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Half-Day and Full-Day Kindergarten: Key Factors That Make a Difference in the Reading Achievement of Struggling Readers Receiving Literacy Intervention

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LOYOLA UNIVERSITY CHICAGO

HALF-DAY AND FULL-DAY KINDERGARTEN:
KEY FACTORS THAT MAKE A DIFFERENCE IN THE READING ACHIEVEMENT
OF STRUGGLING READERS RECEIVING LITERACY INTERVENTION

A DISSERTATION SUBMITTED TO THE
FACULTY OF THE GRADUATE SCHOOL OF EDUCATION
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF EDUCATION

PROGRAM IN CURRICULUM AND INSTRUCTION

BY

KARI PAWL

CHICAGO, ILLINOIS

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ABSTRACT

The purpose of the study was to gain insights on key factors that make a difference in the reading achievement of students attending full-day and half-day kindergarten programs. More specifically, the focus was on investigating the impact that literacy instruction in full-day and half-day kindergarten had on the literacy achievement of struggling readers receiving literacy intervention. This important focus led to the question which guided this research: To what extent is students' early literacy success impacted by instruction or extended schooling? In this study, quantitative methods were used to establish the individual achievement gains of kindergarten students receiving literacy intervention support. These methods included both the observations of kindergarten teachers' literacy practices and retrieval of the district's archived assessment data on both groups of kindergarten students. The research also examined the nature of observed teachers' literacy practices and teachers' awareness of the instructional literacy practices they implement in the classroom.

The setting for the study was in a suburban district neighboring a large urban city in the Midwest. The study took place in April and May of 2011 and included full participation from each of the seven kindergarten teachers employed at the three elementary schools in the selected district. The researcher considered each of the three elementary schools as its own mini-study and analyzed schools separately for research questions. The findings revealed that it was the quality of instruction, rather than the

extended time offered in the full-day kindergarten program, that impacted the gains made in reading by these two groups of kindergarten students.

CHAPTER I

INTRODUCTION

Literacy is an indispensable skill required to participate in today's world, yet according to recent estimates, the percentage of school-age children who cannot read is disconcerting (Shaywitz, 2003). Consider the findings reported by Fielding, Kerr and Rosier (2007) in which they state that, "In the United States, public schools deliver 85% or more of their curriculum by reading textbooks, whiteboards, worksheets, and computer screens. Students must read well to do well. It matters little what else they learn in elementary school if they do not learn to read at grade level" (p. 48).

Based on the work of Fielding et al. (2007), researchers in the field of reading have a renewed interest in the overarching effects of literacy achievement. Of particular interest is the determination of factors that are responsible for these effects on the students' literacy success. These researchers raise the question of whether it is the instructional methods being implemented or the high quality teachers themselves who are responsible for teaching children to read. Such controversies have caught the attention of interested groups such as policymakers, administrators, parents, and educators who share a common goal, which is to provide literacy instruction that will ultimately lead to high rates of achievement for all children. As a result of these efforts, education initiatives have prompted researchers to study preventive measures which include early identification and implementation of instructional interventions that will provide support

for students, particularly for those who are considered to be unsuccessful academically at the onset of their educational careers.

Emergent literacy is at the forefront of nationwide discussions. There are questions about early identification of struggling readers and about which literacy interventions will be most effective in helping these students become successful learners. These queries form the basis of this research investigation because “Early school achievement, especially in reading and writing is a terribly reliable predictor of later school achievement” (Snow, Burns, & Griffins, 1998 as cited in Allington & Cunningham, 2002, p. 1).

Purpose of the Study

The purpose of the study was to gain insights on emergent literacy development and key factors contributing to reading achievement for students attending full-day and half-day kindergarten programs. Since research shows that early identification of literacy and learning problems is critical (Farstrup & Samuels, 2002), it is essential to study the impact that literacy instruction and reading intervention have on students who are learning to read at the kindergarten level. For this study, the focus was on investigating the impact that literacy instruction in full-day and half-day kindergarten had on literacy achievement of struggling readers. In a review of seminal emergent literacy studies (Bloom, 1984; Clay, 1966, 2005; Ehri & Sweet, 1992; Sulzby, 1985; Wienczek, Ciplewski, Vazzano, & Sturken, 1998) several critical points were researched that relate to teachers and their beginning readers. These seminal studies reveal that helping students achieve literacy success is dependent on educators’ perspectives about which

instructional methods and assessments they believe will achieve these goals (Bloom, 1984; Clay, 1966). When groups of teachers, specialists, child study teams, and researchers meet to address a child's reading problem, participants are encouraged to share their views on how best to support the literacy learner's achievement. There is a unified literacy goal to help an underachieving student thrive. The manner in which individuals approach instruction is directly linked to theories they have on ways that children learn to read. Therefore, theories and beliefs drive instructional practices.

Background Contexts of the Study

To gain a better understanding about the theories that are related to reading instruction, it is of value to describe several studies that create a foundation for connecting early literacy theory to successful literacy practice. The theoretical foundations that support the reading process include studies that help educators to understand how literacy theories and teachers' beliefs are embedded in classroom instruction. Thus, both theories and teachers' beliefs are critical aspects of successful early literacy instruction.

Theories Drive Instruction

Strong theoretical bases that inform teachers' decisions about literacy practices are critical for optimal classroom instruction (Tracey & Morrow, 2006), for enacting instructional practices that are useful for improving literacy instruction and that also comprise the ways that teachers' beliefs are implemented in quality literacy teaching (Pressley et al., 2001), for targeting learners' explicit needs (Chall, 1996), and for

accelerating instruction (Allington, 2002). The following early literacy theories will be examined to anchor this study in current research-based practices.

First, Tracey and Morrow (2006) state that it is essential to understand theories because an individual's belief system is strongly connected to his or her behaviors and practices. In fact these researchers suggest that this connection is the main reason that knowledge of theories is vital for optimal classroom instruction. "When teachers understand the full range of theories from which instructional strategies stem, they can select those interventions that best suit the particular teaching situation, thus optimizing the effectiveness of their instruction" (p. 5).

Second, it is important to note that not every teacher is cognizant of the theories they use to inform their instruction. Research conducted by Pressley, Wharton-McDonald, Allington, Block, Morrow, Tracey et al. (2001) revealed that highly effective, exemplary teachers are able to describe the relationship between their instructional practice in the classroom and their theoretical beliefs. Additionally, these teachers often reflect upon and discuss their instructional theories. The process of teachers' debriefing or using interactive discussions allow for deeper understanding of their personal connections between educational theory and practice that facilitate instructional effectiveness.

Third, understanding the stages of reading development can also assist educators in making instructional decisions that best meet the needs of their learners. Chall (1996) characterized reading development into six stages beginning with emergent literacy and progressing through the last stage, a worldview that occurs during late college and

graduate school. Her research suggests that learning to read is dependent on a child's stage of literacy and Chall's (1996) model of reading describes these fundamental stages. Educators can apply their knowledge of these developmental reading stages to plan effective literacy instruction.

Fourth, Allington (2002) also argues that all children, whether they are struggling, average, or accelerated readers, will continue to make progress only when they are reading texts at the level they are able to read successfully and understand. He claims that accelerated literacy teaching is possible at all learning levels and states, "Teachers with greater professional understanding of instruction and the authority to act on that expertise are central to creating classroom interventions that accelerate the development of all children" (p. 276). The challenge an educator faces when teaching reading to students who read at various levels though, is providing strategic attention to students that acknowledges their literacy development and the range of literacy skills evident in their literacy work. Knowing how to prescribe and actualize instruction for early literacy learners that is 'just right' and that enables all children to be successful readers is key to their making meaningful progress, regardless of their literacy starting points. Important literacy practices such as knowing what to teach and how to teach it well still need documentary work to show teachers' evolving literacy teaching expertise. Findings from both past and recent research have provided us with new insights on effective instructional techniques that will help all readers, especially those we consider struggling readers. Therefore, it is imperative for educators to apply their knowledge of the stages

of reading development and insights and theories about effective instructional techniques when selecting and implementing literacy instruction for all levels of learners.

Early Literacy Activities Promote Reading Development

Some research-based practices for enhancing teachers' further understanding of early literacy activities are also provided by the U.S Department of Education's publication entitled, *Helping Your Child Become a Reader* (2005). This brochure provides a developmental continuum of literacy skills for children in kindergarten through third grade. The suggested list of developmental literacy skills includes general steps that children at the kindergarten level progress through as they learn how to read. By studying this literacy continuum, teachers and parents learn that an important first step in students' literacy development is listening to stories read aloud. When children participate in read aloud experiences, they learn both directly and indirectly about print and how it works. For example, these concepts include learning how to handle books, the connection between the spoken and written word, and that printed words tell a story and provide a message for the reader. Children in kindergarten often begin to experiment with 'pretend' (The U.S. Department of Education, 2005) reading and then transition to reading simple books.

These principles of developmental literacy learning play an important role in support of students' early literacy success. Such principles are part of the foundation of this study and conceptualized in the framework that guides this research.

Conceptual Framework

Three theoretical strands of research guided this investigation and provided a solid foundation from which to develop insights and new learning. First, constructivism and learning theories were described with a focus on students' active learning. Second, emergent literacy research was explained in relation to the development of literacy for early readers and for those who struggle in kindergarten. And third, teachers' instructional literacy practices grounded this work in thinking about effective, research-based early literacy teaching that moves students toward independence and success.

The focus of this work was on learning about factors contributing to literacy achievement in kindergarten. This important focus led to the question which guided this research: To what extent is students' early literacy success impacted by instruction or extended schooling? "All children are ready to learn something, but some start their learning from a different place" (Clay, 2005a, p. 9). That is, some children have intense, interactive literacy experiences before kindergarten that enable them to participate easily in academic settings (Wolf, 2007). In some cases, children from impoverished-language environments have been exposed to 32,000,000 fewer words by the time they are five years of age than children from average to middle-class families; this discrepancy effects subsequent reading success in kindergarten and the primary grades (p. 102). Therefore, educators must pinpoint this 'place' using assessment data and must act promptly when providing support to the children considered to be 'at risk' readers. Educators must be prepared to initiate prevention measures rather than a remediation plan beginning in kindergarten, particularly for students who need language experiences.

To determine what might substantially improve or accelerate students' emergent literacy achievement (Clay, 1966), specifically for students who are struggling readers, the researcher investigated the role of emergent literacy instruction and the subsequent reading achievement of students attending half-day and full-day kindergarten programs. This study is built on emergent literacy (Clay, 1966) principles suggesting that literacy begins at birth, is continuous, and ongoing. This notion of emergent literacy is perceived quite differently from reading readiness, where the focus is on observing displayed behaviors as an indication of when a child is ready to learn how to read. Instead, emergent literacy involves a child's natural construction of knowledge about the relationship between spoken and written language. Key factors such as the quality of a child's home environment and exposure to early literacy experiences correlate with a child's early literacy ability (Tracey, & Morrow, 2006).

Literacy Theory Foundations

In this section, the first theoretical foundation of the conceptual framework, constructivism, is characterized as students' involvement in active learning and focuses on their development and independent use of literacy strategies. In addition, behaviorist learning theories and emergent literacy theories are described to contrast theories of learning and to situate the study in emergent literacy development.

Constructivist Theories

Clay (2005a) argues that students must learn to construct knowledge and develop a self-extending system (p. 33). Clay believes that when emergent readers apply strategies such as monitoring, cross checking, discovering, searching, and locating

information, eventually they can use these comprehension devices without the help of a teacher. In the active process of developing inner control of the reading situation (Clay, 1991) students become more strategic readers. Initially teachers provide guided scaffolding that leads to students' reading independence. A gradual release of teacher support and an increase in students' control over the reading act help readers take control of their reading processing.

Behaviorist Theories

In contrast to constructivist theories, a behaviorist view of learning focuses on the connection between behavior and learning. Of critical importance in this theory is the belief that learning is the result of an individual's response to stimuli and that the stimuli could be adjusted to increase or reduce outcome behaviors (Skinner, 1979). The behaviorist approach to instruction emphasizes the necessity of preparing learners for literacy instruction by implementing direct instruction methods of teaching a sequence of prescribed skills. These skills are deemed necessary for students to be successful in learning how to read. Although using a direct instruction method of teaching reading was, and sometimes still is a common practice observed in elementary classrooms, educators believe that experiences beyond this approach to delivering instruction must be incorporated when teaching children about the comprehensive act of reading. This view is what separates a behaviorist's view of reading readiness and a child's learning to read from the theory of emergent literacy development (Clay, 1966) in that constructivism supports students' development as readers.

Though each theoretical foundation has its strong points, research-based emergent literacy practices build a case for supporting early literacy through children's thinking and doing their own active knowledge construction. While behaviorist theories played a role in understanding how children learn, Clay (1966) and Tracey and Morrow (2006) suggest different ways of thinking about students' emerging literacies related to the kinds of activities that strongly impact students' literacy growth.

Emergent Literacy Research

Emergent literacy is the second pillar of the conceptual framework. Young children's higher-level reading proficiencies are the foundation upon which this study is based. Juel (1988) and Clay's (1979) emergent literacy studies proved to be influential in looking at the long-term effects of children who began formal schooling behind their peers. Their focus in research was to learn whether these students continued to be poor readers as they progressed in school, and if so, to determine what reading skills and instructional methods were integral in helping these students become more successful readers. Results from both studies also offered valuable insights regarding the achievement gap between skilled and unskilled readers (Stanovich, 1986).

The first study conducted by Juel (1988) examined the development of reading and writing literacy among 54 minority and low socioeconomic status elementary students in Austin, Texas. The study tracked the literacy achievements of these at-risk students from first through fourth grade. The study represents Juel's conceptualization of reading and writing derived from the Simple View (Gough & Tunmer, 1986; Juel, Griffith, & Gough, 1986). The basic tenet of the Simple View is that reading is

dependent on an individual's ability to decode and comprehend text. Decoding is defined as the process that leads to word recognition and is essential in students' learning how to break the code of written text. Comprehension in the Simple View is "the process by which the meaning of words is integrated into sentences and text structures" (p. 438). There is a causal relationship between decoding and comprehension in that a child's ability to decode words accurately in text affects his ability to understand the material read. A child with poor decoding skills also has the tendency to have poor comprehension skills.

The results of Juel's (1988) study were startling and showed that with this sample of children, specifically those who were identified as poor first-grade readers almost without exception, remained poor readers by the conclusion of their fourth grade year. Juel also found the same results held true for writing, as children who were poor writers in first grade consistently remained poor writers in fourth grade. What skills did these poor readers lack that contributed to their limited progress in reading and writing? Juel found that the children identified as being poor readers in first grade came into this grade with little phonemic awareness. Thus phonemic awareness proved to be a fundamental element that when absent in emergent readers' skills hindered improvement in reading and limited their ability to decode words.

Juel's (1988) study also revealed that at the end of fourth grade, poor first grade readers still failed to achieve the level of decoding on the Bryant Test of Basic Decoding Skills (1975) that the good readers had achieved by the end of second grade. Her study acknowledged that through reading instruction from the basal series, good readers had

seen approximately 18,681 words in running text as compared to approximately 9,975 words the poor readers had seen in running text. In addition, Juel's (1988) results suggested that the difference in print exposure between good and poor readers increased with each year that passed. The implications from Juel's seminal study support the views shared by Ehri and Sweet (1991) and align with their findings.

Clay (1979) also studied the long-term effects of struggling first grade readers. In her sample, which was almost double the size of Juel's (1988), Clay reported her findings from the longitudinal data collected on five-year-old children learning how to read in New Zealand:

There is an unbounded optimism among teachers that children who are late in starting to read will indeed catch up. Given time, something will happen! In particular, there is a belief that the intelligent child who fails to learn to read will catch up to his classmates once he has made a start. Do we have any evidence of accelerated progress in late starters? There may be isolated examples which support this hope, but correlations from a follow-up study of 100 children two and three years after school entry lead me to state rather dogmatically that where a child stood in relation to his age-mates at the end of his first year at school was roughly where one could expect to find him at 7:0 or 8:0. (p. 13)

Clay reports in her studies that struggling readers often do not catch up to their peers, even after several years of literacy instruction. Stanovich (1986, 1993) also speaks of a downward spiral of reading failure that he refers to as 'The Matthew Effects' (Stanovich, 1986). Stanovich argues that, "The effect of reading volume on vocabulary growth, combined with large skill differences in reading volume could mean that a 'rich-get-richer' or cumulative advantage phenomenon is almost inextricably embedded within the developmental course of reading progress" (p. 382).

The aforementioned studies validate the belief that early reading success plays a critical role in subsequent reading outcomes and that young learners enter school at developmentally different points on the literacy continuum. As a result, it is essential for educators to identify the skills of students at their initial entrance into school to plan effective instruction from these starting points forward (Clay as cited in Strickland & Morrow, 1989).

Teachers' Instructional Literacy Practices

The third theoretical foundation of the conceptual framework is teachers' instructional literacy practices and the way they promote reading development. Children in kindergarten work on composing their own stories by using scribbles and drawings at first, but eventually use words to form simple sentences. Instructional time is also spent on developing phonological awareness, "an understanding of the sounds in our language and how they work and knowing how such sounds relate and create patterns" (Miller, 2010, p. 56), which is critical for successful reading comprehension (National Reading Panel, 2000; National Research Council, 1998). This level of instruction also includes an emphasis on phonemic awareness, "which is the ability to focus on and manipulate phonemes in spoken words" (National Reading Panel, 2000, p. 2-1). Research has shown that when measured at the beginning of kindergarten, phonemic awareness is one of the two best predictors of how well students will learn to read during their first two years of school" (Farstrup & Samuels, 2002, p. 114). When teachers promote the use of invented spelling (Read, 1971) and interactive writing or shared writing (McKenzie, 1985) in the classroom, they embed the authentic work of writing in which students use phonemes as

a self-assigned phonics task (Richgels, 2003). Thus teachers' teaching and use of developmentally appropriate processes (Bodrova & Paynter, & Isaacs, 2000) encourage emergent literacy development for young readers.

Struggling Readers

Because readers demonstrate different literacy skills at different times, it is clear that teachers must focus on supporting students who are not successful readers to build their capacity to become more competent. Two other studies provide answers about effective ways to teach struggling readers. Both Compton-Lily (2008) and The National Commission on Excellence in Elementary Teaching Preparation for Reading Instruction (2003) emphasized the importance of gathering information from multiple perspectives in order to help students overcome specific reading problems.

First, Compton-Lily (2008) argued for educators to investigate both academic and affective factors that influence students' learning and to use this information to plan instruction. Compton-Lily (2009) advised classroom teachers to look at the 'whole' child when considering his or her needs. The affective factors that may be contributing to a child's reading difficulty can be evaluated by taking time to get to know the student beyond the measurement of his or her academic skills.

A second study conducted by The National Commission on Excellence in Elementary Teaching Preparation for Reading Instruction (2003) reported similar findings that align with Compton-Lily's (2008) work. The commission conducted a meta-analysis of the research focusing on what professional literacy educators know about reading. The Commission claimed that the roots of effective reading instruction

stem from a professional knowledge of the reading process (how we read and how we learn to read) and the importance of having knowledgeable, caring teachers who take the initiative to design curricula that meet the diverse needs of their students. Findings indicated that when teachers build on students' interests, use key literature, collaborate with families, and differentiate instruction, instruction is most effective.

Full-Day and Half-Day Kindergarten

As part of the theoretical foundations supporting emergent literacy, research on full-day and half-day kindergarten programs provides current knowledge about the ways that school districts implement intervention services at the early elementary level. The following description of these intervention programs highlights teachers' emergent-literacy instructional practices.

To situate how kindergarten intervention programs are critical to early literacy learning, some research findings are presented. Duke and Pressley (2005) revealed that scientists estimate at least 95% of all students can be taught to read effectively with the right instruction in place. Therefore, this researcher aspires to investigate the outcomes of early identification and the subsequent implementation of effective literacy interventions for children considered to be at risk in their literacy development and skills in their first year of formal schooling. That is, this study centers on whether or not the implementation of full-day kindergarten, with the perceived benefits of extended time for learning, is a viable solution for closing the achievement gap for struggling readers in kindergarten.

In the past three decades, current research documents a dramatic change in the number of kindergarten students attending full-day programs. This finding led the researcher to question whether or not such programs were truly effective and necessary. The debate over the academic and social benefits of half-day versus full-day kindergarten remains controversial in the field of education. A significant number of investigations have been conducted by researchers (DeCicca, 2005; Hough & Bryde, 1996; Wolgemuth et al., 2006) who have studied both full-day and half-day kindergarten programs as an intervention for addressing reading difficulties with 5-to 6-year-old children. The results of these studies are mixed.

While Hough and Bryde's (1996) findings showed that full-day kindergarten students performed significantly better than half-day kindergarten students, other studies reporting similar initial academic gains for students attending full-day kindergarten revealed conflicting results when assessing the same group of children a year later. DeCicca's (2005) longitudinal study investigated the impact of full-day kindergarten on standardized test scores in reading and mathematics as students advanced from kindergarten to first grade. Their findings showed that full-day kindergarten substantially increased student's achievement levels in mathematics and reading. This was true for children of all races however, these achievement levels were much smaller in size, especially for minority children, when measured using similar assessments just one year later at the end of first grade.

Wolgemuth et al. (2006) looked at students who attended elementary schools in moderately sized, middle-to-upper class cities in the United States. These researchers

reported that full-day kindergarten presents initial benefits on academic achievement, but these benefits diminish relatively quickly by the start of first grade. In fact the benefits of full-day kindergarten diminished to a level that had little practical value. Several other researchers investigating achievement gains in students in full-day and half-day kindergarten reported that there were no significant differences in the areas of cognitive abilities (Adcock & others, 1980; Hatcher, Schmidt & Cook, 1979; Holmes & McConnell, 1990; Mouw, 1976).

The aforementioned studies provide promising findings that teachers' instructional literacy practices effect literacy achievement for kindergarten students, at least in the initial year. These studies also serve as the foundation for the proposed investigation to determine the outcomes of literacy achievement of students in both types of kindergarten programs.

The theoretical strands that undergird this study, including constructivism, emergent literacy research, and teachers' instructional literacy practices, frame this research. They are important as guiding theories that inform decisions about the study and the ways that the results will be interpreted.

Though research addresses the importance of kindergarten literacy instruction (Farstrup & Samuels, 2002), investigations still need to be conducted in specific areas. Even though teachers need to consider academic and affective factors to teach struggling readers (Compton-Lily, 2008, 2009), and need to focus on developing their knowledge bases when they design effective literacy instruction (Bodrova, Paynter, & Isaacs, 2000), it is not clear which literacy methods are most successful when teaching emergent

readers. Bond and Dykstra (1967/1997) claim that “Children learn to read by a variety of materials and methods. No one approach is so distinctly better in all situations and respects than the others that it should be considered the one best method and the one to be used exclusively” (p. 416). Thus, there is no single instructional approach or literacy intervention that will positively impact all kindergarten students’ literacy achievement, specifically when “children need instructional environments that support all the circuit parts that need bolting for the brain to read” (Wolf, 2007. p. 19). To that end, this study focused on struggling readers’ literacy achievement in half-day and full-day kindergarten and teachers’ early literacy instruction that produced optimal early literacy achievement.

Summary of Conceptual Framework Situating the Study

The underpinnings of the conceptual framework for the proposed study, constructivism, emergent literacy, and teachers’ instructional literacy practices provide valuable research about the interplay that methodology, knowledge of the reading process, and implementation of best literacy practice have on early reading success. The aim of this study is to investigate the effects of providing kindergarten students opportunities to develop and strengthen their literacy skills under the guidance of educators who implement effective instructional methods in an environment that promotes social construction of knowledge.

Methods

Quantitative methods were used to establish the individual achievement gains of students receiving literacy intervention support who are enrolled in half-day and full-day kindergartens. These methods included three observations of the seven kindergarten

teachers (teaching half-day or full-day kindergarten programs) employed in the designated school district who consented to participate in the study. These observations were conducted during the school day between 8:00 a.m. - 2:50 p.m. As a researcher participant collecting documentary evidence of kindergarten teachers' instruction, the researcher observed classroom instruction, but minimized interactions with students. The kindergarten teachers observed and this researcher completed the Early Language and Literacy Classroom Observation Checklist (ELLCO K-3) by Smith, Brady and Clark-Chiarelli (2008) during and/or after each observation, noting the frequency of use of the recommended early literacy strategies used to improve literacy skills. This data served as baseline information about the instructional environment and teachers' practices.

Additional quantitative data collected includes the school district's archived data collection of fall and winter scores on the early literacy measures of letter names and letter sounds using the AIMSweb's Test of Early Literacy-CBM (TEL) assessment. Students in both the half-day and full day kindergarten programs in the school district identified as being struggling readers received intervention support. This data was examined to determine the academic gains made by the half-day kindergarten students in comparison to the full-day students to see if there was a significant difference in achievement gains between these two groups.

Statistically, the independent-samples T-Test was used to analyze the data collected in this study. Using the T-test will allow the researcher to compare the differences between the sample means of these two groups to determine if they are statistically different from each other.

Research Questions

There are five major queries guiding this study.

1) What is the reading achievement gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms?

(2) Do the reading achievement gains of struggling readers in full-day and half-day kindergarten differ?

Ho: The mean gain letter sound scores of struggling readers in half-day kindergarten will not differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

Ha: The mean gain letter sound scores of struggling readers in half-day kindergarten will differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

(3) What is the nature of observed teachers' literacy practices of full-day and half-day kindergarten teachers?

(4) Are teachers aware of the instructional literacy practices they use during the literacy block when teaching students in full-day or half-day kindergarten?

(5) Is there a correlation between teachers' use of literacy strategies and the gains made in reading achievement by the struggling readers they teach?

Ho: There is no relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Ha: There is a relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Foundations of Early Literacy Support

Research clearly shows that early reading support via intervention is critical in helping young at-risk students avoid potential problems in learning to read (Farstrup & Samuels, 2002). According to Allington (2009) exemplary early literacy interventions involve giving all students access to high-quality classroom instruction in addition to supplying unsuccessful readers direct instruction that supplements classroom teaching practices in a more comprehensive and customized manner. Fletcher and Lyon (1998) revealed that 74% of children in third grade who perform below standards in reading continue to do so even into high school, thus further emphasizing the importance of taking the required steps to prepare children to come to school ready to learn. Furthermore, without receiving effective reading intervention, students are at risk of being identified for special education services.

In recent years a significant change to the special education law resulted in the enactment of Response to Intervention, commonly referred to as RtI. This is a new approach to identifying students with specific learning disabilities and represents a new change for determining student eligibility for special education support services under the Individuals with Disabilities Act (Jackson, Pretti-Frontczak, Harjusola-Webb, Grisham-Brown, & Romani, 2009). Prior to RtI, the discrepancy model for identifying students' eligibility for learning disability services required teachers to show a "severe discrepancy between achievement and intellectual ability" (U.S. Office of Education, 1977, p. G1082). This discrepancy was determined by conducting a full case study on a student, which meant that a battery of standardized tests was given to examine scores for

discrepancies between intelligence and achievement. Generally a student with two-year discrepancy warranted special education services. With the current RTI model, teachers identify early-on those who struggle with reading and provide support and intervention prior to conducting a full case study.

Literacy Interventions

The need for literacy intervention in the early grades is clear. Notable researchers have stated the importance of early identification of kindergarten students with insufficient emergent literacy skills. Wren (2002) asserts that a literacy gap at the early grades is relatively simple to remediate with diagnostic and focused instruction. He argues that effective teachers can assist children with deficient literacy skills. However, if a student's literacy instruction is not addressed early on, Wren argues that the gap will widen, affirming the Matthew Effect (Stanovich 1986, p. 381) that those who do not receive critically needed support and are unable to practice reading successfully become the nation's struggling readers. When students do not have increased exposure to print, their lack of reading proficiency creates a gap so wide that bridging it demands extensive, intensive, expensive, and frustrating remedial instruction. These findings (Stanovich, 1986; Wren, 2002) also serve as a reminder of the Matthew Effect that children who get off to a poor start, seldom catch up (Mathes & Torgesen, 1998; Whitehurst & Lonigan, 2001).

Wren's review of early intervention offered important insights for identifying children in need of support beginning at the kindergarten level. In an interview for *Putting Reading First* (Franke, 2002, ¶ 2), Wren stated that "The lion's share of the

research has focused on preventing reading difficulties, but that ignores the fact that some kids get to fourth grade or sixth grade or high school before we understand the depth of their reading difficulties.” Wren also believes the focus on early intervention is warranted. He argues that the number of studies, which show that research-based instruction beginning in kindergarten significantly, reduces the number of children who have reading difficulties, clearly provide evidence for kindergarten intervention. The reasons that some children struggle with reading are as diverse as the children themselves, prompting the need to design the kind of instruction that focuses on the needs of struggling readers. Such a plan should begin by teaching teachers various ways to identify and address the needs of struggling readers.

Effective Interventions

Seminal studies provide important information on effective one-on-one interventions, including Marie Clay’s work in which she designed an intensive, individualized intervention program entitled Reading Recovery® and Benjamin Bloom’s (1984) research on *The 2 Sigma Problem: The Search for Methods of Group Instruction as Effective as One-to-One Tutoring*. Marie Clay (2005) argues that “literacy learning provides the tools the child will need to underpin his future progress in education, and they are critical for success in the new information age” (p. 8). Clay’s (1966) acclaimed year-long study of 100 children in their first year of formal schooling enlightened educators across the country of the importance of early identification of and remediation for struggling readers. Additionally, the U.S. Department of Education Institute of Education Sciences (IES What Works Clearing House, 2007) reported that Clay’s

instructional intervention design, Reading Recovery®, was “found to have positive effects on alphabetic and general reading achievement and potentially positive effects on fluency and comprehension” (Schwartz, Askew, & Gómez-Bellengé, 2007, p. 1).

Subsequent findings by Pinnell, Deford, Bryk, and Seltzer (1994) revealed that key factors in the success of tutorial programs, such as Reading Recovery®, included teacher training, instructional emphasis, and individual instruction.

Similarly, Bloom’s (1984) study was pivotal in providing insights about effective alternative interventions in situations where individualized instruction is not a viable option. His findings showed that students being tutored in a one-on-one situation scored approximately two standard deviations above the average student in the control group. This means that “under these learning conditions about 90% of the tutored students and 70% of the mastery learning students attained the level of summative achievement reached by only the highest 20% of the students under conventional instructional conditions” (p. 4).

These literacy intervention studies state that early literacy support is essential in order to equalize the opportunities for all young readers to develop the skills required for successful reading. It is still unknown which intervention or support is most effective when teaching emergent readers.

Statement of the Problem

Because the reality of one-to-one intervention is impractical for school districts due to additional financial costs, staffing needs, and schedule conflicts, it is critical for educators to look for other avenues to provide effective intervention for struggling

students beginning as early as kindergarten. For these reasons this researcher investigated the outcomes of early identification of and intervention support for children in kindergarten to determine whether the extended time for learning in the full-day program is, in itself, a viable solution for struggling readers or if the half-day literacy intervention is equally effective.

Significance of the Study

The study was essential for several reasons. Much debate surrounds the benefits of half-day programs versus full-day kindergarten programs. Research studies included in the comprehensive review of literature represent both sides of the argument for extended day kindergarten. The findings from this research study offered valuable insights to school administrators, teachers, and reading teachers on effective ways to provide literacy support for struggling emergent readers. Echoing the words of Marston and colleagues (2007), “The poor outcomes and limited opportunities available for students who do not read well, combined with the significant number of students who are affected, convey an urgency to create solutions” (p. 98). In this study, the researcher conducted research that addressed a gap in the literature and provided emergent literacy baseline data for deriving early literacy decisions and actions in classrooms. Because the findings of this study revealed that both groups of kindergarten students made significant gains in reading on the AIMSweb letter-sound fluency measure, the researcher also considered other factors that may have contributed to these students’ reading gains. Further analysis of the instructional practices employed by the teachers during the designated literacy block, suggested that the gains in reading made by struggling readers

receiving literacy intervention are not dependent on the length of the kindergarten day students attend, but rather the quality of the instructional interactions between the kindergarten teachers and their students.

Definition of Terms

AIMSweb's Test of Early Literacy-CBM (TEL): A universal screening assessment that consists of standardized, quick (one-minute) fluency measures of fundamental literacy skills used by teachers and psychologists to progress monitor student achievement (Stecker, Fuchs & Fuchs, 2005).

Full-day Kindergarten: An extended day of learning services for kindergarten students. Students enrolled in the full-day program attend school for the standard length of the school day.

Half-day Kindergarten: Students enrolled in the half-day kindergarten attend either the morning or afternoon session.

Letter Naming Fluency (LNF): A standardized assessment used to measure a student's ability to recognize and identify alphabet letters in one minute. LNF is commonly identified as the best single indicator of risk for reading failure (AIMSweb, 2010).

Letter Sound Fluency (LSF): A standardized assessment used to determine a student's ability to produce the letter sounds for both upper case and lower letters in one minute. LSF has equal or even better predictive ability to later general reading skills than the DIBELS Phonemic Segmentation measure.

Intervention: Students qualifying to receive reading intervention in both the full-day and half-day kindergarten based on scores received on the AIMSweb Test of Early Literacy-CBM.

Raw Score: The number of questions answered correctly by a student on an assessment.

Reading Gains: The measurement of growth determined by calculating the differences between the scores on the fall and spring letter sound fluency assessment (AIMSweb, 2010) for students attending full-day and half-day kindergarten.

Limitations

Threats to the validity of the study include the following points. There is a small sample size of students in this study which may impact the statistical results. Another limitation is the interrater reliability of the researcher's recorded observations using the ELLCO (2008) K-3 literacy rubrics. Additionally, the limited number of classroom observations may narrow the scope of the literacy practices observed. Lastly, because the classroom observations were previously scheduled by the researcher and each of the kindergarten teachers, there is a potential for performance bias.

Summary

This chapter contextualized briefly how this study is organized and how foundational theory and effective literacy instruction propels students forward in their literacy development. The aforementioned studies support the postulation that "Today we possess sufficient knowledge about the components of reading to be able not only to diagnose almost every child in kindergarten at risk of a learning difficulty, but also to

teach most children to read” (Wolf, 2007, p. 20). Ensuing chapters will provide further research to support this investigation.

Chapter II provides a review of literature related to this study’s conceptual framework and explores research related to full-day and half-day kindergarten programs. Chapter III includes background information pertaining to the school district and teachers who consented to participate in the study along with a description of the quantitative methodology that was employed to collect, analyze, and authenticate the data. Chapter IV provides a detailed report of the analysis and summarization of the findings. In Chapter V, implications and contributions of this research study are discussed and ideas for future research are offered.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The connection between early literacy skills and subsequent reading achievement is of particular interest to educators in the field of reading. This is especially true since research has shown that, “Early literacy skills have a clear and consistently strong relationship with later conventional literacy skills, such as decoding, oral reading, fluency, reading comprehension, writing, and spelling” (The National Early Literacy Panel, 2009, p. vii). Because early reading skills are the cornerstones of subsequent academic success, it is imperative that students develop these foundational skills at the kindergarten level. Providing effective literacy instruction to kindergarten children remains a salient goal, but it is especially important for children considered to be at-risk readers.

Background Contexts of the Study

The examination of research in this chapter offers important insights on the impact that emergent literacy theory has on teachers’ instructional literacy practices in half-day and full-day kindergarten classrooms. Equally important is the examination of the impact this relationship has on kindergarten students’ literacy achievement. The primary theoretical framework guiding this study is constructivism, which supports the collaborative construction of knowledge by using an individual’s prior knowledge as a

bridge to learning new concepts. This theoretical base informs and creates a strong research foundation that guides this study.

Conceptual Framework Foundations

To understand kindergarten literacy development, it is essential to apply theory in practice. Three theoretical strands support the literature review and provide the rationale for this study. The first strand, constructivism, relies on children learning socially in the midst of others. The expectation is that children will internalize what they hear while engaging in interactions with peers and adults and use that information to build their knowledge about themselves and the world (Tracey & Morrow, 2006). This theory is different from other theories in that learning is believed to develop from a continuum of experiences. The focus for students' learning is based on information gained from the observations and reflections made by more significant and supportive others who encourage children to extend knowledge from what they already know to new learning.

The second strand, emergent literacy theory, develops from the notion that early literacy learning is continuous and ongoing. Children become more proficient readers and writers when they learn to orchestrate ideas and use them to think independently (Clay, 1991).

The third strand, teachers' instructional practices, requires that teachers know and use research-based literacy models to inform their teaching and guide students' active learning. This involves a balance between content knowledge of the learning process and personal pedagogy. Expert or skilled teachers demonstrate this balance by using data,

observations, and reflective practices to act upon and plan effective instruction for diverse learners (Lyons, 2003; Wold, 2003).

Constructivism

Constructivism (Tracey & Morrow, 2006) is a theory grounded in research and observation about how people learn. Constructivism supports the collaborative construction of knowledge through social cooperation and reflective thinking. Central to this theory is the belief that knowledge is the result of social interaction, language usage, and shared experiences. Constructivists believe that when learning new information, an individual activates his or her prior knowledge and either accepts the new information to strengthen his or her existing schema, changes prior beliefs to fit the new information, or discards the new information as irrelevant. In every situation, the person constructing knowledge asks questions, explores and assesses what he or she knows.

Constructivist theories that explain the ways in which children learn and how literacy growth occurs can be traced back to the 1900's. These theories include the views of Vygotsky (1896-1934), an established Russian psychologist and philosopher. Vygotsky's theory of learning, the Zone of Proximal Development (ZPD), supports the idea that knowledge construction is a cumulative process that is built on prior experiences, metacognitive talk, and scaffolding of instruction. ZPD is defined as the, "distance between the most difficult task a child can do alone and the most difficult task a child can do with help" (Mooney, 2000, p. 83). Educators often use Vygotsky's theory, which exemplifies the constructivist approach to learning, as a framework to guide effective instructional planning, especially for struggling readers.

To situate learning as an active, constructive process, Gordon Well's (1990) article chronicled literacy development and investigated the impact of teachers and students interactions with text, a collaborative inquiry practice he referred to as 'Talk about Text' (p. 369). Well described five different modes of engaging with text: performative, functional, informational, re-creational, and epistemic (p. 373). These cognitive modes of engagement are considered tentative and applied to the reader's purpose. In other words, when an individual interacts with a text, he or she is likely to apply a mode of engagement that aligns best with the purpose for reading. For example, when the purpose for reading is to find an answer to a specific question, the reader is likely to exercise the informational mode of engagement.

The Vygotskian perspective of learning is represented in the fifth mode, the epistemic mode of engagement. This mode requires individuals to interact with texts following an intellectual apprenticeship model in which literacy development is considered to be continuous and ongoing. Similar to the Vygotskian view, the learning experience occurs socially through teacher-student interactions, cooperative learning groups, and classroom discussions. To contextualize how this learning framework relates to early learning experiences, it is important to develop an understanding of emergent literacy theories.

Emergent Literacy Theories

Emergent literacy theory is built on two central tenets. The first tenet focuses on the interrelationship between children's development in the areas or literacy strands of listening, speaking, reading, and writing (Morrow, 2005). The relationships between

each strand can positively or negatively affect others. For example, children showing competence in the strands of listening and speaking are typically the same children who achieve success at early attempts to read and write. More specifically, as children increase their understanding of the connections between spoken and written communications, the more success they will have with early efforts to read and write.

The second tenet is the notion that literacy development begins at birth and is ongoing until the child can read and write at a conventional level, which is typically third grade (Clay, 1966; Morrow, 2005). Consequently, this premise provides a focus on the quality of a child's home environment and the connection this has to subsequent literacy achievement (Morrow, 2005). For example, a child's early experience with being talked and read to has a pivotal role in his or her early literacy development. Emergent literacy theorists (Clay, 1979; Durkin, 1966; Ehri & Sweet, 1991; Morrow, 2005; Sulzby, 1985) also believe there are essential understandings that children must become proficient in during their early years to become thriving readers. These understandings include an array of critical skills and concepts about print that enable readers to decode and eventually comprehend text.

Delores Durkin's (1966) studies on emergent literacy offered valuable insights on the impact that a child's home environment and learning experiences have on early literacy development. Durkin wanted to determine what circumstances were in place that enabled young children to arrive at school knowing how to read. Therefore, in her first study, Durkin selected the population of 49 first graders and for the second study, 156 early readers at the beginning of first grade. Findings from these studies not only brought

attention to the connection between early reading experiences (being read to) and students' interests in reading, but also contributed to the shift in perspective from reading readiness to emergent literacy. Reading readiness is the belief that teaching children how to read can begin only when they demonstrate mastery of the pre-reading skills, whereas emergent literacy embraces the idea that children possess a variety of readiness skills that can be strengthened during the teaching of reading. This shift focused attention on the roles that teachers, parents, and storybooks have on the development of literacy in children.

Sulzby contributed substantively to emergent literacy research. Sulzby is widely known for her research on examining the development of children's emergent reading of favorite storybooks. This practice, referred to as storybook reading (Sulzby 1985), describes the act of children pretending to read a book they have heard read to them multiple times as they retell the story from memory.

In 1985, Sulzby conducted an investigation examining the development of children's emergent reading of favorite storybooks using two studies. The first study tracked the emergent reading attempts of 24 middle class children living in a suburb of a large midwestern city. These students came from a literacy-rich environment where storybooks were read aloud to them. For this study, the kindergarten teachers introduced and repeatedly read storybooks to their students and in turn these students were asked to read their favorite storybooks from their classroom book collection to the research examiners a total of four times throughout the school year (October, November, April, and May). The reading attempts of the 11 girls and 13 boys were recorded and analyzed

and the results aligned with the developmental behaviors or properties of five broad sequential classification schemes.

Sulzby (1985) discovered five categories of storybook reading by emergent readers. In the first category, "Attending to Pictures, Not Forming Stories," Sulzby describes a child's attempt at storybook reading that focuses on labeling and commenting about the pictures on the page in view, but shows that the child does not connect or weave the story across the pages. The second category, "Attending to Pictures, Forming Oral stories," includes a child's retelling of the story with a clear understanding of how the pictures connect. "Attending to Pictures, Reading and Storytelling mix," the third category, describes a child's attempt to 'read' by looking at the pictures and alternating his or her speech between sounding like a storyteller using oral intonation and sounding like a reader by reading with intonation. "Attending to Pictures, Forming Written Stories" is the fourth category and is characterized by a child's reading that is similar to the original story in both the choice of words and intonation.

The fifth category, "Attending to Print," is separated into four subcategories. The first three, "refusing to read" based on print awareness, "reading aspectually" (focusing on only one or two aspects of print), and reading with "strategies imbalanced," describes a child's attempt at reading by exploring print in pre-conventional ways. A child demonstrating these reading behaviors may refuse to try to read as he or she learns that it is the print and not the pictures that guide reading. These subcategories also describe the child who is beginning to connect the skills and concepts required for conventional reading such as demonstrating an understanding of the relationships between letters and

sounds, word stability, and comprehension of written language. The fifth subcategory, “real reading” or “conventional reading” describes a child reading independently. Sulzby’s classification schemes contributed valuable information related to the important developmental changes that occur within the reading processing of a child who is transitioning from picture-to-print orientation.

Sulzby’s (1985) results revealed that there is a developmental progression from oral language to written language where a child systematically internalizes a form of reading that has been socially created from the interaction between the adult and child. The child who initially relies upon pictures to retell a familiar story gradually transitions to using print to independently read. Her research also demonstrated that children’s emergent storybook reading is an essential part of literacy development because of the pivotal role that early childhood experiences play in learning how to read. Essentially, storybook reading strengthens a child’s understanding of how books are structured both semantically (ideas) and visually (text and pictures) on each page. Because these students did not receive formal instruction in reading or writing during their kindergarten year, it was evident that they developed an understanding about written language long before reading conventionally from print.

The purpose of Sulzby’s (1985) second study was to investigate the issue of consistency of children’s storybook reading behavior to determine age-related differences. The sample population included a total of 32 children ages two, three, and four, who were enrolled in a privately-operated day care center in a suburb outside of a large midwestern city. The emergent reading attempts of these children were examined

throughout the year. Each child read two storybooks per session for a total of four sessions. Results showed that there was evidence of stability of students' developmental reading behaviors in the five broad classification schemes (Attending to Pictures, Not Forming Stories, Attending to Pictures, Forming Oral Stories, Attending to Pictures, Reading and Storytelling mixed, Attending to Pictures, Forming Written Stories, and Attending to Print) across familiar storybooks. These behaviors began with the least mature re-enactments of children's reading and progressed through their independent reading of print from texts. In addition, children's language and relevant non-verbal behaviors when attempting to read a storybook were noted (Sulzby, 1985, p. 464).

Sulzby's research provided new insights into young children's early reading behaviors. She described a developmental hierarchy of ten types of reading behaviors from more mature to less mature reading strategies. Her findings also showed that through each interaction with storybook reading, children's reading behaviors continued to develop substantially and were conceptual rather than stimulus-response based patterns associated with children reading a particular book. In both of her studies, children developed reading behaviors before conventional reading instruction was formally introduced. Sulzby's work also supports the notion that when a child is learning to read and write, a transition from oral language to written language occurs. In other words, "learning to read and write involves a reconceptualization by the child of his or her language which had its beginnings in oral contexts and functions" (p. 460).

Critical research studies across a range of early literacy concepts. Building on Sulzby's (1985) research of storybook reading, Ehri and Sweet (1991) investigated a form of pretend reading referred to as fingerprint-reading (p. 445). This form of reading requires the child to point to each word in the text as it is read orally from memory. This skill is difficult for emergent readers as it requires specific attention to the print, thus requiring children to demonstrate one-to-one word matching. The purpose of this study focused on the developmental changes in reading that occur as a student transitions from matching "speech to print" (Ehri & Sweet, 1991, p. 445) to reading a text independently. In addition, Ehri and Sweet examined the transition that occurs between pretend reading and "fingerprint-reading" to discover whether types of print-related knowledge needed to be mastered before emergent readers transitioned to fingerprint-reading of a memorized text and retained information about the print. Their findings showed that print-related knowledge impacted the ability of a child to fingerprint-read successfully. These skills, listed in order of importance, included phonemic segmentation, letter-name knowledge, and pre-primer word reading.

Ehri and Sweet's (1991) study aimed to answer questions generated from Sulzby's (1985) work about what causes children to move up the literacy hierarchy and begin to process print. They questioned whether the practice of pretend reading is an integral step in the reading process or if other print-related experiences are needed and if so, what were they? To answer these questions, they used the procedures outlined by Holdaway (1979) for a shared reading experience between the teacher and students which was conducted in a laboratory setting. The shared reading experience required the

teacher to model the conventions of reading. This not only included drawing the student's attention to the illustrations, but most importantly emphasized the student's purpose for reading. Using "fingerpoint-reading" (Ehri & Sweet, 1991, p. 445), the teacher modeled how to read the print to show the students how print is structured to correspond to speech. This modeling was done using an enlarged text (big book) with specific attention given to how text is read (from left to right, return sweep of a new line) and "speech to print" match. The story was read multiple times and students were given ample opportunities to practice these skills with their own, smaller version of the text.

The sample population for Ehri and Sweet's (1991) study included 36 children with an equal balance of males and females ranging in age from 4.5 through 5.8 years. The children came from two local preschools, a day care center, and a kindergarten classroom. Similar to Sulzby's (1985) study, these children had not received any prior formal reading instruction.

The researchers individually assessed and trained the children during 20-30 minutes sessions on two successive days. The children were assessed on three tests of letter and word knowledge and were trained to fingerpoint-read. Instruction on phonemic segmentation skills was given using four moveable cubes with modified versions of Lindamood (1975) pictures of mouth positions for the short vowel /e/, long vowel /a/ and consonants m, l, s. Posttests on six tasks measuring letter and word knowledge were administered after the fingerpoint-reading task. To reduce the possibility that a subject was relying upon his or her memory of the story, he or she was required to fingerpoint-read for the assessment.

A regression analysis methodology was employed using the scores from the child's final solo reading attempt. Three skills were measured: the child's accuracy at reciting each line of text verbatim, accuracy at pointing to the words in each line, and his or her ability to coordinate these two behaviors to match print. The findings from this study confirmed the hypothesis that emergent readers need some print-related knowledge to be successful in learning to fingerpoint-read memorized text and to remember information about print from doing this. These skills include the ability to read a few pre-primer or basic sight words which enables the student to read individual words in the text, to know some letter names to help locate lines in the text and to be able to recognize when letters in the text have been changed, and to have some knowledge of phonemic segmentation skills. The child's ability to match print with speech, meaning what is read on the page with the printed text, proved to be more important than pre-primer word reading for fingerpoint-reading performance. This finding suggests that a child's ability to fingerpoint-read demonstrates his or her knowledge and use of concept of word and word boundaries. These findings also indicate that a child's prior knowledge and experience with literacy greatly affects his or her ability to successfully transition from memorizing text to fingerpoint-reading.

Juel's studies on small group reading. Extending the research beyond storybook reading skills, Juel's (1988) study examined the development of reading and writing literacy among 54 at-risk minority and low socioeconomic status students in Austin, Texas, from first through fourth grade. This study represents Juel's conceptualization of reading and writing derived from the Simple View (Gough &

Tunmer, 1986; Juel, Griffith, & Gough, 1986). The basic tenet of the Simple View is that reading is first dependent on an individual's ability to decode and then to comprehend text. Decoding is defined as the process that leads to word recognition and is essential in learning how to break the code of written text. Comprehension in the Simple View is "the process by which the meaning of words is integrated into sentences and text structures" (p. 438). There is a causal relationship between decoding and comprehension in that a child's ability to decode words accurately in text affects his ability to understand the material read. A child with poor decoding skills will likely have poor comprehension.

The results of Juel's (1988) study were startling and showed that with this sample of children, specifically those who were identified as poor first-grade readers, almost without exception remained poor readers by the conclusion of their fourth grade year. Juel (1988) also found the same results held true for writing, as children who were poor writers in first grade consistently remained poor writers in fourth grade. What skills did these poor readers lack that contributed to their limited progress in reading and writing? Juel found that the children identified as being poor readers in first grade came into this grade with little phonemic awareness. This proved to be a fundamental element that hindered improvement in reading and limited their ability to decode words.

Juel's (1988) study also revealed that poor first grade readers still failed to achieve the level of decoding on the Bryant Test of Basic Decoding Skills (1975) at the end of fourth grade that the good first grade readers had achieved by the end of second grade. Her study acknowledged that through reading instruction from the basal series, good readers had seen approximately 18,681 words in running text as opposed to the

9,975 words seen by poor readers (p. 441). In addition, the results suggested that the difference in print exposure between good and poor readers increased with each year that passed. The implications from this seminal study support the views shared by (Ehri & Sweet, 1991) and align with their findings.

Marie Clay's contribution to emergent literacy theory. Clay's research is seminal in all emergent literacy development because her work reveals that readiness is not important in a child's literacy learning. What is critical, according to Clay, is that learning is always viewed on a continuum in which children advance and regress as they develop literacy skills.

Clay (1979) studied the long-term effects of struggling first grade readers. In her sample, which was almost double the size of Juel's (1988), Clay reported her findings from the longitudinal data collected on five-year-old children learning how to read in New Zealand:

There is an unbounded optimism among teachers that children who are late in starting will indeed catch up. Given time, something will happen! In particular, there is a belief that the intelligent child who fails to learn to read will catch up to his classmates once he has made a start. Do we have any evidence of accelerated progress in late starters? There may be isolated examples which support this hope, but correlations from a follow-up study of 100 children two and three years after school entry lead me to state rather dogmatically that where a child stood in relation to his age-mates at the end of his first year at school was roughly where one could expect to find him at 7:0 or 8:0. (Clay, 1979, p. 13)

Clay confirms in her studies that struggling readers do not often catch up to their peers, even after several years of literacy instruction. In 2005, Clay argued that students must learn to construct knowledge and develop a "self-extending system" (Clay, 2005b, p. 40) in order to apply strategies such as monitoring, cross checking, discovering, and

searching without the help of a teacher. In the active process of developing inner control of the reading situation, (Clay, 1991) students become strategic readers. Initially, teachers provide guided scaffolding that leads to students' reading independence. A gradual release of teacher support and an increase in students' control over the reading encourages students to take responsibility of their reading processing.

Other current contributions to Emergent Literacy Theory. In 1997, a national panel was formed at the request of the Director of the National Institute of Child Health and Human Development (NICHD) with assistance from the Secretary of Education. Their charge was to evaluate the effectiveness of different instructional approaches used to teach children to read. The panel spent over two years reviewing research-based studies on reading instruction which resulted in the publication of, *The Report of the National Reading Panel: Teaching Children to Read* (National Institute of Child Health and Human Development, 2000) on April 13, 2000.

This influential report offered a synthesis of 450 studies focused on reading instruction in Grades K-12. The committee members "summarized and researched literature relevant to the critical skills, environments, and early developmental interactions that are instrumental in the acquisition of beginning reading skills" (p. 1). Findings from their comprehensive investigations revealed the need for systematic instruction in the following areas considered to be pivotal in developing good readers: Alphabetics (phonemic awareness instruction and phonics), Fluency, Comprehension, and Vocabulary.

Recognizing the spectrum of reading skills presented by beginning readers, the Panel's aim was to search for evidence that identified what these skills were and how these skills were best taught to students at varying points related to literacy development. In their review of research in the area of Alphabets, the National Reading Panel (2000) detailed the importance of phonics instruction in helping beginning readers understand the relationship between letters and sounds, the connections phonics has with spelling patterns, and how to apply this knowledge when reading. Findings revealed that using a systematic approach to teaching phonics yielded significant benefits for students in kindergarten through sixth grade, including struggling readers. Furthermore, students in kindergarten showed an increased ability to read and spell when receiving a systematic approach to phonics instruction. The impact from this type of instruction was strongest for children at the kindergarten level and declined in later grades.

Recommendations set forth by The National Reading Panel (2000) and the No Child Left Behind Act in 2002, used to ensure that essential elements to support early literacy, are included in the development of kindergarten curricula. Findings from these landmark studies, along with the subsequent government mandates, require educators to focus on instructional reading practices that have been proven to be effective in teaching children to read. It is important to note that while the focus of the National Reading Panel's research was to evaluate the effectiveness of various approaches to teaching children to read and to determine the transferability of these effective approaches to the classroom setting, their findings were not inclusive. Other topics including motivational

factors in learning to read and the effects of integrating reading and writing are examples of identified areas for future research.

In 2009, The National Early Literacy Panel (NELP) published *Developing Early Literacy: Report of the National Early Literacy Panel* which summarized an extensive meta-analysis of nearly 500 scientific research studies on the development of early literacy skills in children from birth to age 5. These studies specifically focused on early literacy measures that correlate with later reading achievement in conventional reading skills such as decoding, spelling, oral fluency, comprehension, and writing. The Panel's main objective "was to synthesize research to contribute to decisions in educational policy and practice that affect early literacy development and to determine how teachers and families could support young children's language and literacy development" (p. iii). The Panel used the following questions to guide their queries:

What are the skills and abilities of young children (age birth through five years or kindergarten) that predict later reading, writing, or spelling outcomes?

Which programs, interventions, and other instructional approaches or procedures have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling?

What environments and settings have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling? (p. vi).

The Panel found a total of 11 variables that consistently predicted later literacy achievement for children in preschool and kindergarten. Six of the variables not only

showed a strong correlation to later conventional literacy skills, but also sustained their predictive power after other factors such as socioeconomic status and IQ were considered. These variables included components of phonological awareness (alphabet letter and sound knowledge), phonemic awareness, rapid automatic naming (RAN) of letters or digits and objects and colors in random order, and the ability of students to demonstrate written letters in isolation or in an individual's own name. The remaining 5 variables moderately correlated with subsequent literacy achievement, but did not sustain their predictive power when other contextual variables were considered. These skills included (a) concepts about print, (b) print knowledge, (c) reading readiness, (d) oral language, and (e) visual processing.

Summary of studies on Emergent Literacy. The aforementioned studies validate the belief that early reading success plays a critical role in subsequent reading outcomes and that young learners enter school at various points on a developmental continuum. Equally important is the notion that learning is prompted by instruction based on observations and reflections, rather than on instruction stemming from signs of readiness, as outlined in the behaviorist view. The findings of these studies clearly show that it is essential for educators to identify the skills students bring with them to school at the beginning of kindergarten to plan effective instruction from their literacy starting points that continue to move them forward.

Teachers' Instructional Practices

For all students, but specifically for struggling readers, teachers need to implement literacy strategies that require students to become active and independent

readers. Instruction that typically begins with teaching students phonics skills and strategies to break the written code (decoding) are quickly partnered with constructive discussions on ways to become a strategic reader. Strategic readers demonstrate the ability to apply strategies as they interact on a conceptual level with texts. This is accomplished by having teachers incorporate a gradual release of responsibility structure (model, guided support, independent practice) as part of their instructional literacy practices.

What do struggling readers need? In a perfect world, “the child comes to reading instruction with well-developed language abilities, a foundation for reading acquisitions, and varied experiences with emergent literacy” (Snow, Burns & Griffin, 1998, p. 79). Unfortunately, this scenario is not always true. When reading failure is the case, it is important for researchers to investigate ways to “break this course of failure by providing immediate and effective early literacy instruction” (Marston & Pickart, 2007, p. 98) for struggling students. In fact, research studies have shown that early reading intervention is critical in helping at-risk young students avoid potential problems in learning to read (Strickland, 2002). The National Reading Panel Report (2000) confirmed that 74% of poor readers in third grade remained poor readers in ninth grade. These children grow to dislike reading and as a result spend less time reading inside and outside of school. This finding is important because of the high correlation between students’ time spent reading and their related achievement in learning to read (Allington, 1980).

As a prominent advocate for struggling readers and school reform, Allington's (Allington & Cunningham, 2002) research revealed that most schools offer a standard schedule to all students and often organize instruction so that the lowest-achieving students are allotted the fewest opportunities to read and write. Within the constraints of a school day, Allington argued that if valuable time could be reallocated for academic instruction, the amount of quality time would be increased for students to have more opportunities to read and write. Allington reported that just finding twelve additional minutes a day, adds up to an additional hour a week of time devoted in these academic areas. That additional hour a day results in a day of reading each month and about two weeks' work of reading and writing each year.

Furthermore, Compton-Lily (2008) reported that teaching struggling readers begins by valuing the differences each child brings to the classroom. A common practice is first to identify the academic differences in the literacy skills children possess. These include skills such as knowing letter names, sounds, and words, in addition to observing the reading strategies children use to solve problems they encounter when reading connected text. While these academic differences are necessary to know, there are other differences that also impact learning achievement. These include a child's previous learning experience, language and modes of communication, and personal interests.

Compton-Lily (2009) also advised classroom teachers to look at the 'whole' child when considering his or her needs. Her idea of knowing the child includes knowing the individual as a reader and as a person. Knowing the child as a reader requires the teacher to have a solid understanding of the reading process as this enables him or her to

correctly identify the literacy skills a child uses when reading. Knowing the child as a person can offer valuable information about the early literacy learner. The affective factors that may be contributing to a child's reading difficulty can be evaluated by taking time to get to know the student beyond the measure of academic skills. She believes that, "observations, interviews with children and parents, eavesdropping on the playground, and informal conversations help teachers discover children's passions" (p. 90) and provide a more balanced view of the child. Because of the disadvantages struggling readers encounter when starting school academically behind their peers, there is a pressing need to examine the literacy instruction being implemented at the kindergarten level.

The impact of literacy teaching on kindergarteners. The National Commission on Excellence in Elementary Teaching Preparation for Reading Instruction (2003) reported similar findings that align with Compton-Lily's (2008) work. The commission conducted a meta-analysis of the research focusing on what professional literacy educators know about reading. The Commission claimed that the roots of effective reading instruction stem from a professional knowledge of the reading process (how we read and how we learn to read) and the importance of having knowledgeable, caring teachers who take the initiative to design curricula that meet the diverse needs of their students. Findings indicated that when teachers (a) build on students' interests, (b) use key literature, (c) collaborate with families, and (d) differentiate instruction, literacy instruction is most effective.

The meta-analysis (The National Commission on Excellence in Elementary Teaching Preparation for Reading Instruction, 2003) revealed that teachers provide effective reading instruction when they (a) attend to their students' interests and attitudes by observing and recording behaviors to monitor student progress; (b) teach authentic literature in a positive learning community in which all students are expected to achieve; (c) build partnerships with families to strengthen the home and school literacy connection; (d) use a variety of teaching methods and instructional grouping to support all levels of learners; and (e) build background knowledge and incorporate comprehension strategies before, during and after reading.

Moreover, studies also show that effective characteristics of powerful classroom literacy teaching include a school's curriculum that incorporates the following: use of multi-leveled texts to ensure that struggling readers have a variety of texts of appropriate difficulty to read with success, provide for small-group and side-by side teaching (limited reliance on whole group instruction), implement useful strategies that are explicitly taught, differentiate activities, open tasks, foster students use of self-monitoring strategies, and focus on the child's social, emotional, and academic needs (Allington & Johnston, 2001; Pressley et al., 2001; Taylor et al., 2000).

Clearly, the planning of effective reading instruction develops from a teacher's knowledge of the reading process and incorporates both the academic and affective factors of his or her students. With kindergarten being the first formal year of schooling, it is the important to investigate the literacy practices occurring in half-day and full-day kindergarten and how these practices factor into students' reading success.

Kindergarten practices; Full-day and half-day programs. Questions concerning the effectiveness of full-day versus half-day kindergarten on students' achievement prompted the need for research studies on these two types of programs. Research findings (Puleo, 1988) comparing full-day and half-day kindergarten revealed inconsistent and inconclusive results regarding the benefits favoring one program over another. However, children attending full-day kindergarten appeared to perform better academically than children attending half-day kindergarten. Research (Housden & Kam, 1992; Karweit, 1992; Puleo, 1988) also showed that the extended time in full-day kindergarten greatly benefited at-risk students because it provided additional time for learning.

Studies (Mouw, 1976; & Hatcher, Schmidt & Cook, 1979) specifically focusing on academic achievement in half-day and full-day kindergarten have had mixed results. Findings from a study comparing students in a half-day program with those in a full-day program, (Mouw, 1976) showed there were no significant differences in the two groups on the Cognitive Abilities Test. Similarly, the findings from a study by Hatcher, Schmidt and Cook (1979) reported no significant differences in the areas of cognitive, affective, and psychomotor development using Boehm's Test of Basic Concepts and the Metropolitan Readiness Test.

In contrast, there have been several studies whose findings indicate higher academic achievement from students attending full-day kindergarten. Adock, Hess, and Mitchell (1980) conducted a study intended to measure how the length of the school day affects academic achievement of students in kindergarten. The 131 students in the study

group were from five full-day kindergarten classes and the control group consisted of 58 half-day students from three classes. In total, 189 kindergarten children were included in this study. Results from the Survey Battery of the Metropolitan Achievement Tests (1978) showed that the students attending the full-day kindergarten program achieved significantly higher scores on academic skills than the students attending the half-day program.

In several research studies evaluating full-day kindergarten using measures of academic achievement, socialization and behavioral skills, Fusaro (1997), Clark and Kirk (2002), and Wang and Johnstone (1999) supported the need for further investigation regarding the benefits of full-day kindergarten over half-day kindergarten. Hough and Bryde (1996) did a comparative study between six half-day programs and six full-day programs. The findings showed that full-day kindergarten students performed better than half-day kindergarten students on language arts and mathematics criterion-referenced tests.

Meyer, Wardrop, Hastings and Linn's (1993) study produced similar findings in their examination of the achievement gains of 650 children in two cohorts at the beginning and end of their kindergarten year. Data was collected in three school districts of which two of the districts had half-day kindergarten programs and one had a full-day kindergarten program. Fall and spring scores on three measures of reading performance, using the WRAT, the Chicago Reading Test, and the Woodcock reading comprehension paragraphs, were collected and analyzed along with the researchers' recorded observations of nine full days of general classroom instruction. The results from

descriptive findings and multiple regression analyses suggested that what is happening in the kindergarten classrooms, rather than the numbers of instructional hours of the school day, determined student's reading ability at the conclusion of their kindergarten year.

A mixed-method study conducted by Baskett, Bryant, White, and Rhoads (2005) examined the educational effects from an instructional shift from half-day kindergarten to full-day kindergarten in a low socioeconomic rural school district in Maine. Child development and educational measures, based on principles of the Informal Reading Inventory (McCarrier et al., 2000) and the district's Observation Survey used to assess the literacy skills of students in the primary grades, were used to evaluate differences in improvement scores between children enrolled in half-day kindergarten one year and full-day kindergarten the following year. In addition, surveys were sent to the parents of the full-day kindergarten students at the end of the first year that consisted of nine questions which were rated on a Likert scale. The survey questions asked parents their views about their child's academic performance, their social or maturational development, and if there were any benefits to the family that were a result of the extended day program. In total, 55 of 119 surveys were returned. To obtain data from the teachers' perspectives, the thirteen full-day and half-day kindergarten teachers were given surveys at the end of the first year requesting them to comment on the impact of full-day kindergarten programs in their classrooms.

The results from the parent and teacher survey ratings suggested a favorable opinion about the full-day program. Based on t-test reports for changed scores between full-day and half-day kindergarten educational measures, significant differences existed

in favor of the full-day program in reading, literacy skills, letter sounds, and story sequence. Teacher surveys showed themes about child behavior, academic performance and social relationships. Some teachers reported a positive increase in their students' behavior and emotional maturity whereas others noted an increase in difficult behaviors. There were also mixed feelings about the need for rest time to help maintain their students' focus. Most teachers did however, indicate an increase in their students' academic performance and they connected this academic success to creating a relaxing classroom environment, having more time to process lessons and to increased time for children's play. Although full-day kindergarten students demonstrated significantly higher achievement at the end of kindergarten as opposed to their half-day kindergarten counterparts, that advantage disappeared quickly by the end of first grade.

Zvoch, Reynolds, and Parker's (2008) large-scale study examined literacy data collected on students attending full-day and half-day kindergarten programs in a southwestern school district serving approximately 300,000 students per year. Of the 300 schools in the district, 188 provided kindergarten instruction. In the 2004-2005 school year, Title I monies were used to fund full-day kindergarten programs to children attending the district's most educationally disadvantaged schools. The aim of this study was to identify the effect of the kindergarten program model on students who received the instructional treatment (full-day kindergarten) for one school year. The sample population included students participating in the Title I funded full-day kindergarten programs (treatment condition) in 6 schools and half-day kindergarten students (control group) in six schools that fell just under the poverty level for Title I funds.

Using the Dynamic Indicators of Basic Early Literacy Skills (Good & Kaminiski, 2002) assessment, student literacy achievement on the subtests: Initial Sounds Fluency, Letter Name Fluency, Phonemic Segmentation Fluency, and Nonsense Word Fluency was evaluated 3-4 times throughout the school year. Results showed that kindergarten students participating in full-day kindergarten instruction showed a faster rate of literacy acquisition as compared to their half-day kindergarten peers. However, class size proved to be a pivotal factor in the students' literacy gains. For example, in classrooms where there were a small number of students, (< 20) the rate of literacy growth for full-day kindergarten students was twice that of their peers in the half-day program. The findings showed a statistically significant relationship between the kindergarten program model, class size, and literacy growth gains.

Elicker and Mathur (1997) and Morrow, Strickland, and Woo (1998) investigated the structure and quality of teacher and student interactions during kindergarten classroom activities and found that teacher-directed, large-group activity in both the full-day and half-day kindergarten program accounted for the greatest percentage of time. Conversely, research conducted by Hough and Bryde (1996) and Morrow et al. (1998), found that small-group instruction and small-group activities were provided and used more frequently in full-day programs versus half-day programs. In addition, Hough and Bryde found that full-day programs incorporated more individualized instruction compared to half-day programs. Findings from Karweit (1992) and Olsen & Zigler (1989) showed that what children are doing during the kindergarten day is more important than the length of the school day. For example, if time on task shows that

students are more thoroughly engaged in literacy practices and instruction is designed to address the needs of all level of learners, then teaching literacy in half-day program, where the students have maximum time allotted to literacy learning, can be as effective as teaching literacy in the full-day program where instruction does not maximize time on task.

The National Center for Education Statistics (U.S. Department of Education, 2003) conducted a special analysis examining children's classroom experiences and reading achievement in kindergarten and first grade. The researchers gathered data on the reading skills of students entering kindergarten, the quality of their home literacy environment, and the instruction the children received from their teachers at schools. The results showed that the resources children possess at the start of kindergarten, including their early literacy skills and the quality of their home literacy environment, directly correlate with their achievement in reading across kindergarten and first grade.

In addition, the National Center for Education Statistics (U. S. Department of Education, 2003) study revealed that the amount of total percentage time spent on whole class, small group, and individual activities were similar in a full-day and half-day kindergarten program. Teachers in both types of classes spent time each day on developing students' reading skills, which included letter recognition and matching letters to sounds. The difference found in a full-day program was the amount of time spent on these skills as well as on the conventions of print and vocabulary. In the public schools that offered both types of programs, the children attending full-day kindergarten made greater gains in reading than did the students enrolled in half-day kindergarten. A

similar study was conducted by Wolgemuth et al. (2006) using archival data to look at longitudinal academic achievement of students in full-day and half-day kindergarten attending elementary schools in moderately sized, middle-to-upper class cities in the United States. The 489 students in the sample attended full-day kindergarten or half-day kindergarten from 1995-2001. Of the 489 students, 283 attended half-day classes and 206 students attended the full-day kindergarten program. The curriculum in both programs were similar in that both programs operated small, ability group student centers as part of their mathematics and reading instruction and all kindergarten teachers met weekly to discuss and align curriculum. Also, the time devoted to reading instruction was two times greater than that allotted to mathematics.

The reading curriculum in both programs was based on the Open Court program and emphasized phonemic awareness. Reading instruction included an emphasis on segmenting and blending words by pronouncing and re-pronouncing words when beginning and endings of words were removed. In addition, daily “letters to the class” were presented and students were required to identify the letters of the day and circle specified words. Stories were read aloud to students and they practiced writing capital and lowercase letters and words as they were scaffolded by their teachers. Teachers also encouraged their students to be independent readers and to carry out other reading activities. End of year academic expectations for all kindergarten students included knowing capital and lower case letters, their sounds, and some sight words. Results showed that full-day kindergarten presented initial benefits on academic achievement, but

these benefits diminished relatively quickly and by the start of first grade, they had little practical value.

As the popularity of full-day kindergarten programs increases, educators and taxpayers remain steadfast in determining the effectiveness of both types of programs. Karweit (1992) argues that “The major challenge facing kindergarten is to provide a developmentally and individually appropriate learning environment for all kindergarten children” (p. 84). She also emphasized that lengthening the kindergarten day provides additional opportunities for learning, and how that time is actually being spent is what matters most. Furthermore, Meyer’s (1985) study showed that some half-day kindergarten programs offered more high-quality instructional time compared to full-day programs.

Several influential factors add to the decision making of whether school districts should invest in implementing full-day kindergarten programs. These factors include the availability of financial resources, building space, personnel to teach full-day kindergarten, and most importantly, knowing the significant short-term and long-term effects on students’ academic achievement. Valuable information has emerged from the studies reviewed thus far including the inconclusive findings of research regarding full-day and half-day kindergarten and the impact small group literacy instruction has on kindergarten students’ literacy achievement. More importantly, if it is not the time on task literacy teaching, but rather the quality and focus of small group targeted literacy instruction that are the critical factors in kindergarten students’ reading achievement, would these instructional practices make a difference in half-day kindergarten programs?

Early Literacy Targeted Support

Dorothy Strickland, a renowned reading expert and professor of education at Rutgers University, focuses much of her research on topics of early literacy interventions that are intended to positively influence the course of language and literacy development in children from birth through age eight. Her work provides information on the curricular components that are generally included in prevention programs for family literacy, pre-kindergarten, and kindergarten. She believes that no matter what skills a child brings with him or her to school, the learning opportunities in the classroom should be in place to support all levels of readers, especially those most at-risk (Farstrup & Samuels, 2002).

Strickland (2002) also recommends that reading prevention and intervention programs be incorporated in both the half-day and full-day kindergarten. These programs include essential elements considered vital to the overall implementation of the program and those components specifically related to the curriculum. The implementation components include the following: (a) Timing: early identification in preschool and in the early primary grades); (b) Time: more time on task and daily reading intervention; (c) Materials: use of texts that are appropriately leveled within a child's instructional reading range and are high interest; (d) Nature of instruction: lesson plans that follow a consistent plan or approach are carefully and purposely designed to meet the instructional needs of the students in an individualized or small-group format and include a variety of activities like rereading of previously read text; (e) Documenting and monitoring learning: the progress of each student is monitored and evaluated on a consistent basis; (f) Professional development: training is provided for teachers and volunteers providing instruction to

students in the intervention groups; and (f) Home-school connections: a systematic program of home support to support literacy instruction. Key curricular components in a literacy intervention program include an emphasis on the following: Language development with an emphasis on vocabulary and concepts, understanding about the functions of print, print awareness and concepts about print, literacy as a source of enjoyment, knowledge of narrative structure, storybook reading, knowledge of the alphabet and Phonemic awareness (Farstrup & Samuels, 2002, pp. 75-76). Likewise, Allington (2002) offers valuable insights on the importance of structuring time and resources to children most in need of literacy support in every type of school environment. He suggests a thorough evaluation of how time is being allocated for quality instruction in the school as the first step in leveling the playing field for beginning kindergarten students. Allington asserts that teaching children to read takes time and unfortunately children beginning kindergarten behind their peers have an uphill battle to win when catching up to their peers. Additionally, he believes that kindergarten classrooms that are print rich, with books and writing implements that immerse children in language and in the diversity of print we come upon in our everyday world are successful literacy environments for children, especially for our struggling readers.

Though expert literacy researchers like Allington (2002) and Strickland (2002) believe that materials, time on task, and reading intervention are critical to students' successful literacy development, others may not believe that emergent literacy instruction is equitable or easily addressed in classrooms where the quality and implementation of effective teaching practices are not aligned with both the academic and the affective

needs of beginning and developing readers. Wren (2002) asserts that a literacy gap at the early grades is relatively simple to remediate with diagnostic and focused instruction. Then Wren argues that effective teachers can assist children with deficient literacy skills. However, if a student's literacy instruction is not addressed early on, the gap will widen, confirming the Matthews Effect (Stanovich, 1986) that the best readers get better and the poorer readers get poorer. The gap in literacy achievement between struggling readers and their peers widens to the point that bridging it demands extensive, intensive, expensive, and frustrating remedial instruction. Findings from the past two decades (Lentz, 1988; Neuman & Dickinson, 2001; Snow, Burns, & Griffin, 1998; Torgesen, 1998; Whitehurst & Lonigan, 2001) show that children who get off to a poor start and who do not receive any literacy intervention seldom, catch up.

In an interview about the publication, *Putting Reading First* (Franke, 2002), Wren stated that "The lion's share of the research has focused on preventing reading difficulties, but that ignores the fact that some kids get to fourth grade or sixth grade or high school before we understand the depth of their reading difficulties" (¶ 2). Wren also believes the focus on early intervention is warranted, considering the number of studies which show that research-based instruction, beginning in kindergarten, significantly reduces the number of children who have subsequent reading difficulties. For this reason, it is important to evaluate the literacy practices occurring in kindergarten to identify students struggling in reading, and to implement targeted support (individualized or small group intervention) that increases the literacy achievement gains of these students.

Reading Recovery Intervention. Clay's (1966) acclaimed year-long study of 100 children in their first year of formal schooling in New Zealand enlightened educators internationally of the importance of early identification and remediation of struggling readers. Reading Recovery (Clay, 1993) is a short-term (12-20 week intervention intended to serve the lowest-achieving students in the bottom 20%) in first grade. The one-on-one tutoring is administered by trained Reading Recovery teachers to promote literacy skills, to decrease the number of first-grade students who are identified as struggling readers, and to prevent long-term challenges in reading.

Reading Recovery teachers are required to complete a one-year intensive university training program. During this training, teachers learn how to create individualized lesson plans to teach their students strategies to employ when decoding unfamiliar text. Strategic activities taught through a variety of methods include modeling, explicit teaching, prompting, and praising and are designed to help struggling students become self-regulatory readers.

Through careful observation during Reading Recovery training, teachers learn how to promote emerging reading skills by using what the student knows to help him or her learn new information. Each lesson focuses on principles of early literacy intervention and includes an emphasis on phonological awareness, phonics/decoding skills, vocabulary and word work, fluency, comprehension, and writing practice. The structure of each lesson is as follows: reading familiar and new stories, manipulating letters and words and writing and assembling stories. During the lesson, the teacher carefully monitors the reading behaviors of the student. Again, through observation, the

teacher is able to determine the most effective sequence of reading strategies to introduce to their students and help them become more independent.

In Reading Recovery (Clay, 1993), pull-out literacy sessions are 30-minutes, and occur on a daily basis during the school day. They are considered a supplement to the classroom curriculum. Although the structure of the New Zealand's kindergarten program differs from the traditional program found in the United States, Clay's research findings continue to offer insights on effective ways to reduce reading difficulties with the promising effects of early intervention.

Benjamin Bloom's 2 Sigma Study. Clay's research focused primarily on one teacher working with one student. Bloom, on the other hand, looked at the effectiveness of small group instruction. Bloom's (1984) study was pivotal in providing insights on alternative effective interventions in situations where individualized instruction wasn't a viable option. In his report, Bloom described a study by two doctoral students, Anania (1983) and Burke (1984), in which student learning, conducted in three different learning conditions, was compared. The purpose of this study was to search for methods of group instruction that were as effective as one-to-one tutoring. Two of the three learning conditions reviewed were Conventional and Master Learning. Both consisted of a class with 30 students and one teacher. In each of these classes one subject was taught and formative assessments were administered. The main difference between these two classes pertained to the assessment process. For example, in the Conventional learning condition, assessments were given periodically to evaluate students, whereas in the Mastery learning condition, formative assessments were given for feedback and followed

up with corrective procedures. Additional parallel assessments were administered to evaluate the extent to which students mastered the subject content. The third learning condition involved one-to-one or small group (two to three students) tutoring. The students in this learning condition were instructed by a good tutor, given formative assessments, feedback, and corrective procedures. In addition, the parallel formative assessments aligned with the ones given to students in the Mastery Learning group. Students demonstrating previous achievement in the subject area and showing similar attitudes, interests, and results on their initial aptitude test scores, were randomly assigned to the three learning conditions. The amount of instructional time did not differ among the three groups except for the corrective work in the mastery learning and tutoring groups.

Anania (1983) conducted the same study with four different samples of students in grade 4, 5, and 8 with the subject matters of Probability and Cartography. The instructional treatment in these subsequent studies included 11 periods of instruction over a three-week block of time. The results showed an astounding difference in final achievements measures under the three learning conditions:

Using the standard deviation (σ) of the control (Conventional) class, it was typically found that the average student under tutoring was about two standard deviations above the average of the control class (the average tutored student was above 98% of the students in the control class). The average student under mastery learning was about one standard deviation above the average of the control class (the average mastery learning student was above 84% of the students in the control class). (Bloom, 1984, p. 4)

In addition, 90% of the students who were tutored secured the level of summative achievement attained by only the highest 20% of the students under conventional

instruction conditions, whereas only 70% of the students in the mastery learning condition attained the same level. This study shows that the average student working in a one-on-one tutoring situation performed two sigmas above the average control students instructed under the Conventional group method design of instruction. Bloom's findings provides insights on the importance of discovering ways to increase achievement gains under more practical and realistic conditions versus the individualized tutoring sessions used in programs like Reading Recovery (Clay, 1993) which requires substantial financial and time commitments.

Elfrieda Hiebert's three on one study. Drawing upon research on emergent literacy and principles associated with Reading Recovery, Hiebert, Colt, Catto, and Grury's (1992) study considered three perspectives in determining the effectiveness of restructuring instructional practices to help low-performing first-grade students attain literacy proficiency. This study addressed a gap in research by focusing on instructional interventions that matched theory and practice. Hiebert et al. (1992) evaluated the performance gains of students participating in a literacy intervention program offered at a restructured Chapter 1 school located in a rural district on the outskirts of a large city. The shift in instructional literacy practices in the Chapter 1 school included the implementation of an intervention program that provided daily participation in meaningful literacy events and scaffolded instruction in word level strategies (p. 549). In addition, the number of students the teachers worked with during a 30-minute literacy class was reduced to allow for small group instruction.

To evaluate students' performance gains, three perspectives were considered. The first perspective included the number of first-grade students participating in the study who developed into proficient readers and writers and reached absolute levels of literacy. This level of proficiency exceeded the achievement goals established in other intervention programs like Reading Recovery (Clay, 1993), in which students are expected to reach literacy levels commensurate with the average level of their peers after 12-20 weeks of specialized reading instruction. The second perspective considered student performance in the restructured Chapter 1 school to student performance in the district's regular Chapter 1 program. Finally, the third perspective considered student performance in comparison to those of their peers who demonstrated higher literacy skills at the start of the school year and did not qualify for Chapter 1 program services.

In Hiebert's et al. (1992) study, the regular Chapter 1 program incorporated the Whole Language approach to reading instruction. This meant that book sets were used to create literature activities as opposed to using a commercially produced text series. The teacher-developed curriculum included activities that met each of the district's six core objectives: oral communication, writing process, study/reference skills, reading process, literary content, and attitude development.

The restructuring design for the new Chapter 1 school was developed by Chapter 1 teachers and university-district team members. Changes to the existing framework were made after extensive discussions between both parties. The literacy intervention program offered at the restructured Chapter 1 school followed many of the basic tenets of Whole Language like students' daily participation in meaningful language experience,

both spoken and written, but also included an added emphasis on embedding word-level strategies. The established curriculum goals required children to read and write grade-appropriate text fluently. Therefore, books were ordered according to their difficulty level and prominent word pattern usage, teachers used data gathered from observations and interactions with their students to inform instruction, students read predictable books multiple times practicing one-to-one correspondence, and wrote in their journals. In addition, instructional time was structured to enable teachers to work with smaller groups of children. More specifically, the teacher worked with half of the students for two 15-week periods, while a teaching assistant worked with the other students. At the midpoint of the year, the students switched groups and worked with the other teacher.

At the end of the school year, the students participating in the study (Hiebert et al., 1992) representing all three perspectives (students participating in the regular Chapter 1 program, the restructured Chapter 1 program, and their classmates who did not qualify for intervention services) were assessed on identical sets of text and word-level reading and writing measures. Each assessment was given in the same order to all groups in two periods (about 15 minutes each) on consecutive days. Reading words and writing assessments were administered on the first day and writing words and reading text were administered on the second day. Findings from revealed that 77% of the initially low-performing students participating in the restructured Chapter 1 program were able to read a primer passage fluently and 50% of the student could read a first grade passage by the end of their first grade year. In addition, 80% of the students moved from the bottom quartile of achievement performance and 18% progressed to the top half. Most

importantly, significant achievement gains were made for students who began the year with limited literacy skills. Although the authors were not able to determine which of the changes to the restructured Chapter 1 school contributed to the impressive student achievement gains, their findings suggested that students who were “initially in the lowest quartile benefited from focused small-group work and did not require one-to-one tutoring” (Hiebert et al., 1992, p. 565).

Response to Intervention. Response to Intervention (RtI) is a new approach used to identify students with specific learning disabilities and is a significant change from previous methods of determining student eligibility for special education support services under the Individuals with Disabilities Act (IDEA). Prior to RtI, a discrepancy model for identifying students with learning disabilities was used to establish eligibility. This meant that a student having a “severe discrepancy between achievement and intellectual ability” (U.S. Department of Education, 1977, p. G1082) was identified as having a learning disability and afforded special education support. With the RtI model, the shift in special education law now emphasizes the process of early identification of struggling students and provides these students with support and intervention before a full case study (a battery of standardized tests given to examine scores for discrepancies between intelligence and achievement) is conducted.

There are many benefits related to early identification of struggling students and the implementation of prevention programs. First, time is a major factor. Early identification of students needing reading support allows for instructional interventions to begin as early as kindergarten. Second, the RtI model allows for more students who

struggle in reading to receive intervention services and RtI promotes the use of high quality instructional intervention programs (Hale, 2008). This is especially important for reading teachers who are considered integral members of the literacy support team because more than 80% of students qualifying for special education have difficulty with reading (Lyon, 1995). RtI also aligns with the provisions of No Child Left Behind, which calls for the implementation of scientifically-based research instruction to reduce the incidence of reading difficulties. Third, an important aim for RtI is to coordinate services delivered by a variety of support personnel at multiple levels or tiered interventions, including special education teachers, reading specialists, and paraprofessionals. An added benefit for including these additional support teachers in the framework is to reduce the large number of students receiving special education services. The implementation of RtI shows that by increasing the number of instructional providers and educating teachers on effective ways to teach struggling readers, RtI is successful in enabling teachers to be more proactive in providing literacy intervention to increase students' literacy achievement (Hale, 2008).

Emergent literacy research clearly shows that one-on-one instruction in literacy interventions provides the highest literacy gains (Clay, 1979). To address financial costs, other researchers (Allington, 2009; Bloom, 1984; Hiebert et al., 1992) have studied more practical initiatives to design literacy interventions that enable more students to receive strategic literacy support. Of these studies, several have shown that targeted, small group instruction accelerates academic success. Still, the data from multiple studies is not conclusive in answering the question of how best to prevent students from struggling in

reading or what intervention system or set of strategies will best close the reading achievement gaps. Thus, the need for further research on emergent literacy interventions must continue in order to draw additional conclusions and verify findings. The results may impact school budgets and the hiring of more specialized teachers to train and support teachers in their work with kindergarten literacy learners.

The conceptual framework guides this study and confirms the need to investigate the relationship between the reading gains of struggling readers receiving literacy intervention in half-day and full-day kindergarten and how their teachers' instructional literacy practices are actualized. This literature review leads to the following research questions:

1) What is the reading achievement gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms?

(2) Do the reading achievement gains of struggling readers in full-day and half-day kindergarten differ?

Ho: The mean gain letter sound scores of struggling readers in half-day kindergarten will not differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

Ha: The mean gain letter sound scores of struggling readers in half-day kindergarten will differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

(3) What is the nature of observed teachers' literacy practices of full-day and half-day kindergarten teachers?

(4) Are teachers aware of the instructional literacy practices they use during the literacy block when teaching students in full-day or half-day kindergarten?

(5) Is there a correlation between teachers' use of literacy strategies and the gains made in reading achievement by the struggling readers they teach?

Ho: There is no relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Ha: There is a relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Summary

The comprehensive review of literature in Chapter II develops a theoretical framework grounded in constructivism and verifies the need for further investigation of the relationship between effective literacy instruction and targeted intervention for struggling readers in full-day and half-day kindergarten programs. Chapter III describes the demographics of the selected study site and describes the methodology that was employed for data collection and analysis.

CHAPTER III
RESEARCH METHODS

Introduction

To situate the methodological approach for the proposed study, this chapter provides a description of the selected research design and the procedures that were used to gather data. The description includes information regarding the school setting, participants, kindergarten programs, student and teacher instrumentation, data collection, and assessment administration procedures. Finally, the data analysis that was employed is explained.

Purpose of the Study

The purpose of the study was to gain insights on emergent literacy development and key factors contributing to reading achievement for students attending full-day and half-day kindergarten programs. More specifically, the focus was on investigating the impact that literacy instruction in full-day and half-day kindergarten had on literacy achievement of struggling readers receiving literacy intervention. To achieve this, the following research questions were addressed in this study:

- 1) What is the reading achievement gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms?
- (2) Do the reading achievement gains of struggling readers in full-day and half-day kindergarten differ?

Ho: The mean gain letter sound scores of struggling readers in half-day kindergarten will not differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

Ha: The mean gain letter sound scores of struggling readers in half-day kindergarten will differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

(3) What is the nature of observed teachers' literacy practices of full-day and half-day kindergarten teachers?

(4) Are teachers aware of the instructional literacy practices they use during the literacy block when teaching students in full-day or half-day kindergarten?

(5) Is there a correlation between teachers' use of literacy strategies and the gains made in reading achievement by the struggling readers they teach?

Ho: There is no relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Ha: There is a relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Study Design

In this study, quantitative methods were used to establish the individual achievement gains of students receiving literacy intervention support who are enrolled in full-day and half-day kindergarten programs. These methods included both the observations of kindergarten teachers' literacy practices and retrieval of the district's archived assessment data on full-day and half-day kindergarten students.

Observations of teachers' literacy practices include three observations of each of the seven kindergarten teachers (teaching full-day or half-day kindergarten programs) employed in the designated school district who consent to participate in the study. More specifically, the researcher spent three full days in each of the full-day and half-day kindergarten classrooms observing the instructional interactions between the teacher and his or her students. This required the researcher to conduct a total of 21 observations during the school day (8:00 a.m.-2:50 p.m.) between April and June (approximately seven weeks). The focus of each observation was to collect data on the teachers' observed use of instructional literacy practices, both during and outside of the designated literacy block, using six rubrics from the Early Language & Literacy Classroom Observation K-3 Tool (2008). Furthermore, after each observation, the researcher asked the kindergarten teacher to evaluate his or her use of instructional literacy practices by completing a copy of the same Early Language and Literacy Classroom Observation K-3 Tool (2008) instrument. This data allowed the researcher to examine teachers' awareness of the instructional literacy practices they use when teaching students in full-day or half-day kindergarten.

Additional quantitative data consisting of the archived literacy test scores on the AIMSweb Test of Early Literacy-CBM (TEL) that was administered to the district's kindergarten students were collected and analyzed. While data from the archived test scores were used to calculate the growth gains of struggling readers receiving literacy intervention in full-day and half-day kindergarten, data collected from the Early Language and Literacy Classroom Observation K-3 Tool (2008) instrument was used to

answer research questions related to teachers' use of instructional literacy practices.

Collecting both types of data was essential in understanding the impact literacy interventions and teachers' use of instructional literacy practices have on achievement gains of students who are struggling readers in full-day and half-day kindergarten.

Data was gathered at each of the three elementary schools in seven classrooms with seven teachers who consented to participate in the study. In essence, this study incorporated three mini-studies at three different research locations and utilized a pattern matching approach to reviewing the findings in order to support a general conclusion. More specifically, treating each school as an individual study, allowed for the comparison of full-day and half-day kindergarten students' reading achievement gains at each site. A pattern matching approach was then utilized to examine if outcomes of tested hypothesis related to student gains were the same across all three settings. Using this approach allowed for within study replication logic in order to examine the impact of half-day and full-day kindergarten on the dependent variable, the nature of teachers' observed literacy practices. Comparing multiple individual observation sites supported general conclusions about possible patterns among kindergarten classrooms.

Setting and Participants

The setting for the study was in a suburban district neighboring a large urban city in the Midwest. The total student enrollment for this district was slightly over 2,000. There are four schools within this district, three of which are elementary schools. These three K-4 elementary schools and their kindergarten teachers, who serve approximately 120 students, were the focus of the data collection. To ensure confidentiality of the

selected district, the schools participating in the study are identified as Elementary School 1, 2 and 3 respectively. Demographic and kindergarten program information for each school is provided in Table 1.

Literacy Intervention Models

While this study did not focus on the instructional design or effectiveness of the literacy intervention programs at each of the three elementary schools, it is important to provide a brief description of the services available for struggling readers in kindergarten. To ensure confidentiality of the district and kindergarten teachers, the descriptions of the intervention programs have not been associated with a specific school in the district.

To begin, all struggling readers attending full-day and half-day kindergarten received literacy intervention from September 2010 through May 2011. At each of three schools, administrators, reading specialists and kindergarten teachers examined the data collected from the beginning of the year assessments and considered the instructional needs of their students when designing and implementing literacy support programs. Although the literacy intervention programs are not identical, the goals are the same. That is, to provide effective instructional practices that support students' reading and writing literacies.

Table 1

Demographic of Kindergarten Program

	School 1	School 2	School 3
White	94.6	87.1	92.9
Black	0.5	0.8	1.4
Hispanic	0.5	2.1	3.1
Asian/Pacific Islander	2.1	6.1	2.0
Native American	0.0	0.0	0.0
Multi-racial / Ethnic	2.3	4.0	0.7
Limited English Proficiency Rate	0.3	1.3	1.0
Low-income	0.3	0.8	1.7
Full-day Kindergarten			
8:00 a.m.- 1:45 p.m. (Monday)	13	21	14
8:00 a.m. -2:50 p.m. (Tuesday- Friday)		20	
Half-day Kindergarten—Mornings			
8:00 a.m. -10:15 p.m. (Monday)	17	15	11
8:00 a.m.- 10:55 p.m. (Tuesday- Friday)			
Half-day Kindergarten—Afternoons:			
11:30 a.m. - 1:45 p.m. (Monday)	19	N/A	13
11:55 a.m.- 2:50 p.m. (Tuesday- Friday)			
Weekly Language Arts			
Instructional time allocation guidelines for both full-day and half-day kindergarten programs.	70-90 Minutes	70-90 minutes	70-90 minutes

In one school, the readings specialists provided a pullout literacy intervention program to struggling reading in kindergarten from September to December. The small group literacy intervention lessons focused on (a) letter-identification, (b) letter-sound associations, and (c) concepts about print. Instructional materials included alphabet charts, big books, and manipulatives for letter sorting activities. The days and times of the pullout intervention were based on the teachers' daily schedule. Full-day students struggling in reading received literacy intervention four days a week for 20 minutes (80 minutes), whereas half-day students received intervention three days a week for 30 minutes (90 minutes). It is important to note that some of the intervention lessons for the half-day kindergarten students were cancelled due to scheduling conflicts with special school events.

The model for literacy intervention changed during the second half of the school year. The literacy intervention model from January through May for struggling readers in full-day and half-day kindergarten was provided using a push-in model in each of the kindergarten classrooms. More specifically, each teacher received 20 minutes of push-in support from the reading specialists, four days a week. The focus for literacy instruction for the struggling kindergarten readers included two days of guided reading lessons, one day of word study activities, and one day of focused writing instruction. Instructional literacy kits developed by the district's reading team were used throughout the year. On the fifth day, the reading specialists and each of the classroom teachers meet for 20 minutes to discuss students' literacy needs and to plan literacy lessons.

At another school in the district, all kindergarten students received 30 minutes of daily literacy support beginning the third week of September in 2010. The reading specialists enacted a literacy intervention plan that included push-in support for the half-day kindergarten students and small group, pullout support for the full-day kindergarten students. The focus for the literacy intervention included (a) letter identification, (b) letter-sound association, (c) phonemic awareness, (d) phonics, (e) reading, and (f) writing. Instructional literacy kits developed by the district's reading team were implemented in October and guided reading books were added in January. Based on the results from the district's spring assessments, literacy intervention for struggling readers in both full-day and half-day kindergarten continued through the end of May 2011.

Struggling readers in kindergarten at a third school in the district received support through a pullout literacy intervention program from September 2010 through May 2011. The reading specialists at this school worked with two groups of struggling readers from the full-day and the half-day kindergarten classrooms in the reading resource room. Each literacy lesson was fifteen minutes in length and focused on (a) letter identification, (b) letter-sound association, (c) phonemic awareness, (d) phonics, (e) guided reading, and (f) writing. Instructional literacy kits developed by the district's reading team were used throughout the year. In May, the reading specialists extended the length of the literacy lessons to 25 minutes for struggling readers requiring one to one intervention. Beginning in March 2010, the kindergarten teachers met once a week with the reading specialists to discuss students' learning needs and to plan literacy lessons.

Description of Measures

The proposed study will include data collected from different measures. The first is from the universal screening assessment known as Curriculum-Based Measurement (CBM) that consists of standardized, one-minute fluency measures of fundamental literacy skills used by teachers and psychologists to progress monitor student achievement (Stecker, Fuchs & Fuchs, 2005). The early literacy assessment probes, derived from testing procedures in the Dynamic Indicators of Basic Measurement (DIBELS: Good, Gruba et al., 2002; Kaminski & Good 1998), are considered a downward extension of Curriculum-Based Measurement. The district's CBM's are supplied by AIMSweb, an assessment and data management system.

AIMSweb's Test of Early Literacy-CBM (TEL) aligns with the recommendations put forth by the National Reading Panel (2000). This committee of researchers identified several essential early literacy skills and recommended that each one be measured in kindergarten and the beginning of first grade. These skills include Phonemic Awareness and fundamentals of Phonics (letter names and sounds and the ability to read nonsense words). AIMSweb measures have been found to be predictive of later reading achievement and are sensitive to responsiveness to early literacy instruction and interventions. They are also considered to be reliable tools for monitoring student progress across time (AIMSweb, 2010). The test-retest reliability for Letter Naming Fluency is .90 and .83 for Letter Sound Fluency (Elliot, Lee, & Tollefson, 2001). The reliability using an alternate form for Letter Naming Fluency is .89 and .90 for Letter Sound Fluency (Good et al., 2004). The reliability of both measurements is considered

acceptable by using Cronbach's Alpha for internal consistency which measures the internal consistency or average correlation of scales to assess its reliability. Data collected from the TEL assessments are used to establish a student's base line of early literacy skills to monitor growth gains, and to identify students who are considered to be at-risk for reading failure and/or require intervention support through Response to Intervention (RtI) or special education services.

The advantages of using CBM assessment probes are the ability to quickly evaluate a group of students and identify at-risk students who require instructional intervention (Shin, 1989). Although there has been criticism regarding the use of DIBELS assessment measures (Good, Gruba et al. 2002; Kaminski & Good 1998) as a valid predictor of current and subsequent reading comprehension (Riedel, 2007), the participating district uses AIMSweb's (2010) one-minute fluency measures, which are similar in design, to monitor students' reading progress and to identify students requiring intervention services. Thus, the researcher will use the available data collected from the participating district.

Student Instruments

AIMSweb assessment probes are typically administered to individual students three times a year by examiners trained in the standardized administration procedures. The following table depicts the recommended early literacy assessment schedule for students in kindergarten.

Table 2

Recommended Early Literacy Assessment Schedule for Kindergarten Students

Fall	Winter	Spring
Letter Naming Fluency (LNF)	Letter Naming Fluency (LNF)	Letter Naming Fluency (LNF)
	Letter Sound Fluency (LSF)	Letter Sound Fluency (LSF)
	Phonemic Segmentation Fluency (PSF)	Phonemic Segmentation Fluency (PSF)
	Nonsense Word Fluency (NWF)	Nonsense Word Fluency (NWF)

The number of assessments given increases during certain points of the developmental learning period, thus where one measure is routinely given in the fall of kindergarten, four measures can be administered over the course of the winter and spring of a student's kindergarten year. Furthermore, it is important to make known that the recommended assessment schedule can be adjusted to meet the needs of a district's learners. For example, in this school district, several students enter kindergarten with knowledge of letter sounds, therefore the LSF assessment is administered to all kindergarten students in the fall (September) and winter (January) benchmarking period. For the purpose of this study, the researcher planned to collect and analyze archived data on letter-naming fluency and letter-sound fluency and thus, the operational definition for reading gains will be the kindergarten students' mean gain scores on the AIMSweb's assessment measures used in this study. Both tests are administered individually and

considered to be predictive of first-grade reading growth (Stage, Sheppard, Davidson, & Browning, 2001).

The Letter Naming Fluency (LNF) task is a standardized measure of letter recognition and identification and is commonly identified as the best single indicator of risk for reading failure (AIMSweb, 2010). Kindergarten students are timed for one minute to identify as many upper and lower case letter names as possible. If a student doesn't respond within three seconds, the examiner is instructed to provide the correct response and prompt the student to continue along. The examiner puts a slash (/) through letters named incorrectly on the Letter Naming recording sheet and places a bracket (]) after the last letter named at the end of one minute. The student copy of Letter Naming fluency is identical to the examiner's copy of Letter Naming Fluency.

The Letter Sound Fluency (LSF) task assesses a student's ability to produce the letter sounds for both Upper-case and lower-case letters in one minute. LSN has equal or even better predictive ability to later general reading skills than the DIBELS Phonemic Segmentation measure (AIMSweb, 2010). Again, the examiner is instructed to provide the correct answer if the student fails provide a response within three seconds. The examiner also uses a slash (/) to indicate an incorrect response and a bracket (]) at the end of one minute.

Data Collection Procedures

The Early Language and Literacy Classroom Observation (ELLCO) by Brookes Publishing (2008) were completed on each of the full-day and half-day kindergarten teacher participating in the study. The researcher used two identical observation

checklists from the ELLCO assessment tool to record the type and frequency of the observed literacy practices both during and outside of the designated classroom literacy block. This meant that during the designated literacy block, one of the observation checklists was used to record observed data and a second checklist was used to record observed literacy practices that were employed outside of the literacy block.

ELLCO is a three-part classroom observation tool specifically designed for kindergarten through third grade classrooms. Its primary use is to evaluate and strengthen the quality of classroom instruction and build better literacy programs. ELLCO systematically focuses on the role of environmental factors in early language and literacy development.

In its most recent revision, significant changes were made to the integration of the Literacy Environment Checklist and Literacy Activities Rating Scale. Although the previous instrument (Early Language and Literacy Classroom Observation Toolkit, 2002) was intended to be used as an observation tool to rate the quality of language and literacy instruction in pre-kindergarten and primary-grade classrooms, the majority of the items pertained to preschool classrooms with only a few items focused on practices and approaches used in beginning reading and writing instruction (Smith, Brady & Clark-Chiarelle, 2008). The changes in the design of the 2008 research edition of the ELLCO were based on responses from previous users, field experiences in the primary school setting, and an in-depth review of the literature.

To further explain the key components of the revised observation tool, Table 3 illustrates the five major constructs that will be examined in this study along with their

corresponding indicators as outlined in the ELLCO's K-3 tool User's Guide (Smith, Brady & Clark-Chiarelle, 2008). It is important to note that although data for each of the six major constructs were collected, emphasis was placed on analyzing the data in the indicators of the major constructs of Development of Reading Fluency, Sounds to Print, Strategies to Build Reading Vocabulary, Strategies to Build Reading Comprehension, Writing Environment, and Focused Writing Instruction as these aligned best with the purpose of this study.

Administration Procedures

The procedures for rating each of the indicators, consisting of 18 items, involve aligning evidence from the observation with the ELLCO's rubrics. The rubrics contain anchor statements and descriptive indicators to guide the researcher in assigning scores using a numerical leveling system from 1 (lowest) to 5 (highest). The levels and the key descriptors are as follows: 5-Exemplary (compelling evidence), 4-Strong (sufficient evidence), 3-Basic (some evidence), 2-Inadequate (limited evidence) and 1-Deficient (minimal evidence). If the evidence falls between two levels, it is recommended that the evaluator looks closely at the descriptors until a match between the evidence and a descriptor can be identified.

Calculating Scores

Subtotals for each of the following major constructs, the Language Environment, Books and Reading, and Print and Writing are calculated to form an overarching subscale score for Language and Literacy, representing a total of 55 points. To further explain this, the subtotal from each major construct is determined by taking the sum of all

indicators in that section. Finally, a level of proficiency is determined by dividing the total number of points assigned for the subscale by the number of indicators included in it.

Table 3

Characteristics of Observation Categories

Section I Classroom Structure (4 indicators)	Section II Curriculum (3 indicators)	Section III The Language Environment (3 indicators)	Section IV Books and Reading (5 indicators)	Section V Print and Writing (3 indicators)
<i>Organization of the Classroom</i>	<i>Integration of language and literacy</i>	<i>Discourse Climate</i>	<i>Characteristics of Books</i>	Writing Environment
<i>Contents of the Classroom</i>	<i>Opportunities for independence in learning</i>	<i>Opportunities for Extended Conversations</i>	Development of Reading Fluency	Focused Writing instruction
<i>Classroom Management</i>	<i>Recognition of Diversity in the Classroom</i>	<i>Efforts to Build Vocabulary</i>	Sounds to Print	<i>Students' Writing Products</i>
<i>Professional focus</i>			Strategies to Build Reading Vocabulary	
			Strategies to Build Reading Comprehension	

Language and Literacy Score Form:

Books and Reading	Score
Development of Reading Fluency 5 4 3 2 1	4
Sounds to Print 5 4 3 2 1	3
Strategies to Build Reading Vocabulary 5 4 3 2 1	2
Strategies to Build Reading Comprehension 5 4 3 2 1	3
Subtotal	12

(4 Indicators)

Print and Writing	Score
Writing Environment 5 4 3 2 1	4
Focused Writing Instruction 5 4 3 2 1	2
Subtotal	6

(2 Indicators)

Subscale Total = 18

Subscale Total ÷ Total Indicators
= Overall Score

12 (*Books and Reading Subtotal*)

+

6 (*Print and Writing Subtotal*)

÷

6 (*Total Indicators*)

Overall Score = 3

Figure 1. Sample Scoring of Language and Literacy Results

Using the ELLCO numerical leveling system 1-Deficient (minimal evidence), 2-Inadequate (limited evidence), 3-Basic (some evidence), 4-Strong (sufficient evidence), and 5-Exemplary (compelling evidence), a score of 3 corresponds to a proficiency rating level of Basic-showing some evidence (Smith, Brady, & Clark-Chiarelli, 2008, p. 33). Subsequent examination of the indicators will help identify areas of strengths and weaknesses. For this example, the major construct Books and Reading (subtotal 14) is relative strength, the major construct The Language Environment (subtotal 10) is somewhat weaker and the major construct Print and Writing (subtotal 9) is the weakest. Analysis of the areas of strengths and weakness within each major construct provides key information that can be used to target effective professional development for classroom teachers.

The reliability of data gathered between 2002-2007 from the ELLCO's data analysis was conducted to investigate the internal consistency of the Classroom Observation (n = 646), Literacy Environment Checklist (n = 616), and the Literacy Activities Rating Scales (n = 547) in the ELLCO Toolkit Research Edition using larger sample sizes. Cronbach's alpha coefficients for the General Classroom Environment subtotal (r = .84), Language, Literacy, and Curriculum subtotal (r = .89), and Classroom Observation Total Score (r = .93) indicate good to excellent internal consistency. The alpha coefficients for the Literacy Environment Checklist, Books (r = .76), Writing subtotal (r = .75) and Literacy Environment Checklist Total Score (r = .84), all indicate good internal consistency. Cronbach's alpha for the Literacy Activities Rating Scale, Full-Group Book Reading subtotal (r = .90), indicates very good internal consistency

while the Writing subtotal ($r = .74$, and the Literacy Activities Rating Scale total score ($r = .72$) showed good internal consistency (Smith, Brady, & Clark-Chiarelli, 2008, p. 78).

Students' Early Literacy Test Data

The data gathered from the Test of Early Literacy-CBM came from the district's archival sources. The district assesses all students on all measures of the Test of Early Literacy-CBM irrespective of this research study. To ensure confidentiality of participants' test data for the duration of the study, a coding method to identify student names with their scores was used to protect personal information. This data was stored in a locked file that was only accessible to the researcher. Data codes will be kept for two years after the completion of this study to allow for future research. At this time, the data and codes will be destroyed.

Prior to the start of the proposed study, consent was obtained from the appropriate district and building administrators. When administrators agreed to participate and signed the consent form, the researcher contacted teachers to participate in the study. A consent letter was distributed to general education kindergarten teachers in each of the three elementary schools. Kindergarten teachers in both full-day and half-day programs who provided signed consent for participation in the study were observed in the respective kindergarten classrooms by the researcher three times during the data collection period between April and June.

In addition, the participating district agreed to release data gathered from their archives of universal screening procedures, and from their Test of Early Literacy-CBM

used to assess kindergarten students in the fall and winter of the 2010-2011 academic school year. There were eight Kindergarten teachers employed in this district. The goal was to have all focal teachers provide consent to participate. The researcher provided and explained the Early Language and Literacy Classroom Observation checklist to each of the participating teachers with the understanding that this checklist was to be completed by the researcher during each scheduled observation and by the classroom teacher after each observation. More specifically, the researcher met with each teacher individually or in a small group within each school to explain the observation checklist.

Data Analysis

Based on the five research questions, the following guidelines were used for framing the data collection and for determining results.

What is the reading achievement gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms? The gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms was determined by subtracting the fall scores on the AIMSweb Test of Early Literacy-CBM (TEL) Letter Sound Fluency from the spring scores on the same measure.

Do the reading achievement gains of struggling readers in full-day and half-day kindergarten differ? Using the T-Test to compare the mean reading achievement gains of both the full-day and half-day kindergarten students determined if there was a significant difference between these groups.

What is the nature of observed teachers' literacy practices of full-day and half-day kindergarten teachers? The quantitative data collected from the ELLCO K-3 Tool,

consisting of the average scores obtained from each of the three classroom observations and the overall level of proficiency rating in each of the related indicators (Development of Reading Fluency, Sounds to Print, Strategies to Build Reading Vocabulary, Strategies to Build Reading Comprehension, Writing Environment, and Focused Writing Instruction) determined the quality of observed literacy practices of full-day and half-day kindergarten teachers.

Are teachers aware of the instructional literacy practices they use during the literacy block when teaching students in full-day or half-day kindergarten? In order to determine teachers' awareness of instructional literacy practices, data collected from the observation checklist completed by the researcher was compared with the data collected from the observation checklists completed by each full-day and half-day kindergarten teacher.

Is there a correlation between teachers' use of literacy strategies and the gains made in reading achievement by the struggling readers they teach? Both types of quantitative data (teacher observation ratings and the archived AIMSweb Test of Early Literacy-CBM (TEL) assessment data) were examined to answer this research question. The growth gains in reading of struggling readers receiving intervention in full-day and half-day kindergarten from each school were compared to the calculated proficiency levels given to each full-day and half-day kindergarten teacher to determine if a correlation exists.

Summary

The purpose of this chapter was to describe the setting, population, data instrumentation, and methodology that were used to collect and analyze data obtained from the Test of Early Literacy CBM assessment and the Early Language and Literacy Classroom Observation K-3 Tool. From the quantitative data collection, the researcher expected to confirm the hypothesis that (a) there was a difference between struggling readers receiving literacy intervention support in full-day kindergartens in comparison to struggling readers receiving literacy intervention support in half-day kindergartens; and (b) a relationship existed between the quality of the implementation of a teacher's use of literacy strategies and struggling readers' literacy gains. Chapter IV provides a detailed report of the analysis and summarization of the findings.

CHAPTER IV

RESULTS

Summary of the Study

The purpose of this research study was to investigate the impact that literacy instruction and reading intervention have on struggling readers in full-day and half-day kindergarten. The research also examined the nature of observed teachers' literacy practices and teachers' awareness of the instructional literacy practices they implement in the classroom.

The study took place in April and May of 2011 (approximately seven weeks) and included full participation from each of the seven kindergarten teachers employed at the three elementary schools in the selected district. The researcher considered each of the three elementary schools as its own mini-study and analyzed schools separately for research questions one and two in order to view a pattern among the mini studies to support a general conclusion. To ensure confidentiality, the data results from each school are identified as Elementary School 1, 2 and 3 respectively. In addition, the presentation of results corresponds with each of the five research questions guiding this study.

Research Questions

(1) What is the reading achievement gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms?

(2) Do the reading achievement gains of struggling readers in full-day and half-day kindergarten differ?

Ho: The mean gain letter sound scores of struggling readers in half-day kindergarten will not differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

Ha: The mean gain letter sound scores of struggling readers in half-day kindergarten will differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

(3) What is the nature of observed teachers' literacy practices of full-day and half-day kindergarten teachers?

(4) Are teachers aware of the instructional literacy practices they use during the literacy block when teaching students in full-day or half-day kindergarten?

(5) Is there a correlation between teachers' use of literacy strategies and the gains made in reading achievement by the struggling readers they teach?

Ho: There is no relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Ha: There is a relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Presentation of Results

The National Reading Panel (2000) identified literacy skills that are considered to be essential in helping students learn to read and recommended that these skills be measured in kindergarten and at the beginning of first grade. Identifying letter names and

sounds are two skills included on the list and are typically evaluated during a student's kindergarten year. The participating district in this study administers AIMSweb's Test of Early Literacy- CBM (TEL) measures to evaluate kindergarten students' knowledge of letter names and letter sounds. These measures have been found to be predictive of later reading achievement, are sensitive to responsiveness to early literacy instruction and intervention, and considered to be reliable tools for monitoring student progress across time (AIMSweb, 2010).

Although this researcher intended to analyze archived data from AIMSweb's Test of Early Literacy-CBM for Letter Naming Fluency and Letter Sound Fluency assessments that were administered in the fall and winter testing periods, winter data for Letter Naming Fluency was not available. The reasons provided to the researcher included the large number of students demonstrating mastery of letter naming before the winter testing period and the district's belief that there is a stronger correlation between letter sound fluency and subsequent reading success. The district provided the researcher with archived data on letter sound fluency for fall, winter, and spring assessment periods for all kindergarten students. To determine the reading gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms, the researcher subtracted the fall scores on the AIMSweb Test of Early Literacy-CBM (TEL) letter sound fluency assessment from the spring scores on the same measure.

The data presented in Table 4 shows the reading gains made by full-day and half-day kindergarten students receiving intervention.

The results in Table 4 reveal some interesting patterns. On average, full-day kindergarten students demonstrated the ability to identify six letter sounds on the fall (pretest) assessment and 45 letter sounds on the spring (posttest) assessment, an average increase of 38 letter sounds per minute. Similarly, half-day kindergarten students on average correctly identified six letter sounds on the fall assessment and 46 in the spring, resulting in an average reading gain of 40 letter sounds per minute. It is also interesting to note that although full-day students outperformed half-day students on the letter sound fluency pretest in the fall, half-day students in two of the three schools scored higher on the posttest in the spring. Thus, half-day students showed an overall higher reading achievement gain in this area of literacy.

Table 4

AIMSweb Letter Sound Fluency Scores for Kindergarten Students Receiving Literacy Intervention as Reported by Elementary School and by Kindergarten Program

School	n	Mean Pretest (Fall)	Mean Posttest (Spring)	Mean Gain	SD
School 1					
Full-day	7	8.3	53.9	45.6	12.90810
Half-day	17	7.6	47.9	40.4	20.01231
School 2					
Full-day	5	1.8	40.8	39.0	12.98075
Full-day	8	8.3	44.4	36.1	12.64276
Half-day	9	4.6	43.7	39.1	15.10335
School 3					
Full-day	6	4.2	36.7	32.5	9.77241
Half-day	5	2.2	40.2	38.0	6.63325
Kindergarten Program					
Full-day	26	6.1	44.5	38.4	12.46139
Half-day	31	5.8	45.5	39.6	16.76639

All kindergarten students receiving literacy intervention in both full-day and half-day kindergarten made gains in reading as illustrated in Table 4. To determine if there was a significant difference in the reading gain measurement between the kindergarten students in these two programs, the researcher performed independent-samples t-test. These analyses were used to answer the second research question and test the associated hypothesis.

Independent-Samples t-test Results for Individual Schools

Independent-samples t-tests were conducted to compare the reading gains made by full-day and half-day kindergarten students receiving literacy intervention attending School 1, School 2, and School 3. The results show that there was not a significant difference in the scores of reading gains for full-day ($M= 45.6, SD= 12.9$) and half-day ($M= 40.4, SD= 20.0$) kindergarten students; $t(22) = .633, p = .533$ attending School 1; full-day ($M= 37.2, SD= 12.3$) and half-day ($M= 39.1, SD= 15.1$) kindergarten students; $t(20) = -.321, p = .751$ attending School 2; and for full-day ($M= 32.5, SD= 9.7$) and half-day ($M= 38.0, SD= 6.6$) kindergarten students; $t(9) = -1.066, p = .314$ attending School 3. Due to the low sample size of kindergarten students in this study, the researcher also performed the Mann-Whitney U test to check for statistical significance. The Mann-Whitney U test is considered to be the non-parametric equivalent of the independent-samples t-test for equality of means. In contrast to the independent-samples t-test, the Mann-Whitney U test considers the data as ordinal data and compares the sum of ranks. In addition, the Mann-Whitney U test does not assume that there is a normal distribution between the two samples or that the differences are equal. It is also less likely to detect

significance due to the presence of outliers. The results indicate that there was not a significant difference in the mean ranks of the reading gains made by full-day and half-day kindergarten students attending School 1; $z = -.731, p > .05$. Full-day kindergarten students receiving intervention had an average rank of 14.14, while half-day students receiving literacy intervention had an average rank order of 11.82. The results also indicate that there was not a significant difference in the mean ranks of the reading gains made by full-day and half-day kindergarten students attending School 2; $z = -.301, p > .05$. Full-day kindergarten students receiving intervention had an average rank of 11.15, while half-day students receiving literacy intervention had an average rank order of 12.00. Similarly, the results also indicate that there was not a significant difference in the mean ranks of the reading gains made by full-day and half-day kindergarten students attending School 3; $z = -.730, p > .05$. Full-day kindergarten students receiving intervention had an average rank of 5.33, while half-day students receiving literacy intervention had an average rank order of 6.80.

The findings from both the t-test and the Mann-Whitney U test indicate that the gains made in reading by struggling readers receiving literacy intervention are not dependent on the type of kindergarten program (full-day or half-day) they attend. Therefore, the null hypothesis that the mean gain letter sound scores of struggling readers in half-day kindergarten will not differ from the mean gain letter sound scores of struggling readers in full-day kindergarten is not rejected.

In the next section, the results for research questions three and four are presented together. Both questions were created to examine the literacy practices occurring in full-

day and half-day kindergarten. Aggregated data collected from the researcher's classroom observations and the kindergarten teachers' self-evaluations were analyzed to answer these research questions.

To collect this data, the researcher spent three full days observing the seven kindergarten teachers (teaching full-day or half-day kindergarten classes) employed in the participating school district. The focus of each observation was on the instructional literacy practices between the teacher and his or her students. The Early Language and Literacy Classroom Observation (ELLCO) K-3 Tool (2008) rubrics for Development of Reading Fluency, Sounds to Print, Strategies to Build Reading Vocabulary, Strategies to Build Reading Comprehension, Writing Environment, and Focused Writing Instruction were used to guide the researcher in recording observations.

The overall score, which corresponds to the ELLCO numerical leveling system 1-Deficient (minimal evidence), 2-Inadequate (limited evidence), 3-Basic (some evidence), 4-Strong (sufficient evidence), and 5-Exemplary (compelling evidence), was used to determine the quality of observed literacy practices of full-day and half-day kindergarten teachers. The data analysis presented in Table 5 shows the results sorted by kindergarten teacher and by major literacy indicators.

The results presented in Table 5 indicate that the average overall proficiency levels for full-day and half-day kindergarten teachers are considered to be Basic and Strong in Language and Literacy items. Analyzing the individual scores from each of the six related indicators: Development of Reading Fluency, Sounds to Print, Strategies to Build Reading Vocabulary, Strategies to Build Reading Comprehension, Writing

Environment, and Focused Writing Instruction, allowed the researcher to identify areas of strengths and weaknesses in instructional literacy practices. Relative areas of strength for both full-day and half-day kindergarten teachers were in the literacy indicators of Sounds to Print, Development of Reading Fluency, and Strategies to Build Reading Comprehension, respectively. In each of these three areas of literacy, the kindergarten teachers' average proficiency ratings are considered Basic (3-some evidence), Strong (4-sufficient evidence), and Exemplary (5-compelling evidence).

Table 5

Average Overall Teacher Proficiency Levels Sorted by Major Literacy Indicators

Major Literacy Indicators	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Teacher 6	Teacher 7
Sounds to Print	4	4	4	4	3	5	5
Development of Reading Fluency	4	4	4	4	3	4	4
Strategies to Build Reading Comprehension	3	3	4	5	3	4	4
Strategies to Build Reading Vocabulary	3	3	4	4	3	3	3
Writing Environment	2	3	2	3	3	3	5
Focused Writing Instruction	2	2	3	2	3	4	4
Average Score	3	3	3	4	4	4	4
Proficiency Level	Basic	Basic	Basic	Strong	Strong	Strong	Strong

Conversely, the major literacy indicators Writing Environment and Focused Writing Instruction are considered to be areas of relative weakness. In these two areas of literacy, the average proficiency ratings ranged from Inadequate (2) to Exemplary (5).

More specifically, in the major literacy indicator Writing Environment, two of the seven teachers' average proficiency ratings were Inadequate, four out of seven teachers' average proficiency ratings were Basic, and one teacher's average proficiency rating was Exemplary. The weakest area of instruction was in the major literacy indicator Focused Writing Instruction, as evidenced by an increase of Inadequate ratings (three out of seven teachers).

These results are not surprising given the emphasis of literacy instruction in both programs. The literacy curriculum is the same for both full-day and half-day kindergarten programs and it is a common practice for kindergarten teachers at each of the three schools to plan for instructional activities together. The researcher observed similar instructional practices being implemented in the full-day and half-day classrooms at each school. This included the use of literacy materials and sequence of instruction in guided reading groups.

Conducting observations allowed the researcher to gain insights into the nature of teachers' literacy practices in full-day and half-day kindergarten. Although the data collected was used to inform the researcher's knowledge of the literacy practices occurring in kindergarten classrooms, it was equally important to include a research question focusing on the teachers' awareness of the instructional practices they employ when teaching their students. Are teachers aware of the instructional literacy practices they use when teaching students in full-day or half-day kindergarten?

Following each observation, the researcher asked the kindergarten teacher to evaluate his or her use of instructional literacy practices by completing a copy of the

same ELLCO K-3 Tool (2008) instrument. To determine teachers' awareness of their instructional literacy practices, data collected from the observation checklist completed by the researcher was compared with the data collected from the observation checklists completed by each full-day and half-day kindergarten teacher. It is important to note that when a teacher did not supply a rating on the rubric, either because he or she did not provide instruction in this particular area of literacy during the observation or the item was intentionally left blank, a score was not recorded and the average was calculated by using the scores from the remaining two observations. Table 6 illustrates a comparison of average overall teachers' proficiency levels determined by the researcher's observation ratings and the teachers' self-assessment ratings.

The results displayed in Table 6 showed similarities in the researcher's ratings of full-day and half-day kindergarten teachers. Of particular interest were the major literacy indicators in which the ratings were most aligned, Sounds to Print and Writing Environment. The results presented Table 5, Average Overall Teacher Proficiency Levels Sorted by Major Literacy Indicators, indicated that Sounds to Print was an area of strength and Writing Environment an area of weakness as determined by the researcher's classroom observations.

A difference in average proficiency ratings between the researcher and kindergarten teachers was most evident in the major literacy indicator, Focused Writing Instruction. The results show that the researcher's and one of the teacher's self-evaluation ratings were the same; the researcher's ratings for three kindergarten teachers were lower

than the teachers' self-evaluation ratings; and two of the researcher's proficiency ratings were higher than the ratings given by those teachers.

Table 6

Comparison of Overall Average Teachers' Proficiency Levels Calculated from the Researcher's Observation Ratings and the Kindergarten Teachers' Self-assessment Ratings

Major Literacy Indicators	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Teacher 6	Teacher 7
Development of Reading Fluency	4* / 4+	4 / 4	3 / 4	3 / 4	4 / 3	3 / 4	3 / 4
Sounds to Print	4 / 4	4 / 4	3 / 4	3 / 4	3 / 3	4 / 5	3 / 5
Strategies to Build Reading Vocabulary	4 / 3	4 / 3	3 / 4	3 / 4	3 / 3	3 / 3	2 / 3
Strategies to Build Reading Comprehension	4 / 3	4 / 3	3 / 4	3 / 5	3 / 3	4 / 4	2 / 4
Writing Environment	4 / 2	4 / 3	3 / 2	3 / 3	3 / 3	3 / 3	2 / 3
Focused Writing Instruction	4 / 2	4 / 2	2 / 3	3 / 2	3 / 3	3 / 4	2 / 4
Overall Average Proficiency Levels	4 Strong / 3 Basic	4 Strong / 3 Basic	3 Basic / 4 Strong	3 Basic / 4 Strong	3 Basic / 3 Basic	3 Basic / 4 Strong	2 Inadequate / 4 Strong

* Teacher's Self-assessment Ratings
+ Researcher's Ratings

Although the researcher's ratings were either the same, slightly higher, or lower than the teachers' self-assessment ratings in the six major literacy indicators, the results revealed that teachers' perceived areas of strengths and weaknesses aligned with the findings of the researcher's (Sounds to Print, Development of Reading Fluency, Strategies to Build Reading Comprehension, Strategies to Build Reading Vocabulary, Writing Environment, and Focused Writing Instruction).

To measure the degree of association between the researcher's observation ratings and the teachers' self-assessment ratings, Pearson's coefficient was calculated to evaluate the relationship between the researcher's average overall proficiency ratings of full-day and half-day kindergarten teachers' self-assessment ratings. The results indicate that there was a negative correlation between the researcher's and teachers' ratings in the six major literacy indicators [$r = -.710$, $n = 7$, $p = .074$]. This means that as the researcher's ratings increased, the kindergarten teachers' self-evaluation ratings decreased. The analysis also shows the correlations are not significant. It is important to note that the low sample size and the limited variation among scores for the small sample will impact the value and nature of the direction of the relationship represented in the correlation coefficient.

Data collected from the researcher's classroom observations and from kindergarten teachers' self-assessment ratings were analyzed to gain a deeper understanding of the literacy practices occurring in both full-day and half-day kindergarten. Another important aim of this study was to see how these practices factor into students' reading success and prompted the fifth research question guiding this

study. Is there a correlation between teachers' use of literacy strategies and the gains made in reading achievement by the struggling readers they teach?

Data from the researcher's average proficiency ratings of full-day and half-day kindergarten teachers and the archived AIMSweb (TEL) Letter Sound Fluency assessment were examined to answer this research question. The Spearman Rank Correlation Coefficient was conducted to analyze the differences between the teachers' average overall proficiency levels and the mean gains made in sound fluency scores of the struggling readers they teach.

The findings suggest there is no relationship between a teacher's use of literacy practices and their students' gains in reading ($\rho = .006$, $P = .965$). These results are not surprising due to the high proficiency ratings calculated for both full-day and half-day kindergarten teachers, especially in the major literacy indicator, Sounds to Print, that directly corresponds with the AIMSweb's letter-sound fluency measure. Again, it is important to note that the small sample size of kindergarten teachers produced a limited number of data points, which may have impacted the results.

Summary

The purpose of this research study was to investigate the impact that literacy instruction and reading intervention have on struggling readers receiving intervention in full-day and half-day kindergarten. To achieve this, the researcher analyzed archived data from AIMSweb's Test of Early Literacy-CBM for Letter Sound Fluency assessments that were administered in the fall and spring testing periods during the 2010-2011 school year. The researcher also examined the nature of observed teachers' literacy

practices and teachers' awareness of the instructional literacy practices they implemented in the classroom. The researcher spent approximately seven weeks observing each of the seven participating kindergarten teachers employed at the three elementary schools in the selected district. The focus of each observation was on the instructional literacy practices between the teacher and his or her students. The Early Language and Literacy Classroom Observation (ELLCO) K-3 Tool (2008) rubrics for Development of Reading Fluency, Sounds to Print, Strategies to Build Reading Vocabulary, Strategies to Build Reading Comprehension, Writing Environment, and Focused Writing Instruction were used to guide the researcher in recording observations.

Findings revealed that the gains made in reading by struggling readers receiving literacy intervention are not dependent on the type of kindergarten program (full-day or half-day) they attend. Rather, the results suggest that other variables; such as the quality of the literacy instruction propels students' academic achievement in language and literacy. Chapter V provides a discussion of the findings, implications of the study, and offers recommendations for future research.

CHAPTER V
CONCLUSION

Introduction

The purpose of this research study was to investigate the impact that literacy instruction and reading intervention have on struggling readers in full-day and half-day kindergarten. The research also examined the nature of observed teachers' literacy practices and teachers' awareness of the instructional literacy practices they implement in the classroom. Five research questions guided this study.

(1) What is the reading achievement gain measurement of students receiving literacy intervention in full-day and half-day kindergarten classrooms?

(2) Do the reading achievement gains of struggling readers in full-day and half-day kindergarten differ?

Ho: The mean gain letter sound scores of struggling readers in half-day kindergarten will not differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

Ha: The mean gain letter sound scores of struggling readers in half-day kindergarten will differ from the mean gain letter sound scores of struggling readers in full-day kindergarten.

(3) What is the nature of observed teachers' literacy practices of full-day and half-day kindergarten teachers?

(4) Are teachers aware of the instructional literacy practices they use during the literacy block when teaching students in full-day or half-day kindergarten?

(5) Is there a correlation between teachers' use of literacy strategies and the gains made in reading achievement by the struggling readers they teach?

Ho: There is no relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

Ha: There is a relationship between the literacy strategies used by teachers and the mean gain letter sound scores of struggling readers.

The quantitative data collected for this study included the archived literacy test scores on the AIMSweb Test of Early Literacy-CBM (TEL) letter sound fluency measure; the scores of struggling readers receiving literacy intervention in full-day and half-day kindergarten were analyzed to determine the students' growth gains in reading. Additional quantitative data included observations of seven kindergarten teachers' literacy practices. The Early Language and Literacy Classroom Observation (ELLCO) K-3 Tool (2008) rubrics for Development of Reading Fluency, Sounds to Print, Strategies to Build Reading Vocabulary, Strategies to Build Reading Comprehension, Writing Environment, and Focused Writing Instruction were used to guide the researcher in recording observations.

Discussion of Findings

Although the findings of several research studies reviewed regarding the academic and social benefits of full-day and half-day kindergarten have provided mixed results (DeCicca, 2005; Hough & Bryde, 1996; Wolgemuth, et al., 2006; Zvoch,

Reynolds, & Parker, 2008), the findings of this study revealed that both full-day and half-day kindergarten students receiving literacy intervention made significant gains in reading and writing literacy proficiency in specific literacy skills and indicators of sound instructional practice. This section will discuss both reading and writing literacy findings in depth below.

To begin examining reading literacy, the findings revealed that both full- and half-day kindergarten students who received literacy intervention made significant gains on the AIMSweb letter-sound fluency assessment. Although an independent-samples t-test and the Mann-Whitney U revealed there was not a significant difference between the two groups of kindergarten students, the results did show that overall, half-day kindergarten students receiving literacy intervention made greater gains on this measure than full-day students receiving literacy intervention as evidenced by the mean scores for the groups, 39.6 and 38.4 respectively. These findings suggest that the gains in reading made by struggling readers receiving literacy intervention are not dependent on the length of the kindergarten program day.

Because both groups of kindergarten students made gains in reading, it is important to consider other factors that may have contributed to the reading gains that quantitative statistics alone did not reveal. Within each subset of the Early Language and Literacy Classroom Observation (ELLCO) K-3 tool (2008), one literacy indicator of literacy practice directly correlated with the AIMSweb's letter-sound fluency measure used to calculate students' gains in reading; that literacy indicator was Sounds to Print.

Because of this result, the researcher examined the nature of the literacy practices, Sounds to Print, as it includes letter-sound fluency instruction.

In fact, understanding the relationship between sounds in language is an instructional focus for this literacy indicator and helps to explain the gains the kindergarten students' receiving intervention made on the AIMSweb's letter-sound fluency measure. Similar findings were also reported in a recent study conducted by DiLorenzo, Rody, Bucholz, and Brady (2011). The researchers investigated the outcomes of using an innovative, multisensory approach to explicitly teach letter-sound connections to students in three kindergarten classrooms and found that all kindergarten students, including at-risk learners, made significant gains on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) letter-sound fluency measure.

It is also important to note Sounds to Print was the significant literacy indicator in terms of examining proficiency level gains for students in relation to the length of kindergarten school day, both full-day and half-day, as evidenced in Chapter IV, Table 5. The overall proficiency levels for full-day and half-day kindergarten teachers for the literacy indicator Sounds to Print were impressive, ranging from Basic (3-some evidence), Strong (4-sufficient evidence), and Exemplary (5-compelling evidence) in this Language and Literacy item. These rankings imply that the researcher observed teachers giving short episodes of direct instruction on specific principles of phonics, including letter-sound relationships, and provided their students with multiple opportunities to apply these skills when decoding words in isolation and in texts at their independent and instructional reading levels. Additionally, both groups of kindergarten teachers were

observed scaffolding phonics instruction in small and large groups to meet their students' learning needs.

The results are not surprising given the emphasis of literacy instruction in both programs. The results of this study mirror a study conducted by The National Center for Education Statistics (Guarino, Hamilton, Lockwood, & Rathbun, 2006) which reported a positive correlation between teacher reported instructional practices and student reading achievement gains. These instructional practices included a focus on reading and writing skills, explicit instruction, phonics, and students activities for reading and writing. These findings speak to the importance of providing targeted instruction by aligning instructional practices with curricular goals. More specifically, to promote students' reading achievement, teachers need to focus their instructional practices on the skills they want their students to learn.

Furthermore, the literacy curriculum was identical in both full-day and half-day kindergarten programs and it was a common practice for these kindergarten teachers to plan literacy activities together. Common planning was observed at each of the three elementary schools and was evident in both the materials and in the instructional sequence of the literacy instruction implemented in both kindergarten programs district wide. A study by Odden and Archibald's (2009) examined schools and districts in which student achievement increased twofold and found that "one result of the multiplicity of activities was a collaborative, professional school culture" (p. 78). Additionally, a comprehensive study of exemplary school systems internationally found that these schools strive to "create more opportunities and spaces for teachers to work together in

sharing practices and research, developing lesson plans, and building consensus on what constitutes good teaching practice” (Barber & Mourshed, 2009, p. 30). Therefore, this study parallels others in suggesting common planning seems to be a significant factor in student achievement. More importantly, these findings underscore the impact that collaborative planning has on students learning. That is, the outcomes of the kindergarten planning meetings directly influenced the literacy practices of both full-day and half-day kindergarten teachers that transcended factors of time.

Promoting reading development through teachers’ instructional literacy practices also includes examining the relationship between reading and writing. When teachers promote the use of invented spelling (Read, 1971) and interactive writing or shared writing (McKenzie, 1985) in the classroom, they embed the authentic work or writing in which students use phonemes as self-assigned phonics tasks (Richgels, 2003). Thus teachers’ teaching and use of developmentally appropriate processes (Bodrova & Paynter, & Isaacs, 2000) encourage emergent literacy development for young readers.

This study observed the nature of teachers’ writing literacy instructional practices, including the aforementioned in the literacy literature. Although teachers’ proficiency levels were lower in Focused Writing Instruction and Writing Environment in comparison to reading, it is important to consider the writing skills typically observed in five and six year old kindergarten students. In 2009, The National Early Literacy Panel published a report which summarized an extensive meta-analysis of nearly 500 scientific research studies on the development of early literacy skills in children age birth through kindergarten and found a total of 11 variables that consistently predicted later reading

achievement. Young children's ability to write letters in isolation or in his/her name were two skills that not only showed a strong correlation to later literacy skills, but also sustained their predictive power after other factors such as socioeconomic status and IQ were considered. To further understand the development of writing skills in young children, the U.S. Department of Education's publication of *Helping Your Child Become a Reader* (2005) provides a continuum of writing literacy skills for children in kindergarten through third grade. The continuum of writing skills for most kindergarten students (five years of age) includes several skills; for this study three such skills are relevant to the findings: (1) writing letters of the alphabet; (2) some known words; (3) and writing stories with some readable parts. It is important to note that the ELLCO literacy rubrics represent instructional practices typically observed in kindergarten through third grade classrooms. Therefore, in some instances, the writing expectations found on the Focused Writing Instruction rubric include skills that exceed what research has found to be developmentally appropriate for kindergarten age students. Similarly, writing skills associated with first graders (six years of age) relevant to this study include: (1) stretching the sounds out in words; (2) recording the major sounds when writing; (3) writing about topics of interest; (4) and using some punctuation marks and capitalization.

The writing literacy instructional practices the researcher observed in classrooms aligned with kindergarten writing expectations typically associated with five and six year old students described above. Each of the kindergarten teachers provided opportunities for students to write. As noted by the U.S. Department of Education (2005), kindergarten students' choosing of their own writing topics is important for their writing and literacy

growth. Interestingly, the observations of this researcher indicate that most forms and topics of students' writing were typically determined by the teacher rather than stemming from the students' interest. For this reason, it may be more appropriate to examine the instructional practices that correlate with the literacy indicator Writing Environment rather than Focused Writing Instruction, because of the attention this indicator gives to providing students with authentic writing opportunities. Additionally, it is also possible that a shift in focus from teacher-directed to student-choice in writing on topics of interest may improve kindergarten students' writing proficiency and literacy growth.

As stated above, reading instruction among teachers mirror each other due to common planning. It seems important to note that unlike in reading, writing instruction varied between teachers. The kindergarten writing expectations for kindergarten age students described by the U.S. Department of Education (2005) were met by all teachers, however, some teachers provided additional opportunities for students to write for varied and authentic purposes, a focus normally reserved for older students, typically first grade. The disparity in writing instruction supports the lower proficiency ratings on the ELLCO K-3 Tool (2008) rubrics for Writing Environment and Focused Writing Instruction.

Lower proficiency ratings in these literacy indicators indicate that there was only some evidence of systematic instruction in writing. In other words, while all teachers were providing some writing instruction, they were not consistently observed providing instruction aimed to strengthen their students' understanding of the writing process or mechanics. Also, there was limited evidence of student engagement in the writing process beyond the successful completion of the writing assignment.

Another major aim of this study was to determine teachers' awareness of their own instructional literacy practices as implemented in the classroom. As stated in previous chapters, one major area of analysis in this study included a comparison of the average overall teachers' proficiency levels determined by the researcher's observation ratings and the teachers' self-assessment ratings in the six major literacy indicators. Findings in this area of analysis note that although there were some differences between the researcher's ratings and the teachers' self-evaluations in the six major literacy indicators, the results revealed there were similarities in the continuum of strengths and weaknesses when comparing the researcher's and teachers' self-evaluation ratings. That is, both the researcher and the kindergarten teachers' average proficiency ratings showed strengths to be in the literacy indicators Sounds to Print, Development of Reading Fluency, Strategies to Build Reading Comprehension and Strategies to Build Reading Vocabulary. Likewise, both the researcher and the kindergarten teachers' average proficiency ratings were lower in the literacy indicators, Writing Environment, and Focused Writing Instruction.

The next section of this chapter provides a discussion of the study's findings in relation to the literature. Of particular interest is the connection between the findings and research on emergent literacy theory, teachers' instructional literacy practices, and the recommendations from the National Reading Panel (2000).

Current Research Connections

Emergent literacy theorists (Clay, 1979; Durkin, 1966; Ehri & Sweet, 1991; Morrow, 2005; Sulzby, 1985) believe there are essential understandings (readiness skills

and concepts) that children must become proficient in during their early years to become thriving readers. Most importantly, is the notion that learning is prompted by instruction based on teachers' observations and reflections on their students learning, thus making it essential for educators to identify the skills students bring with them to school at the beginning of kindergarten and use this information to effectively plan instruction that will continue to develop and grow their literacy proficiency. The kindergarten teachers participating in this study used the test scores from the AIMSweb Test of Early Literacy-CBM (TEL) that was administered to the district's kindergarten students along with observations of their students' literacy learning to inform their instructional practices beginning in the fall of the 2010 school year. These benchmark scores allowed the teachers to group students according to their learning needs and provide literacy intervention to students struggling in reading.

In the pursuit to develop good readers, the findings from the National Reading Panel's (2000) comprehensive investigation of effective reading instruction underscored the importance of implementing systematic instruction in each of the domains of literacy. Both full-day and half-day kindergarten teachers acted upon the recommendations of The National Reading Panel (2000) and also included principles of Clay's (1993) Reading Recovery early literacy intervention model when designing the content and structure of their daily literacy lessons.

In terms of the content of the literacy lessons, the teachers incorporated the recommendations set forth from the National Reading Panel (2000) and designed lessons that focused on principles of early literacy intervention and included systematic

instruction in phonological awareness, phonics/decoding skills, vocabulary and word work, fluency, comprehension, and writing practice. In terms of the structure of the literacy lessons, research addresses the need for small group, targeted instruction particularly for struggling readers. The kindergarten teachers in this study structured their small group guided reading literacy lessons to follow the systematic sequence characteristic of Reading Recovery (Clay, 1993) literacy lessons. That is, in each lesson, students read familiar and new stories, manipulated letters and words, and engaged in writing activities that were connected to their reading.

During the lessons, the teachers were observed monitoring the reading behaviors of their students, which included taking anecdotal notes on observed reading behaviors and adjusting instruction as needed. Most importantly, the teachers demonstrated the ability to integrate an effective sequence of instructional strategies that followed the gradual release of responsibility model (Pearson & Gallagher, 1983). For example, kindergarten teachers were observed modeling reading strategies, supporting their students during guided practice, and providing them opportunities for independent practice to help them become more independent readers. This instructional model was observed in whole group, small group, and when teachers worked with their students individually.

In addition, the findings from this study support Allington's (2012) assertions regarding the need for schools to develop thoughtful literacy programs that promote proficient readers. Allington emphasizes the importance of having teachers provide students "with instructional texts that they can read with accuracy, fluently, and with

good comprehension” (p. 73). He also argues for teachers to demonstrate effective comprehension strategies and to provide ample opportunities for students to practice them. The instructional practices employed by both half-day and full-day kindergarten teachers incorporated all these principles.

In thinking of sound literacy programs, many researchers agree that small group literacy instruction has a positive impact on kindergarten students’ literacy achievement (Allington, 2012; Allington & Johnston, 2001; Clay, 1993; Pressley et al., 2001; Taylor et al., 2000). The findings from this study revealed that both full and half-day groups of kindergarten students made significant gains in reading on the AIMSweb letter-sound fluency measure, thus suggesting that it is the quality and focus of small group targeted literacy instruction that are the critical factors in struggling kindergarten students’ reading achievement. This finding confirms other research findings that it is the quality and focus of small group literacy instruction that supports the development of active and independent readers (Allington, 2012; Clay, 1993; Hiebert, Colt, Catto, & Grury’s, 1992; Strickland, 2002).

In addition to the content and structure of literacy instruction, the findings seem to support the researcher’s position that it is the quality of the instructional practices in full- and half-day kindergarten that propels literacy achievement for struggling readers rather than the extended time offered in full-day kindergarten programs. These assertions align with Karweit’s (1992) contentions that “The major challenge facing kindergarten is to provide a developmentally and individually appropriate learning environment for all kindergarten children” (p. 84). She also emphasized that lengthening the kindergarten

day provides additional opportunities for learning, but how that time is actually being spent is what matters most.

Implications for Practice and Research

The findings from this study suggest that the gains in reading made by struggling readers receiving literacy intervention are not dependent on the length of kindergarten day students attend. Rather, it is the quality of the instructional interactions between the kindergarten teachers and their students that impacts student learning. In other words, it was the quality of time, rather than the quantity of time that bolstered students' learning. Given that the findings of several research studies reviewed regarding the academic and social benefits of full-day and half-day kindergarten have provided mixed results (DeCicca, 2005; Hough & Bryde, 1996; Wolgemuth et al., 2006; Zvoch, Reynolds, & Parker, 2008), coupled with the findings of this study that show there is not a significant difference in the reading gains made by struggling readers in both kindergarten programs, this researcher proposes that we abandon future studies on half-day versus full-day kindergarten and instead focus on factors, irrespective of the length of the school day, that underpin literacy achievement. This is especially important considering that full and half-day kindergarten programs are based more on political and economic issues related to practice that are often beyond teachers' control. That is to say, district driven decisions are typically made without input from teachers. However, teachers do have control over the quality of the instructional interactions they have with the students they teach. Furthermore, the findings from this study and previous research have shown that a critical factor in students' literacy achievement is how that time is spent (Allington, 2002;

Karweit, 1992; Strickland, 2002). For these reasons, the next section of this chapter will discuss practice recommendations that extend the findings of this study and focus on the following themes (a) targeted literacy instruction, and (b) teachers' awareness of their instructional literacy practices. In addition, ideas for future research will be presented.

Implications for Practice

This research advocates for continued research in the quality of teachers' instructional practices.

Targeted literacy instruction. A significant finding in this study is the relationship between teachers' use of instructional literacy practices and the gains made by the struggling readers they teach. We also know that research has shown there is a positive association between teachers' instructional literacy practices and student achievement gains (Bodrova & Paynter & Isaacs, 2000; DiLorenzo et al., 2011) and further examination linking assessment measures to student outcomes is likely to enhance student learning. Given the strong association in this study between the letter-sound fluency measure and instructional practices inherent in the literacy indicator Sounds to Print, this researcher recommends that classroom teachers specifically align their instructional practices with their district's curricular goals and thus provide targeted literacy instruction. Additionally, it would be advantageous for school administrators to evaluate the summative assessment measures used to monitor student growth to determine if these assessments accurately measure what students have learned in relation to what they've been taught. The results will inform teachers' and school administrators about the instructional literacy practices that directly impacts their students' learning.

Teachers' awareness of their instructional literacy practices. Another major aim of this study was to determine teachers' awareness of the literacy practices they employ in the classroom. The findings revealed that both full-day and half-day kindergarten teachers are cognizant of the instructional practices they use in the classroom and are able to identify areas of strengths and weaknesses in the six indicators of literacy. With this in mind, an area for further research may include the use of observation tools, such as the Early Language and Literacy Classroom Observation (ELLCO) K-3 Tool (2008), for professional development to assist in-service teachers in identifying areas of strengths and weaknesses in literacy instruction. While the teachers in this study used the ELLCO rubrics as tools for self-evaluation, these rubrics could also be used by groups of teachers in learning teams for peer evaluation. More specifically, teachers could observe each other using the observation tools as guides and then meet to discuss their findings. The use of good observational tools serve as an excellent means of helping teachers identify areas of strengths and weaknesses in their instructional literacy practices. Additionally, the ELLCO rubrics may be used by administrators when evaluating teachers. The results can then be used to improve the quality of literacy instruction as it relates to individual teachers, teaching practices at specific schools, and district wide. The findings can also be used to promote discussions on "best practices" in literacy as it relates to the recommendations set forth by the National Reading Panel (2000) and to facilitate the collaborative construction of professional learning goals.

Additionally, the findings of this study may also be used to inform the curricular design for pre-service education teachers. More specifically, the integration of a literacy

tool like the ELLCO K-3 tool (2008), will allow pre-services teacher to evaluate the literacy practices observed during required field experiences, thus strengthening the relationship between theory and practice; a reciprocal relationship supported by research (Tracey & Morrow, 2006). In addition, the ELLCO literacy rubrics can be used to guide pre-service teachers when designing and implementing literacy instruction in their field experiences.

Ideas for Future Research

The implications of this study support the need for developing common literacy language and evaluation tools to improve the quality of the instructional interactions between teachers and their students. Most importantly, the findings of this study emphasize the need and importance of evaluating the literacy practices being implemented in the classrooms. Naturally, these implications prompted the researcher to develop future research questions surrounding the use of targeted literacy instruction and teachers' awareness of the instructional practices they use in the classroom.

Targeted literacy instruction. Research questions to guide future research studies that align summative assessment measures with the other domains of literacy (reading fluency, comprehension, vocabulary, and writing) may include:

(1) Is there a correlation between teachers' use of instructional literacy practices in the indicator Development of Reading Fluency and the gains made by the students they teach?

(2) Is there a correlation between teachers' use of instructional literacy practices in the indicator Development of Reading Comprehension and the gains made by the students they teach?

(3) Is there a correlation between teachers' use of instructional literacy practices in the indicator Strategies to Build Reading Vocabulary and the gains made by the students they teach?

(4) Is there a correlation between teachers' use of instructional literacy practices in the indicator Focused Writing Instruction and the gains made by the students they teach?

Teachers' awareness of their instructional literacy practices. Research questions to guide future studies on the use observation tools to assist in-service and pre-service teachers in identifying areas of strengths and weaknesses in literacy instruction may include the following:

(1) What impact, if any, does a teacher's use of an observation tool for self – reflection have on his/her instructional literacy practices?

(a) Would the outcomes be different for teachers at different grade levels?

(b) Would teachers' awareness of the literacy practices they employ with their students be different with different teaching populations?

(2) Does the practice of using observation tools for peer-evaluation assist teams of teachers in identifying strengths and weaknesses in their literacy practices?

(a) Does the use of observation tools for peer evaluation promote collaborative discussion among teachers?

(b) Do the results of peer-evaluations change teachers' instructional literacy practices?

(3) Does the use of observation tools strengthen pre-service teachers' understanding of effective literacy instruction?

(4) Does the use of observation tools assist pre-service teachers in evaluating instructional practices observed during clinical field experiences?

Furthermore, because the findings of this study showed that kindergarten teachers are cognizant of the instructional practices they use in the classroom and are able to identify areas of strengths and weaknesses in the six literacy indicators, an area for further research may include a study on the relationship between teachers' theoretical understandings and their classroom practices. Tracey and Morrow (2006) state that it is essential to understand theories because an individual's belief system is strongly connected to his or her behaviors and instructional practices. In fact, these researchers suggest that this connection is the main reason that knowledge of theories is vital for optimal classroom instruction. "When teachers understand the full range of theories from which instructional strategies stem, they can select those interventions that best suit the particular teaching situation, thus optimizing the effectiveness of their instruction" (p. 5).

It is important to note that while unintended and outside of the scope of this study, the researcher observed collaborative efforts between full-day and half-day kindergarten teachers. More specifically, the researcher observed kindergarten teachers planning literacy activities together during common planning times at each of the three elementary schools. The literacy activities and practices discussed during these sessions were then

implemented directly into the classroom. This was evident in both the materials and in the instructional sequence of the literacy instruction implemented in both kindergarten programs district wide. Since research has shown there is a reciprocal relationship between teachers' use of collaborative planning opportunities and students' achievement gains (Barber & Mourshed, 2009; Odden & Archibald, 2009), this researcher advocates for further study on the impact these common planning times have on the quality of teachers' instructional literacy practices.

Limitations

Threats to the validity of this study include the small sample size of kindergarten students. This may have impacted the statistical results by limiting the ability to detect significant relationships from the data collected. The small sample size may also impact the generalization of this study's findings with larger groups of kindergarten students; it's possible the findings could be significantly different. Another limitation is the interrater reliability of the researcher's recorded observations using the ELLCO (2008) K-3 literacy rubrics. Although the researcher used the rubrics to guide each classroom observation, there was no interrater reliability of the literacy practices observed. Additionally, there were a limited number of classroom observations. If the researcher had conducted more than three observations of each kindergarten teacher, a broader range of literacy practices may have been observed. More specifically, the focus of literacy instruction may have changed at different points of the school year. Lastly, because the classroom observations were previously scheduled by the researcher and the kindergarten teachers, there is a potential for performance bias. After the initial observation, the kindergarten

teachers were aware of the literacy indicators included in each of the six literacy rubrics and may have aligned their instructional practices to obtain higher ratings.

Summary

The purpose of this chapter was to discuss the findings and implications of this study and to present recommendations for future research. In this study, half-day kindergarten students receiving literacy intervention made greater gains in reading on the AIMSweb's letter-sound fluency measure compared to their full-day counterparts. Because both groups of students made significant gains on this measure, it was important to consider the literacy practices observed in each of the seven kindergarten classes. The findings revealed that it was the quality of instruction, rather than the extended time offered in the full-day kindergarten program, that impacted the gains made in reading by these two groups of kindergarten students. Recommendations for future research include using evaluation tools like the ELLCO K-3 tool (2008), to improve the quality of literacy instruction being implemented in elementary classrooms and to guide pre-service teachers entering the field of education.

APPENDIX A

DISTRICT INVITATION TO PARTICIPATE IN RESEARCH

Date

School District Name

Address

City, State, Zip Code

Attention: Administrator Name

Subject: District Invitation to Participate in Research

Dear Administrator Name:

The purpose of this letter is to request the participation of your school district in a research project. My name is Kari Pawl and I am currently a doctoral candidate in the School of Education at Loyola University Chicago. I am conducting a research study to examine the nature and function of literacy instruction in full-day and half-day kindergarten programs and the impact that literacy interventions have on struggling readers in both programs. By focusing on predictive early literacy measures and learning more about the intervention practices with struggling readers in kindergarten classrooms and their reading achievements, the researcher intends to learn more about effective instruction in full-day and half-day kindergarten programs.

The nature of the district's participation requires sharing archived student assessment results and allowing time for this researcher to conduct three observations of each kindergarten teacher (teaching full-day or half-day kindergarten programs) employed in your school district. More specifically, archived data will include collecting fall and winter scores on the early literacy measures of letter name fluency and letter sound fluency using AIMSweb's Test of Early Literacy-CBM (TEL) assessment. The main focus will be on students in both the full-day and half-day kindergarten programs in the school district identified as being struggling readers and thus receiving intervention support. An analysis of the data will focus on examining the level of academic growth made by each group of students to compare the academic gains made by the full-day kindergarten students in comparison to the half-day students to see if there is a significant difference in reading achievement gains between these two groups.

The research questions guiding this study are as follows:

- (1) What is the reading gain measurement of struggling readers receiving literacy intervention in full-day and half-day kindergarten classrooms?
- (2) Do the reading gains of struggling readers in full-day and half-day kindergarten differ?
- (3) What is the nature of teachers' instructional literacy practices that are observed in full-day and half-day kindergartens?

- (4) Are teachers aware of the instructional literacy practices they use when teaching students in full-day or half-day kindergarten?
- (5) Is there a correlation between teachers' use of instructional literacy strategies and the gains made by the struggling readers they teach?

This research project is considered to be a quantitative study. While data from the archived test scores will be used to calculate the growth gains of struggling readers receiving literacy intervention in full-day and half-day kindergarten, data collected from the Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument will be used to answer research questions related to teachers' use of instructional literacy practices. Collecting both types of data is essential in understanding the impact literacy interventions and teachers' use of instructional literacy practices have on reading achievement gains of full-day and half-day kindergarten students.

No students' names will be associated with the data set and the teachers' class data will be assigned a random participant number. Once a teacher's class data is matched to a random number, the teachers' names will no longer be connected to the data. A list of the teachers' names and subject numbers will be kept in a securely locked filing cabinet in the researcher's office. All data will be maintained as confidential. Any information that that could specifically identify the school district, teachers, or students will be modified or removed from the data and any subsequent reporting of results.

The district is also being asked to give permission to the researcher to contact the kindergarten teachers at their respective schools to participate in this study. However, individual teacher participation is completely voluntary, and teachers are free to take part or decline to participate without any penalty or prejudice from the researcher, building administrators, or district administrators.

If you have questions about this research study, please feel free to contact me or the faculty sponsor, Dr. Linda Wold.

Sincerely,

Kari Pawl
Doctoral Candidate
Loyola University Chicago

APPENDIX B
DISTRICT CONSENT FORM

Date:

DISTRICT CONSENT TO PARTICIPATE IN RESEARCH

Your district has been asked to participate in a research project being conducted as part of a doctoral dissertation. It was explained that the purpose of the current investigation is to examine the nature and function of literacy instruction in full-day and half-day kindergarten programs and the impact that literacy interventions have on struggling readers in both programs. The nature of the district's participation requires sharing archived student assessment results and allowing time for this researcher to conduct three observations of each kindergarten teacher (teaching full-day or half-day kindergarten programs) employed in your school district.

As an authorized representative of the selected school district, I give Kari Pawl, Doctoral Candidate from Loyola University Chicago, consent to access archived student data for inclusion in this study. More specifically, archived data which includes the fall and winter scores on the early literacy measures of letter name fluency and letter sound fluency using AIMSweb's Test of Early Literacy-CBM (TEL) assessment from the 2010-2011 school year will be provided for data analysis as part of Mrs. Pawl's research project.

In addition, the district gives permission for teachers from the district to be contacted at school to participate in this study. However, individual teacher participation is completely voluntary, and teachers are free to take part or decline to participate without any penalty or prejudice from the researcher or the district. It was explained that the focus of each observation will be to collect data on the teachers' observed use of instructional literacy practices, both during and outside of the designated literacy block, using the Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument. Furthermore, after each observation, the researcher will ask the kindergarten teacher to evaluate his or her use of instructional literacy practices by completing a copy of the same Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument. This data will allow the researcher to examine teachers' awareness of the instructional literacy practices they use when teaching students in full-day or half-day kindergarten. The time required for teachers to complete the Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument after each observation should take approximately 15 minutes.

It has been explained that no students' names will be associated with the data set and that the teachers' class data will be assigned a random participant number. Once a teacher's class data is matched to a random number, teacher names will no longer be connected to the data. A list of the teachers' names and subject numbers will be kept in a securely locked filing cabinet in the researcher's office. All data will be maintained as confidential.

This letter serves as documentation that your school district agrees to provide student assessment results for inclusion in Kari Pawl's dissertation research. In addition, the district will allow the researcher to learn more about the literacy interventions provided to struggling readers in kindergarten and to conduct three observations of each full-day and half-day kindergarten teacher using the Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument.

Sincerely,

Administrator Name
Official Administrator Title

APPENDIX C

TEACHER CONSENT TO PARTICIPATE IN RESEARCH

TEACHER CONSENT TO PARTICIPATE IN RESEARCH

Introduction:

You are being asked to take part in a research study being conducted by Kari Pawl for a doctoral dissertation under the supervision of Dr. Linda Wold in the Department of Curriculum & Instruction at Loyola University of Chicago.

With permission from your school district administration, you are being asked to participate because you are currently teaching in a full-day or half-day kindergarten general education classroom. In addition, your students participated in the district's universal screening of early literacy skills using AIMSweb's Test of Early Literacy-CBM (TEL) assessment this year. All kindergarten teachers in your school district are being asked to participate in this study.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

Purpose:

The purpose of the current investigation is to examine the nature and function of literacy instruction in full-day and half-day kindergarten programs and the impact that literacy interventions have on struggling readers in both programs.

Procedures:

If you agree to be in the study, you will give permission for the researcher to conduct three observations in your classroom. The focus of each observation will be to collect data on the use of instructional literacy practices, both during and outside of the designated literacy block, using the Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument. Furthermore, after each observation, you will be required to evaluate your instructional literacy practices by completing a copy of the same Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument.

Risks/Benefits:

There are no foreseeable risks involved in participating in this research beyond some possible stress involved in having the researcher observe literacy practices in your classroom and taking time out of your schedule to complete the Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument. However, it should only take you approximately 15 minutes to complete the instrument.

There are no direct benefits to you from participation, but it is anticipated that your participation will provide valuable insights about the nature and function of literacy instruction in full-day and half-day kindergarten programs and the impact that literacy interventions have on struggling readers in full-day and half-day kindergarten programs. Moreover, the results may have implications regarding effective literacy practices that help struggling readers increase reading achievement gains.

Confidentiality:

- (1) You have been assigned a random participant number. After the classroom observations, the average scores from the Early Language & Literacy Classroom Observation K-3 Tool (2008) instrument will be matched to your students' CBM early literacy scores. Once this is completed, your name will no longer be connected to the observation checklist or student data. The data collected from the observations and student data will only be identified with your randomly assigned number.
- (2) The completed paper and pencil versions of observation instruments will remain confidential and will be stored in a locked filing cabinet in a secured location. The researcher will be the only one with access to the information and it will be destroyed at the completion of this study, which will occur within the next year.
- (3) The results of this research study will be published, but any information that could personally identify you or your school district will be changed or removed from the data.

Voluntary Participation:

Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty. Your decision not to participate or to withdraw from the study will not affect your standing within your school district, or with Loyola University Chicago.

Contacts and Questions:

If you have questions about this research study, please feel free to contact Kari Pawl or the faculty sponsor, Dr. Linda Wold at lwold1@luc.edu.

Statement of Consent:

Your signature below indicates that you have read and understood the information provided above, have had an opportunity to ask questions, and agree to participate in this research study. You will be given a copy of this form to keep for your records.

 Participant's Signature

 Date

 Researcher's Signature

 Date

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VITA

Dr. Kari Pawl has worked in the field of education for over 25 years. Her professional career began in 1989 after she graduated from Barat College with a Bachelor of Arts degree in Elementary Education and Psychology. At that time, she began teaching at the elementary school level in Lake Forest, Illinois. In 1993, Kari earned a Masters of Education degree in Curriculum and Instruction from National Louis University. Kari's interest and passion for reading prompted her to return to National-Louis University to obtain a Reading Specialist Type 10- certification, which she completed in 2005. Additionally, in 2006, Kari successfully completed the year-long training required to become a Reading Recovery teacher.

During her tenure at Lake Forest School District 67, Kari was a classroom teacher and reading specialist. She received the district's Innovative Practice Award for new literacy initiatives implemented in the district in 2002 and again in 2007. In 2008, Kari expanded her professional pursuits and became an adjunct professor for Saint Xavier University and Concordia University Chicago.

In her current position, an Assistant Professor in the Reading Department at Concordia University Chicago, Kari teaches graduate students earning their Masters in Reading. She enjoys the rigor of Concordia's reading program which has gained national recognition by the International Reading Association. Kari continues to conduct research and presents on topics related to literacy instruction. She is a member of the International

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Kari is married and her family resides in the Chicago metropolitan area.

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