TEACHERS’ PERCEPTIONS OF THE IMPLEMENTATION OF A TIERED MODEL OF INSTRUCTION IN READING IN FULL DAY KINDERGARTEN: A CASE STUDY

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Abstract

This descriptive case study examined educators’ perceptions of the effect of tiered instruction on the reading achievement of kindergarten students. The purpose was to explore and describe current cultural and structural conditions that support or inhibit effective school-level implementation of a Response to Intervention (RtI) model. This study was guided by the following research question: How do teachers perceive the effectiveness of a tiered instruction program in reading in full day kindergarten? Data was gathered from five educators and one administrator within a suburban public early childhood school through individual interviews, analysis of student benchmark assessments and a focus group discussion. Vygotsky’s sociocultural theory, with its focus on interdependence among social and individual processes to construct knowledge, provided a lens through which to examine the context of the study and inform the findings. Findings from this study revealed understandings and beliefs that supported the use of tiered instruction as a general education model that benefitted all students, provided the necessary supports for beginning readers and contributed to reading success. Results indicated that communication, collaboration, shared goals, increased individual accountability, training and professional development contributed to the success and sustainability of tiered instruction. This study identified a number of components perceived to facilitate or challenge successful implementation of instructional practices, assessment and data-driven decision making within the RtI model. These findings have implications for educational practice and can be used to inform key stakeholders at the building and district levels.

Keywords: tiered reading instruction, response to intervention (RtI), educators’ perceptions, student achievement, full day kindergarten, communication, collaboration, accountability, sustainability
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Chapter I: Introduction

Statement of the Problem

Fourteen years of education reform has resulted in curriculum that is complex and challenging for all learners, beginning with the youngest students in kindergarten. Grade-level expectations are uniform, standardized and based on the premise that all students will exit demonstrating proficiency in literacy and math. The sense of urgency for all students to meet or exceed grade-level standards is palpable. Teachers are held accountable for student growth and achievement and must ensure that students make at least one year’s growth in reading and mathematics (Common Core State Standards Initiative, 2010).

The accountability effort had its beginnings with the reauthorization of the Elementary and Secondary Education (ESE) Act in 2001. Also known as No Child Left Behind (NCLB, 2001), this federal law, along with the Individuals with Disabilities Improvement Act of 2004 (IDEA, 2004), required teachers to utilize and implement scientifically based instructional practices grounded in research and evidence. To ensure that all students would be reading by the end of third grade, The Reading First program was authorized under NCLB 2001 (Title I, Part B). Reading First highlighted the key components of effective reading programs as phonemic awareness, phonics, vocabulary, fluency and comprehension (U. S. Department of Education, 2002, p. 3). Scientifically-based reading research, that which “applies rigorous, systematic and objective procedures to obtain valid knowledge relevant to reading development, reading instruction, and reading difficulties”, was the foundation for Reading First (U.S. Department of Education, 2002, p. 3-4).

Significant changes in educational policies and practices inevitably lead to changes for classroom teachers and other practitioners. Mandates such as NCLB 2001 and IDEA 2004 also led to discussions among teachers regarding different learning styles of students, ways to reach
all learners, and changes in expectations for students, particularly those with disabilities. (Hodge & Krumm, 2009). Reform efforts require accountability for every student, placing a responsibility on educators to improve student performance for all learners in their classrooms. Teachers at the site of this research study have expressed concern as to how to effectively reach high goals and bring about school-level change as they cope with this increasing burden of responsibility.

Many schools are using a response to intervention (RtI) model to address student needs using scientifically research-based practices, those which have provided “verifiable results through research studies” (Mesmer & Mesmer, 2008, p. 281). These practices include providing quality instruction and interventions and using student learning in response to that instruction when making educational decisions (Burns, 2010). This tiered instruction framework has gained attention since the inclusion of language in IDEA 2004 requiring districts to provide data regarding a student’s response to interventions when considering a diagnosis of specific learning disability (SLD) in reading (U.S. Department of Education Federal Register, 2006, p. 5).

Benefits of RtI include early intervention for low achieving students, assessment linked to instruction, frequent progress monitoring, intensive interventions and more accurate identification of students with reading disabilities (Keller-Margulis, 2012, p.342). The practitioners at this research site realize that beginning readers’ abilities and individual needs differ, and depending on only one approach to reading instruction would be detrimental to a large group of students. Effective practitioners realize that instruction needs to be varied and designed so that all students can demonstrate their knowledge to the best of their abilities (Watts-Taffe, Laster, Broach, Marinak, Connor & Walker-Dalhouse, 2012, p. 304). By differentiating, or modifying instruction based on need, and using data to inform these instructional decisions,
students will likely make greater gains in reading (Watts-Taffe, et al., 2012).

RtI gathered support from policy makers, practitioners and parents as a beneficial alternative to the “wait to fail”, or discrepancy model (Al Otaiba, Wagner & Miller, 2014, p. 129). The discrepancy model is an IQ-Achievement based formula that resulted in delaying intervention until a child’s achievement was sufficiently low that a significant discrepancy was noted when compared to the child’s intellectual ability (Wright & Wright, 2011). The U.S. Department of Education strongly urged schools to use a process that was based on a systematic assessment of a student’s response to high-quality, research-based instruction with research-based interventions provided along the way (IDEA, 2004, p. 118). RtI is a tiered model of instruction that combines the science of reading interventions with screening and progress monitoring practices in the general education classroom, assisting struggling readers and preventing some reading problems. RtI adds layers of support in the form of increasingly intensive interventions for those students who do not respond to the core instruction and practices (Al Otaiba, et al. 2014).

Teachers of reading, as practitioners, are responsible for implementing Rt within the classroom, and accordingly must be equipped with a variety of instructional practices that have proven results. Teachers must feel comfortable measuring student progress and using these measurements to guide instruction. Most importantly, they must feel supported as they work together to develop an effective RtI model (Stuart, Rinaldi & Higgins-Averill, 2011). Instruction must be delivered in a standardized way, and conditions need to be examined to determine if a certain practice is causing a specific learning outcome. If scientific interventions are to be implemented, research findings must be available to ensure that this label is not misused. Screening tools must be chosen with care as these need to be depended upon to measure
achievement and to suggest future gains (Mesmer and Mesmer, 2008).

The grade-level team at the site of this research needs to outline short and long-term goals and objectives as benchmarks of student performance. They need to collaboratively define what adequate progress looks like at the kindergarten level. Additional discussion must include determining the amount of time a specific intervention should be implemented before enough data is collected to allow them to decide whether an intervention has been successful or not. (Stuart et al, 2011).

**Research Problem**

This descriptive case study provides insight into how teachers and administrators at a public early childhood school in southeastern New England understand and support kindergarten readers using a tiered instruction model. The RtI process is a comprehensive framework used to identify and address the needs of at-risk or struggling students by changing teacher instruction and implementing interventions. Teacher perspective is critical since, even though RtI involves the whole school, educators at the classroom level are primarily responsible for instruction at Tier 1 (evidence-based instruction) and Tier 2 (additional supports and more frequent progress monitoring). Successful implementation of a tiered model of instruction begins at the level of the teacher, and “given teachers’ integral role, it is important to examine teachers’ attitudes, beliefs, perceptions, and challenges with respect to RtI to identify the appropriate actions, interventions, and supports necessary for the successful implementation and sustainability of RtI” (Castro-Villarreal, Rodriguez & Moore, 2014, p.105).

This study targeted a practical goal of determining the effectiveness of the RtI model at meeting the needs of kindergarten students who are not performing at grade level in reading. Results of this study will guide the staff at a small suburban primary school in determining areas
of the curriculum that need to be strengthened. This researcher will discuss research-based interventions, those which have been proven effective through observation, experimentation and data analysis and need to be implemented to allow all students to succeed in developing reading skills commensurate with grade-level expectations. Teacher perceptions regarding the barriers to successful implementation of a tiered instruction model in reading in kindergarten will be a key focus, along with suggestions for improvement. Implications for training and future RtI implementation will be presented.

**Justification for the Research Problem**

Learning to read at an early age is critical. A report from the National Reading Panel (2000) highlights the need for early identification and intervention for children at risk for reading failure. The intervention knowledge that teachers have affects their practice as they have to identify the problem, know how to implement potential solutions and be able to access resources to solve the problem. General education teachers may lack sufficient knowledge of research-based practices and interventions, may have limited support personnel to assist in the classroom or may not be provided with resources necessary to assist struggling readers (Kamps, Abbott, Greenwood, Wills, Veerkamp & Kaufman, 2008).

IDEA (2004), by introducing language leading to regular education interventions, described tiered instruction as both a way to identify students with learning disabilities and as a way to reduce the number of students being identified with disabilities. This researcher will study the qualities of instruction that will lead to prevention of reading disabilities. A focus will be placed on the struggling reader by identifying instruction and interventions that will target identified areas of weakness, assist with student achievement in reading and lead to success in reading for all students. At this research site, educators are responsible for teaching reading to
students who enter kindergarten with varied levels of ability and background experiences, along with learners for whom English is not their first language. As stated by Johnston (2010), “Although there are differences in students’ abilities that make it harder for some to acquire literacy, given appropriate instruction, students with the most limited competencies have almost all been taught to read on par with their peers” (p. 602). It is the intent of this study to highlight appropriate instructional practices which may already be in place and to identify additional practices that will lead to success in reading for all students.

When discussed as a means to prevent reading disabilities, RtI must focus on responsive teaching, useful assessments and teacher expertise and knowledge, along with research-based instruction and interventions (Johnston, 2010). Studies have linked increased teacher understanding and knowledge of RtI to improved intervention outcomes and better data-driven decision-making (Nunn & Jantz, 2009; Nunn, Jantz & Butikofer, 2009).

Data plays a key role in the RTI process as it is crucial to have valid measurements of a learner’s level of development at a specific point in time, along with the tracking of progress over time. A universal screening, such as Dynamic Indicators of Basic Literacy Skills (DIBELS), is a useful system for student data collection and progress monitoring. DIBELS are a set of procedures for assessing early literacy skills, and are designed to be short (one minute) measures to monitor phonemic awareness, vocabulary, accuracy, fluency and comprehension (Ball & Christ, 2012).

This study will provide practitioners with a framework to understand the usefulness of universal screenings and curriculum-based measures, along with alternatives such as computer-generated tests (STAR Early Literacy Assessment, 2008) for progress monitoring and instructional planning. This researcher will discuss issues surrounding data-driven decision
making, such as the number of data points needed to make a decision regarding response, the amount of time necessary for an intervention to be implemented in order to determine its effectiveness, and specific actions to take once an intervention has been determined to be either successful or unsuccessful.

Effective RtI implementation takes place with all students, and educators bear the responsibility of implementing interventions with a large number of students. Therefore, it is crucial that an effective RtI model in reading in kindergarten is in place at this research site. It is also critical that this model is developed through the teachers’ perspective and understanding in order for the model to be sustainable. Understanding teachers’ instruction for struggling readers will provide insight into how teachers’ expertise can be supported and improved so they are more effective with implementing research-based interventions that will assist in raising the reading achievement of all students, regardless of their ability levels.

**Deficiencies in the Evidence**

A substantial body of research is available regarding the tiered instruction model. Many studies utilize a quantitative approach when examining the effectiveness of RtI (McAlenney & Coyne, 2015; Al Otaiba et al, 2014; Vernon-Feagans, Gallagher, Ginsberg, Amendum, Kainz, Rose & Burchinal, 2010). As RtI models are being introduced into public schools with increasing regularity, it is important to consider the perspectives of those directly involved in the implementation. Reynolds and Shaywitz (2009) noted that, despite being an integral part of the RtI process, teachers’ perspectives and views on RtI were primarily disregarded. There is a smaller body of qualitative research on this topic and a need for descriptive studies that allow for analysis of teachers’ perceptions, knowledge and information regarding RtI (Castro-Villarreal et al, 2014).
When analyzing teacher perceptions regarding the effectiveness of an RtI model in reading at the kindergarten level, a qualitative study will provide richness and detail that quantitative research cannot (Creswell, 2009). This case study will allow for detailed investigation of the research problem and will add to the research concerning instructional practices of reading teachers in primary classrooms and the supports they provide for struggling readers. This qualitative study will provide a holistic view of teachers’ perceptions of the effectiveness of the tiered instruction model in reading in kindergarten in order to gain knowledge that can be used to improve reading instruction for all learners.

**Relating the Discussion to Audiences**

This study is intended for the key participants in the Response to Intervention process. The audiences who will benefit from the findings of this descriptive case study are classroom teachers, support staff (paraprofessionals), literacy coaches, special education teachers, school counselors, administrators, central office staff and program funders. As the expectations and standards for reading achievement become more challenging and complex, it is necessary for all professionals to understand the components necessary for an effective RtI model that will increase levels of student achievement in reading in kindergarten.

The findings of this study will inform the audience of teachers’ perceptions as to the effectiveness of the RtI model currently in place in reading in full day kindergarten at a suburban primary school. The results will assist practitioners in developing an effective RtI model and will provide information to teachers and support staff challenged with assisting struggling readers by providing effective strategies to increase the achievement of all students. The findings of this study will inform district and building administrators who design and implement professional development so that teachers can be provided with the guidance they need to
become more successful at improving the reading ability of struggling readers. This research will furnish insight for all stakeholders into what needs to be accomplished within the classroom to support struggling readers and to help them attain grade level skills.

**Significance of the Research Problem:**

Changes in federal law (NCLB, 2001; IDEA, 2004) have drawn increasing attention to response to intervention (RtI). Many schools have implemented tiered instruction models in reading in response to these requirements, anticipating benefits such as early intervention for struggling readers, assessment aligned with instruction, rich progress monitoring data, along with intensive supports and evidence-based programming (Keller-Margulis, 2012, p. 342). Educators bear the responsibility for implementation of RtI, and the success of this framework depends on the systems and critical features in place to support teachers. Teacher understanding of the concepts and features of an effective RtI model is necessary for sustainability and student success (Castro-Villerral et al, 2014). This is significant to the problem of practice that will be researched, namely, teachers’ perceptions of the effectiveness of the RtI model in reading in kindergarten, since some educators at this research site struggle with aspects of this framework for modifying instruction according to student needs.

The changes in the law require teachers to deliver optimal instruction grounded in research and evidence. Expertise in teaching reading and providing instructional supports for learners is critical. Training teachers and interventionists to work with small groups of children and to implement research-based interventions can result in greatly reducing the number of students at risk for reading failure (Johnston, 2010). A National Reading Panel (2000) report identified the five core components of reading instruction for students in preschool through grade twelve as follows: phonemic awareness, phonics, fluency, vocabulary and comprehension (p. 2).
Phonemic awareness refers to the ability to manipulate the smallest units of sound in the spoken word, while phonics focuses on sound-symbol correspondences. Fluency, or the ability to orally read rapidly, accurately and expressively, is directly related to comprehension. Vocabulary is a major component of reading and should be taught both directly and indirectly. Reading comprehension, the ability to derive meaning from text, is the goal of reading instruction. (Cassidy, Valadez & Garrett, 2010).

Cervetti and Hiebert (2015) expanded upon the National Reading Panel’s five core concepts of reading development, proposing to include a sixth pillar: knowledge development. The authors aligned this pillar with the Common Core State Standards (CCSS) in English Language Arts (ELA) and Literacy that have been adopted by many states (CCSS, 2010). The standards have produced an increased focus on knowledge building and development in reading, and the use of informational texts helps all students build a foundation of knowledge through reading. Knowledge supports every aspect of reading, from accuracy and fluency to fact-based comprehension and higher-level thinking (Priebe, Keenan & Miller, 2012; Best, Floyd & McNamara, 2008).

In order to effectively implement an RtI model, teachers need to be able to deliver high quality Tier 1 instruction and to assess student progress in the core components of reading. They must receive ongoing professional development in order to deliver this core instruction with fidelity. Teachers need training in strategies for Tier 2 and Tier 3 interventions. The ability to differentiate between lesser or more intensive interventions, determine necessary frequency and duration of interventions, and progress monitor in a meaningful way to determine a learner’s level of response to interventions are critical for RtI to be effective in reading (Shapiro, 2015, p.4).
This research is driven by the belief that teachers’ perceptions, understanding and knowledge are key factors to the successful implementation and sustainability of an RtI model in reading. It is significant because, in order to create change and improve the achievement levels in reading of the kindergarten students at this study site, it is important to consider how to support the implementers of the practices related to RtI. This researcher will investigate what teachers at this small, suburban primary school know about RtI, what they perceive as barriers, what they perceive as facilitators, and will solicit suggestions for improvement.

Due to this researcher’s familiarity with the research site, the over identification of students who struggle with reading in kindergarten may be due to factors other than student ability levels. Over identification may be due to lack of quality instruction using core reading materials, inconsistent or poor knowledge of instructional and intervention strategies, or a poorly designed model to support struggling readers. Areas of focus for this study will include consistency of instruction from classroom to classroom, adequate support staff to allow for small group and individual instruction, and availability of necessary resources. Teacher training in effective intervention strategies to support students in reading will also be investigated. Data collection and analysis, along with changes in instruction as a result of data information will be examined.

**Positionality Statement**

Being formerly in the role of building administrator at the research site for five years, and acting as a lead agent of change over that period of time may contribute to some bias in this study. Although every attempt to be objective with the collection and interpretation of the data will be made, it is possible that personal relationships developed with the study participants could influence the way data is interpreted. The researcher is an integral part of qualitative
research and cannot separate himself or herself from the topic and people involved. Knowledge is created through the interaction of the researcher and those being researched, and researcher bias can be difficult to avoid (Mehra, 2002).

By drawing on one’s personal and professional integrity, neutrality can be maintained and judgments can be avoided. Objectivity is especially important when conducting the data collection process, and care must be taken to ensure that all relevant data is included. It is important that this researcher guard against seeing only data that supports her beliefs and opinions. The purpose of this qualitative study is to produce findings that will assist the participants when responding to struggling readers. The analysis, interpretation and presentation of findings will be based on the identification of significant patterns, with the goal of constructing a framework to communicate what the data will reveal. This researcher will make every attempt to strike a balance between being a participant and being an observer in this study. By recognizing the types of biases that could compromise this research and taking into consideration personal beliefs, objectivity will be optimized.

**Research Question**

In order to address the problem of practice, this study will explore the following central question: How do teachers perceive the effectiveness of a tiered instruction program in reading in full day kindergarten?

This research question directly relates to the sociocultural theory of learning, and in particular the theoretical lens of Lev Vygotsky (1934/1978). His concept of the zone of proximal development (ZPD) provides the basis for an analysis of effective teaching practices, which must begin with a study of the relationship between teaching, learning and development. Vygotsky (1934/1978) stressed the difference between a child’s actual developmental level and the ZPD,
explaining that what a child can do today with assistance, he or she will be able to do independently tomorrow.

An understanding of Vygotsky’s ZPD is essential when studying reading instruction and looking at student data as it allows for responsive instruction, leading to the ability to provide both proactive and reactive interventions. Responsive instruction combines the development of interpersonal relations, collaboration, and understanding of culture and shared beliefs to allow the teacher to fully understand each student (Eun, 2010). This deeper understanding will allow the teacher to develop appropriate lessons and activities. It will also allow for the provision of support from a More Knowledgeable Other (MKO), assistance that is targeted and individualized to the learner. Those who know the child best recognize what immediate support is needed and can continue to respond to the child’s changing needs. When support and interventions are combined with formative and summative assessment data and more frequent progress monitoring, it is assumed that all students will be able to develop their skills in reading.

Theoretical Framework

Sociocultural theory (Vygotsky, 1934/1978) is the theoretical framework that will guide this qualitative case study. The sociocultural theory of human development and learning provides the essential framework for understanding the process of teaching and learning in the school setting. It is based on the principle that social interaction is the driving force behind human development. Communication through the use of language, along with collaboration, result in new knowledge being constructed (Eun, 2010). The theory has implications for teaching and learning that can be applied to the development of reading. The teacher can utilize the sociocultural theory when developing curriculum, planning cooperative activities, and supporting student learning.
Sociocultural theory has its roots in the work of Russian psychologist Lev Vygotsky. He emphasized the role of social interaction and culture in general as being essential in cognitive development of children (Vygotsky, 1978). Vygotsky believed the development of higher psychological functioning occurred on two levels, “…first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological)...” (Vygotsky, 1934/1978, p57).

Vygotsky (1978) originated the concept of the zone of proximal development (ZPD) as he discussed the use of standardized measurements, those which are normed and scored in a consistent way, to assess a child’s intellectual abilities. Vygotsky defined ZBD as, “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (1978, p. 86). In other words, it is the difference between what a learner can do independently and with help from either the teacher or more able peers. Vygotsky (1978) recognized the presence of the More Knowledgeable Other (MKO) as someone who has better skill or understanding of a concept, process or task. In order to internalize learning, learners must first see it in action, reflect upon it and then do it themselves (Miller, 2011). Interactions within the ZPD can be considered generators of culture and development, and allow children to participate in tasks and activities that may be very difficult for them to achieve on their own (Fernandez, Wegerif, Mercer & Rojas-Drummond, 2015).

Learning experiences must be designed to encourage the student to extend beyond his or her capability in order to reduce the gap between the learner’s current development and where he or she could be with assistance (Armstrong, 2015). Interaction and dialogue through the use of language are fundamental at this stage. Vygotsky (1978) placed emphasis on the use of language
since collaborative dialogue is the way in which the MKO communicates important information to a learner. In addition, external dialogue leads to the use of internal dialogue. The language used during social interaction, after being transferred to internal dialogue, allows the learner to further construct meaning through thinking and reflection (Armstrong, 2015).

The More Knowledgeable Other (MKO) is part of a community of practice and is essential to the collaboration process and the development of learning. Eun (2010) discussed Vygotsky’s thoughts on the relationships among teaching, learning and development. The role of the teacher in the learning process is crucial, with the implication being that any child, with appropriate support from adults, has the potential to develop knowledge and learn at a rate commensurate with his or her ability level. As stated by Eun (2010), “Sensitive and compassionate teachers who provide guidance that is attuned to children’s current level of understanding enable them to learn concepts that were initially beyond individual comprehension” (p. 403). Teachers provide scaffolding, or cognitive support, to assist learners in solving tasks they otherwise would not have been able to accomplish on their own (Bruner, 1978). This support leads the learner to higher levels of understanding by focusing on the critical aspects of a task, minimizing frustration and the fear of failure and maintaining motivation by directing the actions leading to task completion (Fernandez et al, 2015).

Vygotsky’s sociocultural theory of development continues to impact learning and provides implications for classroom support in the development of reading. In order to foster collaboration and interaction, curriculum and activities should be designed to encourage and emphasize collaboration between learners and learning tasks. Teacher-student collaboration is essential for cognitive development. Instruction and appropriate adult support will assist children in performing tasks they were otherwise incapable of performing. Scaffolding, with the
adult continually adjusting the level of support based on the student’s performance, produces immediate results while instilling the skills necessary for future performance. Assessments must be based on Vygotsky’s concept of ZPD, and need to individually target both the learner’s actual development as well as the level of potential development (Miller, 2011).

The theoretical framework will guide this research as the problem of teacher perceptions of the RtI model in reading in full day kindergarten is examined. The sociocultural theory will provide the structure, organization and lens through which to examine contributing variables and their relationship to the educational problem presented. The researcher’s inquiry into the literature will be guided by the concepts developed by theorist Lev Vygotsky, in particular the ZPD and MKO. Vygotsky’s thinking is important when analyzing the processes used by students to deal with the demands of content-loaded curriculum. Assessment procedures used to analyze student achievement in reading at the kindergarten level should be based on the ZPD in order to accurately address a student’s cognitive level of functioning and mastery of concepts (Gredler, 2012). Teacher knowledge about the developmental stages is crucial as educators must know their students in order to provide instruction that is tailored to their needs. As teachers guide students in their learning, using a gradual release model of support, they are using the work of Vygotsky and the zone of proximal development. The responsibility for learning shifts from the teacher as the more knowledgeable other to the students.
Chapter II: Review of Literature

Introduction

Reading is a basic skill that all students must possess in order to be successful. Reading is the foundation for future knowledge as students must be able to read in order to learn. With the variability of reading levels in classrooms, teachers are faced with students who are struggling to read (Reynolds, Wheldall & Madelaine, 2011). Those students who experience difficulty with reading at an early age are at a disadvantage and face the possibility of progressing at a slower pace than their peers unless provided with intervention (NCLB, 2001). The barriers faced by children with reading difficulties, however, can be overcome with proper guidance and support. Education reform has resulted in policy at the federal, state and district levels that initiated large scale change and has a significant impact on the day to day work of educators (CCSS, 2010; IDEA, 2004; NCLB, 2001). Teachers must have an understanding of accountability requirements in the legislation along with the instructional practices that will help them be effective in raising student achievement in reading (Harlacher, Nelson Walker & Sanford, 2010).

The following bodies of literature will be used to inform this study: a.) the reading process, b.) tiered instruction and support, otherwise known as response to intervention (RtI), and c.) educators’ views: perceptions of and recommendations for intervention strategies and implementation support in reading. A review of the research on the reading process will provide an understanding of the pillars of reading instruction, the emergence of reading comprehension, the struggling reader and the efficacy of reading interventions (Cassidy, Valdez & Garrett, 2010; Dooley, 2010; National Reading Panel, 2000; Reynolds, Wheldall & Madelaine, 2011). A review of the research on RtI will provide an understanding of research-based tiered instruction and interventions, assessment practices and data-driven instructional decisions, and the role of school-wide personnel in the RtI process (Ball & Christ, 2012; Bean & Lillenstein, 2012; Johnston, 2010; Keller-Margulis, 2012). A review of the literature on educators’ perceptions of an effective RtI model and
recommendations for sustainability will provide appropriate actions along with a variety of instructional modifications and supports to assist in improving the performance of struggling readers (Castro-Villatorreal et al., 2014; Enriquez, Jones, & Clarke, 2010; Reynolds & Shaywitz, 2009).

This literature review will focus on connections to Vygotsky’s theory of learning development. The concept of the ZPD will be discussed as it relates to the implementation of differentiated instructional practices and response to intervention at the kindergarten level. This researcher will center the literature review using the theoretical lens of Vygotsky, concentrating in particular on the role of the teacher as the MKO and his or her understanding of students’ ZPD. The ZPD and MKO are critical factors in the process of teaching and learning when examining the relationship between development and acquiring knowledge (Vygotsky, 1978). These elements of Vygotsky’s sociocultural theory will guide this research into the literature.

**Historical Perspective of Standards-based Reform**

In order to understand standards-based learning as it is used in schools today, it is important to trace back to its origins. The history of standards-based reform (SBR), originally referred to as outcomes-based reform (OBR), dates back to the work of Benjamin Bloom and his educational philosophies which focused on higher-order thinking skills (Bloom, 1965). SBR gained momentum in 1983 during the Reagan administration, with federal educational goals highlighted in the report A Nation at Risk (1983). In 1994, President Clinton signed into law Goals 2000, which encouraged schools to develop plans as they worked to increase student achievement (Educate America Act, H. R. 1804).

The No Child Left Behind (NCLB) Act of 2001 dramatically changed the way education reform was viewed in America by instituting accountability measures and systems. Signed into law by George W. Bush in January of 2002, it required schools to implement standardized assessments and to ensure that all students achieved benchmarks of proficiency in reading and
math by the end of the 2013-2014 school year. This initiative was based on the premise that accountability would increase the quality of education for all learners in the United States. Accountability was defined as being standards-based, with regular assessment implemented based on those standards, along with consequences related to student performance. This “consequential accountability” was a condition for receiving federal Title I funding provided to districts and schools with a high percentage of low income families (Kress, Zechmann & Schmitten, 2001, p. 186).

The theory behind standards-based reform (SBR) was that change should begin with the development of content standards in core subject areas to outline what students should know and be able to do. These standards would be paired with explicit goals, or student learning targets, that would be measured by standardized assessments aligned to the content standards. It was expected that teachers would align instruction with the standards and assessments if given appropriate supports and guidance, and in turn, student learning would increase (Polikoff, 2012). Both qualitative and quantitative studies have been conducted to investigate the extent to which alignment is occurring and results indicate that most teachers, ranging from 76% in a national sample (Pedulla, Abrams, Madaus, Russell, Ramos, & Miao, 2003) to 96% in California and Georgia (Hamilton & Berends, 2006), report increased instructional alignment between content, instruction and assessment (Polikoff, 2012, p.343).

Congress continued to uphold the mandates of NCLB 2001 as they passed additional legislation designed to govern the education of students with disabilities. The reauthorization of IDEA in 2004 required districts to use a process to determine a student’s response to scientifically-based instruction and interventions when making a determination of specific learning disability (SLD). The question remained, however, whether states would mandate RtI
by law, requiring it for a determination of SLD. A study conducted by Zirkel and Thomas (2010) found that twelve states had adopted RtI as the required approach for determining SLD, with the site of this research not being included in this list. Further investigation by Zirkel (2011) found that laws had not yet been proposed to either fully or partially mandate the use of RtI in the special education process in most states, including this research site. Whether mandated or not, many schools and districts in a number of states have chosen to implement RtI as it was intended, as a general education initiative that focuses on using high quality instruction and interventions along with close monitoring of student progress, with the goal of improved achievement for all students (RTI Action Network, 2015.)

Education reform focused on the development of content standards to identify what all children should know and be able to do. This led to additional changes in federal policy to construct curriculum-based standards that would be common to all states in order to ensure fidelity of implementation. The case for Common Core State Standards (CCSS 2010) in English Language Arts and Mathematics was made by referencing a report from the National Governors’ Association (2008) which cited low achievement among students from the United States when compared to peers from other countries, along with an achievement gap among students from different socioeconomic backgrounds.

McDonnell and Weatherford (2013) found that the promoters and developers of the CCSS used research along the various stages of development, “thus ensuring that the CCSS are grounded in research-based knowledge of the cognitive and developmental pathways that characterize learning success” (p.18). When considering adoption, over 40 states discussed this policy proposal based on research and evidence, questioning whether the advantages would be greater than the price of implementation. As of January 1, 2015, common core standards in
language arts and math were in place in 43 states, including the state of this research site (Nelson, 2015).

**Reading Instruction**

In order for kindergarten students to meet the common core standards outlined for reading, instruction needs to be designed so that optimal learning takes place. The National Institute of Child Health and Human Development (NICHD, 2000) published a report by the National Reading Panel that cited the major areas that were critical in learning to read. By conducting studies and examining the evidence from kindergarten through grade three, the subgroups from this panel found that phonemic awareness, phonics, vocabulary, fluency and comprehension were all areas related to successful reading development and instruction. In 2002, the National Early Literacy Panel (NELP) expanded upon the work of the NRP by examining instructional strategies for those key areas and identifying the significance of these strategies on children’s reading development (NELP, 2008).

**Phonemic Awareness.** Identified by the NRP (2000) as one of the five necessary topics to include when discussing reading instruction, phonemic awareness (PA) refers to the ability to use the sounds which make up language and words. This is a key component of kindergarten reading programs as teachers begin instruction by first focusing on identifying the letters of the alphabet along with corresponding sounds. Instruction then moves on to phonological awareness and use of the alphabetic sounds, both individually and blended.

Scientifically-based research studies were analyzed by the NRP to determine the correlation between direct PA training on students’ phonemic abilities and the effectiveness of this training on reading development (Bentin & Leshem, 1993; Kozminskey, & Kozminskey, 1995; McGuiness, McGuiness, & Donohue, 1995; Wilson & Frederickson, 1995). Results of fifty-two
studies related to PA training were calculated by the NRP (2000) to identify a mean overall effect size of .86 on students’ ability to improve phonemic skills (p. 26), along with a moderate effect (.53) on reading development (p.20). The NRP identified PA as one of the pillars of reading instruction when they described “phonemic awareness and letter knowledge as the two best school-entry predictors of how well children will learn to read during their first 2 years in school” (NICHD, 2000, p. 4). The reading panel also found that phonemic awareness instruction was more successful when the instruction was specific and targeted for learners as individuals. This has implications for the kindergarten classroom in terms of viewing phonemic awareness instruction as a separate part of the reading curriculum. It also underscores the need for differentiating instruction and activities to accommodate student needs and ensure that all students receive a solid foundation in PA.

Another study analyzed the relationship between phonological awareness and phonological memory, relating both to the development of reading (Nithart, Demont, Metz-Lutz, Majerus, Poncelet & Leybaert, 2011). Kindergarten students, ranging in age from 5.3 to 6.4 years, were participants in this year-long study. A phonological assessment was done before and during the study, using a computerized program consisting of pictures and different levels of processing: rhyme, syllable and phoneme recognition. Reading development was measured using a version of the Peabody assessment. The purpose of the study was to examine kindergarten students’ progress over time as they participated in the beginning stages of reading development. Results showed a significant improvement in both phonological tasks (awareness and memory) at the end of the study, along with reading abilities that correlated with phonological awareness performance. Results of this study suggest that phonemic awareness and phonological memory contribute strongly toward reading development.
Evidence from studies suggests that teaching children phonemic awareness helps students learn to read, particularly beginning readers in kindergarten (Dougherty Stahl, 2011; Frost, Landi, Mencl, Sandak, Fulbright, Tejada, Jacobsen, Grigorenko, Constable & Pugh, 2009; National Reading Panel, 2000). Phonemic awareness is a foundational piece of the reading process (Whipple-Curtis, p. 35). However, even though it contributes significantly to reading development, there is obviously much more that children need to be taught in order to become competent readers.

**Phonics.** As kindergarten students develop their phonemic awareness skills and commit this knowledge to memory, reading instruction shifts toward the area of phonics. Identified by the NRP (2000) as a second key area in reading instruction, phonics expands upon phonemic awareness by putting together phonemes, or units of sound, into syllables that form words. Phonics builds heavily on a student’s phonemic awareness skills by connecting phonemes with written letters so that the basic knowledge of sounds can be transferred to the printed word (McGeown, 2015). The NRP examined evidence-based research studies to determine whether structured training in phonics, as with phonemic awareness, would help students read more effectively, and whether specific training begun in kindergarten would increase decoding and word reading skills, further developing reading ability (Defior & Tudela, 1994; Iverson & Tunmer, 1993; O’Connor, Jenkins, & Slocum, 1995).

Participants in studies examined by the NRP to examine the effect of phonics training on reading development included kindergarten students who demonstrated both normally developing reading skills along with those demonstrating reading difficulties. The NRP conducted an analysis of fifty-two relevant studies to calculate mean effect sizes. A mean overall effect size of .56 was measured at the end of year-long structured trainings in phonics,
suggesting that phonics training at the kindergarten level, using systematic programs, contributes toward reading development (NRP, 2000, p.114). A mean overall effect size of .51 was measured when comparing the effects of phonics training on the reading comprehension skills of kindergarten students (NRP, 2000, p.115). The NRP (2000) concluded that phonics training had the most impact when used at the early levels of kindergarten and first grade (p.116).

McGeown (2015) conducted a study to compare the effects of a structured phonetic training approach versus an assorted use of reading methods on early reading achievement. Seventy-three kindergarten-aged students participated. Of the two groups, those that participated in a structured phonics training approach using sound blending method showed evidence that memory played a key role in reading success. Students who were instructed using various different methods such as whole word reading or relying on context clues showed that vocabulary knowledge was an essential factor in reading development. Results of this study suggest that teachers must have a strong knowledge of individual students’ strengths and weaknesses when planning reading instruction. Students with less well-developed memory abilities and/or weaker vocabulary would likely be more successful in reading when provided with additional instruction in language skills, rather than relying solely on a phonetic approach to decoding and reading.

Fluency. Fluency, or the ability to read text quickly, smoothly and with appropriate expression, is a key component of reading instruction and is an important foundation for comprehension (NICH, 2000). Fluency is the result of strong word recognition skills combined with practice in reading text. The NRP (2000) recognized the importance of practice to increase fluency, and the panel researched studies to determine whether the better approach would be to guide students as they read orally or to provide considerable opportunities for students to read to
themselves. The panel found an extensive list of research that examined the effects of guided oral practice on developing reading fluency, and a significantly lesser number of studies that looked at sustained silent reading practice (NICHD, 2000, p.7). The NRP examined the results of fifty-one studies that could answer the question of whether a guided oral reading approach was effective on increasing reading fluency. The results of these repeated oral reading studies were calculated and identified an average effect size of .41, suggesting that frequent practice reading orally with guidance has a positive effect on fluency (NRP, 2000, p. 190). The panel also investigated literature and research articles on silent reading practices such as sustained silent reading (SSR), Stop, Drop and Read and accelerated reader (AR), but found that the findings were unclear and did not support a link to increased fluency (NICHD, 2000, p. 7). This study suggests that the use of read-alouds at the kindergarten level is highly beneficial in the development of beginning readers’ fluency with connected text.

Rasinski (2012) stated that fluency instruction should be part of all reading curricula, and noted that direct fluency practice has dropped off in many classrooms over the years. When it is practiced, it is done as a separate aspect of reading instruction and is not linked to word recognition and comprehension. He maintained that while fluency is generally thought to be a lower-level skill that should be taught in the beginning stages of reading, struggling readers at all grade levels would benefit from this practice.

Ross and Begeny (2011) conducted a study to examine the effectiveness of fluency intervention strategies provided to English Language Learners (ELLs). This study was carried out in part to inform school psychologists and other support personnel who work with students in either small group or 1-1 settings. Participants were five second grade students whose first language was Spanish. Assessment of fluency levels was done using the Dynamic Indicators of
Basic Early Literacy Skills (DIBELS), Oral Reading Fluency (ORF) subtest and progress-monitoring materials. Interventions included repeated reading and retell, along with vocabulary instruction. Results offered important information for teachers of reading and support personnel, along with implications for classroom instruction. Findings showed that 1-1 intervention resulted in increased fluency for all five participants and suggest that ELL students may benefit from brief (3-5 minutes) fluency intervention several times per week. Ross and Begeny (2011) noted that the findings of this study were consistent with research conducted among non-ELL subjects.

**Vocabulary.** Along with word recognition and fluency, vocabulary growth and development is an essential component of the reading process. Vocabulary instruction increases receptive language skills, leading to stronger listening and reading comprehension abilities. It also increases expressive language skills, thus strengthening writing and speaking. Children enter school with different vocabulary levels, and the difference between students’ word knowledge and usage can lead to a vocabulary gap which grows over time if not addressed (Cassidy et al., 2010).

As with the other core areas of reading instruction, the NRP sought to review scientific studies related to vocabulary instruction (NICHD, 2000, p. 8). The panel found, however, that an adequate amount of research that met NRP standards was not available. Through discussion among panel members, various methods of instruction were identified as leading to increased vocabulary knowledge and comprehension. Both direct teaching of vocabulary, which includes exposure to targeted words and their meanings, and indirect teaching, which is the result of a variety of independent reading activities and opportunities, were recommended. Other components of effective vocabulary instruction at the beginning reader level include exposure to
rich classroom language using high-quality vocabulary, and incorporating read-alouds to actively engage students in thoughtful discussion (Archer, n.d.).

Fien, Santoro, Baker, Park, Chard, Williams & Haria (2011) conducted a study to examine the effect of reading aloud on the vocabulary and comprehension of young children. Participants were at-risk first grade students who demonstrated relatively weak language and vocabulary skills, having scored below the 50%ile on a non-standardized vocabulary assessment. The Read Aloud Curriculum was used daily for whole group instruction for all of the students; however, the participants in this study received additional read aloud opportunities in a small group setting (2-5 students), two times per week for twenty minute sessions over the course of eight weeks. Results indicated improved vocabulary knowledge and comprehension for all students, with an average increase of 6.26 points for students in the control group. An added benefit was noted for those students who received intervention with an average increase of 11.93 points, 5.67 points higher than students who did not receive intervention. Additional studies support these findings and indicate that vocabulary instruction using core reading materials at a tier 1 level, and assisting those students whose vocabulary is not developing sufficiently by providing interventions at a tier 2 level results in improved achievement for all students (Loftus, Coyne, McCoach, Zipoli, & Pullen, 2010; Pullen, Tuckwiller, Konold, Maynard, & Coyne, 2010; Tuckwiller, Pullen, & Coyne, 2010).

Opportunities for vocabulary instruction occur throughout the day in all classrooms, not just during specified academic times. Teachers of young children need to take advantage of opportune moments to highlight and explain higher-level vocabulary words. These incidental moments, however, usually result in one-time exposure to a word, and it is not likely that most students will incorporate unfamiliar words into their bank of vocabulary based on one exposure.
(Neuman & Roskos, 2012). Children need repeated exposure to challenging words, clear explanations and usage for new vocabulary, along with opportunities to use their new learning in both oral and written language activities. This can only be accomplished through the use of structured, systematic vocabulary instruction during the reading process.

Reading Comprehension. Reading comprehension is the ability to interact with text in order to derive meaning and make inferences based upon individual thinking. This is the fifth component identified by the NRP as essential to reading instruction. The panel analyzed 203 research studies which focused on comprehension strategy instruction, and identified a substantial list of effective reading strategies. Strategies such as questioning, summarizing, organizing ideas and actively observing one’s thinking and understanding throughout the reading process have proven effective in reading comprehension development (NICHD, 2000, p.9). The process of reading comprehension is complex for young readers, as they must develop the ability to decode while processing the meaning of words at the same time. This involves a high-level of mental functioning and is often difficult for beginning and struggling readers.

Cartwright, Marshall, Dandy, & Isaac (2010) conducted a study to examine children’s ability to concurrently and easily focus on both the phonological and linguistic aspects of reading. The authors compared this ability to its effect on reading comprehension in beginning readers. Participants included a diverse sample of first and second grade public school students. A series of cognitive flexibility tasks were completed by the participants, with speed and accuracy recorded. Results showed that second grade students performed significantly better than first-grade students, suggesting that the ability to simultaneously read and comprehend is a learned skill that develops over time and with instruction.

A three-year longitudinal study was conducted by Dooley (2010) to examine the
emergence of reading comprehension in young children. The author spoke of reading comprehension as a process which begins early and develops over time as young children begin to make meaning of pictures and text. The twelve participants in this study were observed from age two to age five, and data was provided through observational notes, interviews and video recordings. Findings were grouped into four phases, beginning with the earliest: using books for play, using books for social interaction, memorizing text and focusing on the sound of reading a book aloud by themselves, and paying attention to the text, pointing and word reading using picture cues (p. 124). This study informs teachers of the development of reading comprehension over time as they develop high-quality reading instruction and activities for kindergarten students.

Gregory and Cahill (2010) suggest a number of strategies that can be used successfully to help develop reading comprehension skills in kindergarten students. Visually organizing ideas through drawing sets the foundation for discussion and from discussion knowledge and understanding is created. Young readers can be encouraged to make pictures in their heads and then share their ideas through social interaction. Teachers need to make connections for students using think-aloud strategies. Modeling interactions with text and thinking about the text allows students to understand ways to make their own connections and develop their own meaning. Visualizing and creating movies in one’s mind assist with identifying pertinent details and sequences of events. Teaching questioning strategies and techniques allow students to become more thoughtful readers, learning to analyze text and to examine it meaningfully. Teaching students to use their brain and to make inferences is a critical strategy in reading instruction. Beginning readers will benefit from direct comprehension strategy instruction and will become more skilled over time.
The National Early Literacy Panel (NLP, 2008) expanded on the work of the NRP by examining studies related to reading strategy instruction. This panel had a goal of identifying the early literacy skills that provided the foundation for beginning readers, and the effect these skills had on future reading achievement. NLP aligned their thinking with that of the NRP and recognized the importance of phonological awareness, memory, and vocabulary knowledge as key components of early literacy instruction. The panel also found that young readers needed to have a solid understanding of basic book handling skills, along with a clear explanation of the meaning of print, illustrations, spacing and punctuation.

NLP (2008) conducted their investigation into literature that focused on beginning readers from birth to age five, looking specifically at skills, curriculum, interventions and instructional methods and their impact on early literacy development. Hundreds of scientific studies were analyzed, resulting in a comprehensive report of NLP’s findings. Results indicated that decoding, oral language, understanding of print, phonological awareness and phonics training are essential for successful reading achievement in kindergarten students. Reading interventions that included teacher questioning, feedback, support and guidance are effective when working with struggling beginning readers. NLP also identified parent support and involvement as factors that contributed to student success with early reading skill development. The panel included the importance of ongoing professional development provided to teachers of reading at the kindergarten level.

Cervetti and Hiebert (2015) discussed the thinking behind their argument that knowledge building should be included among the critical components of reading instruction identified by the NRP. The authors cited the importance of background knowledge to help students draw on their experiences and make connections to reading. Knowledge also contributes strongly toward
comprehension of text by allowing students to explore a subject more deeply. The authors referenced the inclusion of knowledge in the CCSS (2010) along with an increased emphasis on the use of informational texts in their argument that building knowledge should be included as a key component in reading instruction. Additional studies support the importance of knowledge on the reading process, targeting the need for increased knowledge building for increased success in the key areas of decoding, fluency and comprehension identified by the NRP (Best, Floyd & McNamara, 2008; Ozuru, Dempsey & McNamara, 2009; Priebe, Keenan & Miller, 2012).

**Vygotsky’s Influence on Reading Development**

The concept of knowledge building can be linked to the work of Lev Vygotsky and the aspect of socio-cultural theory that relates the creation of knowledge to learning (Churcher, Downs & Tewksbury, 2014). According to Vygotsky (1934/1978), knowledge building is a collaborative process that involves dialogue and social interaction with others. Knowledge is developed in one’s surroundings or specific setting. It is done through a process involving people, language, and shared experiences (Ryan, 2015, p.22). Building knowledge is a mutual process and is different from learning because learning is viewed by Vygotsky as an individual process.

Knowledge building and its link to sociocultural theory has also been discussed by other scholars. Punja (2003) explored Vygotsky’s thinking that knowledge building is dependent upon the developmental levels of students and the collaborative interaction with other social beings. Vygotsky argued that higher levels of thinking developed naturally based on a child’s maturity, along with communication and guidance from others. During the process of knowledge building, the teacher is placed in the role of being an “expert learner” (Punja, 2003, p.3). As the teacher shares with students by planning activities, explaining to avoid misunderstanding,
organizing students’ thinking and tracking progress, all participants are involved in the knowledge building and learning processes. Hofstetter & Schneuwly (2009) also discussed Vygotsky’s thinking related to knowledge building, citing the teacher as a “knowledge specialist” who must share his or her knowledge through teaching methods that align with students’ developmental levels (p. 623). The authors cited the importance of Vygotsky’s reasoning that children’s development differs, depending upon individual cultural and social experiences, since these differences contribute to varied levels of background knowledge and prior experiences to draw upon.

When analyzing the development of a beginning reader, the relationship between a child’s prior knowledge and developing knowledge must be taken into consideration. Vygotsky (1978) discussed commonplace understanding which is based on personal experiences a child has with his or her environment and the importance of this background knowledge on future learning. He compared this to analytical knowledge which is gained through formal school experiences and structured learning opportunities. Students learn by building on all experiences, both formal and informal. Using prior knowledge is particularly important during the reading process as it assists with understanding through vocabulary and text comprehension (Gregory & Cahill, 2010). Not all students, however, enter school with the same levels of background knowledge and experiences. It is up to the teacher in his or her role as MKO to not only work to activate students’ prior knowledge but also to provide background information for those students who are unable to draw upon personal experiences.

A child’s developmental levels are also a key factor in determining success during the reading process. Vygotsky believed that the highest degree of learning came just when a child was developmentally ready to effectively use “mental tools” developed through cultural and
learning experiences (Karimna, 2010, p. 336). According to Vygotsky (1934/1978), children need to fully expand their thinking abilities before they are able to easily and successfully build knowledge by themselves. The rate at which this skill is developed varies from child to child depending upon each child’s ZPD, but once developed, this ability becomes the foundation for higher-level functioning.

The practical implication for teachers of reading is to find a way to target individual students’ ZPD when confronted with a whole class of students requiring instruction. Guk and Kellogg (2007) offered documentation that teachers, by providing support, structure and guidance can create an environment that narrows the disparity between students’ levels of development. By comparing a variety of student-to-student (S-S) and teacher-to-student (T-S) interactions, the authors concluded that it is possible to effectively instruct all students in a classroom. T-S interactions have a heavy language focus and center on the MKO (in this case, the adult) presenting the facts and guiding student learning, while S-S interactions are centered on collaborative activities and shared task completion. This process is an effective use of scaffolding and allows for the role of MKO to be more fluid, transferring from the teacher to a more able peer when appropriate.

Scaffolding strategies are used throughout the instructional process in reading. Effective instruction for beginning readers includes scaffolding techniques such as previewing the text, pre-teaching vocabulary, or questioning for understanding throughout the reading selection. Scaffolding is a tool to be used during the process of differentiating, or modifying instruction according to student needs. While scaffolding and differentiating are two separate instructional practices, they both are dependent upon teachers’ awareness of students’ ZPDs, occur during all stages of reading instruction and are integral components of the RtI process (Alber, 2014).
Response to Intervention (RtI)

RtI has emerged, in part, as a response to increased demands for student accountability and achievement. Educators are responsible for providing all students with mastery of essential skills and knowledge, beginning at the earliest levels. RtI models can vary from state to state, district to district and even school to school, but there are specific features that all models must maintain. The National Research Center on Learning Disabilities (2004), in partnership with various other organizations and coalitions, outlined the core features of an RtI model as including research-based core instruction, school or district-wide screening, tiered instructional support, continuous monitoring of student progress and documentation of the success of interventions that were implemented (Stuart et al., 2011, p.55).

There are three tiers in most RtI reading models: primary, secondary and tertiary prevention levels. In tier 1, which is considered the key component of the tiered instruction process, all students receive core instruction that is evidence-based and scientifically researched. This is done at the classroom level by the general education teacher. Universal screening (at the beginning, middle and end of the year) is conducted with all students, and on-going progress monitoring is utilized for struggling readers. Differentiated instructional practices are used to target individual learning styles by designing and delivering instruction to best reach all learners (RTI Action Network, n.d.)

Tier 2 instruction is supplemental to the core reading program. It is for those students who are not responding to the core instruction at Tier 1 and require more intensive instruction. Tier 2 interventions are usually provided to small groups (two or three) of students, for twenty to thirty minute sessions which can be facilitated by general educators, paraprofessionals, special education teachers, literacy specialists or other support staff. These sessions can be provided
anywhere from two or three times a week to daily intervention, depending upon the model being used. Intervention is focused on the specific needs of the struggling student and usually lasts for eight weeks, with routine (two to three times per month) monitoring conducted (Stuart et al., 2011).

Tier 3 interventions are for those students who are not responding to tier 2 and are not making effective reading progress when compared to the curriculum and content standard expectations. Students at this level are not developing reading skills commensurate with the achievement rates of grade-level peers. Interventions at this level are intensive, provided daily, and are usually done on a one-to-one basis. Progress monitoring is conducted frequently. While tier 2 interventions consist of a mix of general and special educators, tier 3 begins to lean more heavily toward those specialists with expertise in dealing with students with more intensive needs (Keller-Margulis, 2012).

Research has shown the importance of including additional school-wide support personnel in the RtI process (Kibby, 2009; Sanger, Friedli, Brunken, Snow, & Ritzman, 2012; Vernon-Feagons, Kainz, Amendum, Ginsberg, Wood, & Bock, 2012). Literacy coaches, reading specialists, speech-language pathologists, school psychologists and paraprofessionals can make significant contributions toward the success of an RtI program. Literacy coaches provide on-going training to classroom staff to help them become more effective teachers of reading, while reading specialists intervene with the struggling reader on an individualized level. Experts in communication disorders provide specialized interventions that may be more complex than those provided by the classroom teacher. School psychologists, while not reading specialists, are knowledgeable regarding effective reading interventions suited for specific needs. Paraprofessional roles are extensive and varied, ranging from teacher support to student
RtI and the reading process. Many students respond positively when provided with high-quality, research-based core reading instruction. But the question remains as to how long a student who appears to be struggling should remain in tier 1 instruction before moving to a secondary level with intervention. Al Oraiba, Connor, Folsom, Wanzek, Greulich, Schatsneider & Wagner (2014) conducted a study which compared the efficacy of two RtI models and the effects on the reading achievement of first grade students. The first model, labeled a dynamic approach, immediately provided students identified as having the weakest skills in reading with the most intensive literacy interventions, effectively bypassing tier 1 and moving students quickly into tier 2 and even tier 3. The second model, labeled typical, required students to begin in tier 1 and move through the levels only on the basis of weak skill development and slow reading growth.

Findings indicated that the dynamic model was more effective, with a moderate effect size (ES=.36). Through an experimental design, researchers were able to show that students with the weakest skills (identified through brief 3-5 minute screenings) demonstrated significantly stronger reading performance than those students who waited a typical eight week period before moving into tier 2 or tier 3. This study suggests that there is a benefit to providing immediate intervention for beginning readers who are struggling to master the key components of reading instruction. Intervention, support, and differentiated instruction presented at the earliest levels will likely lessen an achievement gap between kindergarten readers and possibly reduce the number of inappropriate special education referrals.

Differentiated Instruction. Tomlinson (2006) defined differentiated instruction as “the process of ensuring that what a student learns, how he or she learns it, and how the student
demonstrates what he or she has learned is a match for that student’s readiness level, interests, and preferred mode of learning” (as cited by Ellis, Gable, Greg & Rock, 2008, p.32). While differentiated instructional practices are commonly used in the intervention tiers of an RtI model, they can be also be effective when used during tier 1 instruction. Watts-Taffe, Laster, Broach, Marinak, Conner, & Walker-Dalhouse (2009) acknowledged that teachers require assistance in the practice of differentiating instruction to clarify what it looks like in a primary classroom, the teacher decisions required leading up to it, and how to implement it. The authors observed classroom instructional practices in differentiation, examining techniques such as flexible grouping, use of graphic organizers, modeling of the think-aloud method and careful choosing of appropriately leveled reading materials (p. 306). They also examined research behind this concept before presenting the conclusion that successful differentiation is the result of thoughtful determinations made by teachers after a thorough analysis of students’ strengths, weaknesses and interests (Connor, 2011; Elleman, Compton, Fuchs, Fuchs, & Bouton, 2011; Tatum, 2011).

Fluid and continuously changing small groups of students (3-5) can more easily be serviced based on skill level and areas of need and have more opportunity to interact closely with the teacher (Watts-Taffe et al., 2009). Effective instruction and opportunities for practice can be accomplished by meeting with small groups three to four times per week for twenty minute sessions. Students who are not meeting in a small group with the teacher can rotate among center activities or work with other specialists assisting in the classroom (such as a reading teacher or paraprofessional). This structure also allows for more frequent monitoring of students’ progress and time to assess students’ levels in order to determine whether more intensive intervention at tier 2 and 3 levels is necessary (Pelletier, 2011, p. 31).

RtI Framework. A suitable RtI model is required to meet the needs of beginning
readers as kindergarten educators plan for instruction, screening, progress monitoring and evaluation of students’ response at all levels. Students of all different backgrounds, cultures and languages must have their reading needs addressed and met as specified by reform legislation.

Garcia and Ortiz (2008) noted that regardless of the specific design or framework, all RtI models should be based on specific principles and contain certain components in order to successfully address the needs of all students. Of primary importance is a school-wide belief in the importance of improving student achievement at all levels and a common understanding that is everyone’s responsibility to assist in that process. Teachers and parents must work together to support student learning. The authors cited the importance of early intervention for the struggling reader, using curriculum and practices that add to the core instruction. The reteaching of skills, scaffolding of instruction, gradual release of responsibility to the student, monitoring of progress and making decisions using a team approach are all important practices to consider when designing an effective RtI model.

Stuart and Rinaldi (2009) applied recommendations from the NRP as they developed a framework designed to inform educators of effective practices for all three tiers of the RtI process. Emphasis is placed on collaboration between general and special educators, along with other building-based support personnel during the instruction and intervention process. Instruction needs to be focused, with clear goals and learning objectives defined. Educators must closely evaluate the core curriculum to ensure that it targets high-level standards and provides all students with favorable learning conditions. Evaluation instruments need to be selected and appraised to determine whether they will accurately identify students who are at risk for needing services at the tier 2 and tier 3 levels. Professional development (PD) will assist teachers in developing effective interventions and instructional supports for students who are at particular
risk in reading development. Training for teachers and other school-based personnel in the assessment instruments and tools used for screening and progress monitoring in the RtI process is essential. Data gained from assessments is used for evidence-based decision-making regarding students’ response to intervention in the area of reading.

**Universal Screening and Progress Monitoring.** Universal screening and progress monitoring are foundational components of most RtI models. Universal screening is the first step in the RtI process, and is conducted in order to identify students who are at-risk in their achievement, are not performing at grade-level expectations, and are likely candidates for more intensive intervention. Progress monitoring is conducted with increasing frequency throughout the tiers to record students’ achievement as interventions are provided (McConnell, Wackerle-Hollman, Roloff, & Rodrigues, 2015).

Screening data for reading is typically collected three times per year (fall, winter and spring) and is analyzed to determine which students are at risk for not achieving benchmarks. Following screenings, students who were identified as needing support to increase their rate of progress are closely monitored. Curriculum based measurements (CBM), which are assessment tools that are designed to be valid and reliable, are used to guide this process (Ball & Christ, 2012).

Thornblad and Christ (2014) conducted a study among grade two students to closely examine the patterns identified through the use of curriculum based measures in reading (CBM-R). Progress monitoring was conducted using the Formative Assessment Instrument and Practices, version 2.0, which is a CBM-R. Criterion validity as related to DIBELS, a CBM-R that is used at the site of the study, was found to be 0.76 – 0.89 across all grade levels (p. 22). Data collection was an independent variable, ranging from two weeks to six weeks. This was
done to allow the researchers to estimate how long an intervention needed to be implemented before data yielded sufficient information to allow informed decisions to be made. Results indicated that more than six weeks of daily progress monitoring was necessary to deem the data reliable enough to yield patterns and trends. The findings of this study can be used to guide educators during the progress monitoring segment of the RtI process, and suggest that struggling readers should receive an evidence-based intervention for a minimum of six weeks before it can be determined whether that intervention has been successful.

**Dynamic Indicators of Basic Early Literacy Skills (DIBELS).** DIBELS assessments are CBMs that are used in many schools, including the site of this research study, to assess early reading skills. DIBELS are standardized measures that align with the CCSS and are designed to work with a school’s reading curriculum. DIBELS can be used to effectively predict long-term reading achievement and not only monitor student progress but identify instructional needs as well (Douvikas, 2014). These one minute measures include the components of phonological awareness, alphabetic principle, fluency, comprehension and vocabulary (Kaminski, Cummings, Powell-Smith & Good, 2008).

The areas measured by DIBELS are the critical areas of reading development for students in grades kindergarten through three, as identified by the NRP and the NICHD. Studies have shown DIBELS assessments to be good predictors of reading achievement for kindergarten students (Fuchs & Fuchs, 2006; Grigorenko, 2009; Mellard, McKnight & Woods, 2009; Oslund, Hagen-Burke, Taylor, Simmons, Simmons, Kwo, Johnson, & Coyne (2012). DIBELS supports the RtI process by identifying students whose performance levels show the need for more intensive instructional support in reading along with providing information about students’ rates of progress and rates of improvement in response to interventions. Use of DIBELS data allows
teachers to make instructional decisions supported by data and make inferences about future performance. When used in a kindergarten reading program, DIBELS allow teachers to gather information early regarding students’ reading levels and skills, allow for earlier adjustments to instructional practices, and in turn, create a stronger RtI framework.

**STAR Early Literacy Assessment (SEL).** The STAR Early Literacy Assessment (SEL; Renaissance Learning, 2008) is computer-generated CBM that is being used in some schools as part of the RtI process. The early childhood school that is the site of this research has recently adopted SEL to be used in conjunction with DIBELS for screening, progress-monitoring and instructional decision-making. This CBM assesses similar early reading skills as the DIBELS, including phonemic awareness, phonics, comprehension and vocabulary. Though research has shown a weak to moderate correlation ranging from .25-.42 with DIBELS at the kindergarten level, stronger correlations of .48-.63 were noted for grades one and two (McBride, Ysseldyke, Milone, & Stickney, 2010). The STAR early literacy assessment has been highly rated as a screening and progress monitoring tool by both the National Center on Response to Intervention and the National Center on Intensive Intervention (Renaissance Learning, 2014).

The SEL has benefits over the DIBELS in that its computer-based format allows for easier collection of data, it can be implemented with larger groups of students (particularly advantageous when the availability of trained staff is limited), and the results are immediately available. Disadvantages include the initial cost to purchase the software required for this assessment, the need for the availability of and access to a sufficient number of computers or iPads, and the skill level needed to independently complete the assessment that may be lacking in young children (Kegel, van der Kooy-Hofland, & Bus, 2009).

Given the lower correlation rate of the SEL to DIBELS at the kindergarten level,
combined with the need for a strong assessment tool for early identification of struggling readers, the literature was investigated to identify research that examined the validity of the SEL. Clemens, Hangan-Burke, Luo, Cerda, Blakely, Frosch, Gamez-Patience, & Jones (2015) conducted a study to determine the extent that SEL, when administered three times per year (fall, winter, spring) would predict the reading achievement of kindergarten students. This study also examined the precision of computer-generated tests and the possible benefits of using both types of measurements (STAR and DIBELS).

Of the ninety-eight kindergarten participants, each one was assessed at the beginning, middle and end of the year using both the SEL as well as subtests from non-computerized CBMs. These subtests included letter naming fluency (LNF), letter-sound fluency (LSF) and word identification (WID), word-reading fluency (WRF). Results indicated that SEL was a moderate predictor of kindergarteners’ end-of-year reading levels, while other CBMs were more significant predictors of achievement. When used in conjunction, however, these CBMs had a greater rate of predictability when identifying at-risk or struggling readers at the kindergarten level, providing more specific data (p. 92).

**RtI and the struggling reader.** The success of any RtI model hinges upon a design which allows teachers to identify those students who are most at risk for future reading difficulties. The predominant thinking among educators, and the theory behind RtI, is that those students who are identified as nonresponders in tier 1 and tier 2 require intensive interventions provided through participation in tier 3 instruction. Fuchs, Fuchs, & Compton (2012) agree with a growing number of researchers that, regardless of how strong the tier 1 and tier 2 levels are in any RtI model, there are still approximately 5% of students who do not respond and who require “intensive and expert support” (p.272).
An examination of the literature revealed research conducted on the specific aspects of tier three, including effective ways to significantly increase intensity of interventions (Denton, Fletcher, Anthony & Francis, 2006; Fuchs & Fuchs, 2006; Gilbert, Compton, Fuchs, Fuchs, Bouton Barquero, & Cho, 2013). These include the use of more systematic programs which are commercially-produced and contain structured lessons, interventions given more often and for longer periods of time, smaller group sizes, or one-to-one instruction. Instruction at tier 3 often involves utilizing educators who are more qualified at working with students who have greater reading needs (usually special educators or literacy teachers). Programs such as Early Reading Intervention (ERI; Florida Center for Reading Research, 2009)) and Leveled Literacy Intervention (LLI; Fountas & Pinnell, 2008) are effective for tier 3 intervention and are currently being used at the site of this research study.

**Educators’ Perceptions**

The purpose behind the study is to determine teachers’ perception of the effectiveness of the RtI model currently in place at the research site. The goal of this research is to assist educators’ at the study site in developing an RtI model that will lead to the greatest achievement in reading for kindergarten students, and will be strong enough for long-term sustainability. In order to effectively conduct a case study on this topic, it is important to examine the literature currently available regarding educators’ perceptions of the components, strategies, instructional modifications and supports necessary for such a model.

Castro et al. (2014) assessed the thoughts, opinions and reasoning of those directly involved in the RtI process. The authors categorized responses and organized these into the themes of overall understanding of the RtI process, barriers to the process, suggestions to streamline the paperwork aspect of RtI, and suggestions for improvement. The authors cited
limitations to this study as the following: many participants were teaching in districts in which RtI was not well-implemented and open-ended responses could have been subject to interpretation and may not have been wholly objective (p. 110). Despite these limitations, a substantial body of useful information was collected regarding the RtI process and its implementation.

The authors found that teachers’ overall understanding of the RtI concept lacked depth and specific knowledge of the changing levels of support, ranging from modifications to significant intervention. Teachers cited lack of adequate training along with insufficient time to plan, implement intervention, collect and analyze data as significant barriers. The availability of sufficient resources and support personnel were also considered as impediments to successful implementation. Paperwork, or the “need for constant documentation”, along with the “overwhelming structure of the process” was cited as additional barriers viewed by participants (Castro et al., 2014, p. 108). Suggestions for improvement included more training in RtI, more staff and intervention materials, a better system to manage paperwork (possibly incorporating computerized data collection), increased communication among all participants (including special educators and administrators), and additional time for data collection and analysis, with a specific suggestion of an RtI block built into each day (p. 109). The results of this study provided information on how to support teachers who are directly responsible for implementing RtI. Findings also suggest that using teachers’ perceptions of the process in conjunction with best practices will strengthen RtI in a school setting, increase student achievement, and enhance reform efforts.

As noted in the previous study, enhancements to an RtI model include increased communication with other key participants in addition to the classroom teacher. Building-based
staff, such as special education teachers, literacy specialists, coaches, and school psychologist all play a role in this process. Accordingly, an investigation of the literature should include the perceptions of other staff members involved. Swanson, Solis, Ciullo, & McKenna (2012) described the viewpoints of special education teachers as related to the RtI process in reading. Participants in this study included only elementary special education teachers who taught reading or mathematics within an RtI structure that was implemented district-wide in a southwestern suburban school district. This qualitative study consisted of data gathered through observation, focus groups and interviews.

The authors recorded the most frequently cited benefit of RtI among special educators as the ability for early identification of at-risk students, leading to the immediate provision of supportive services based upon individual student needs (p. 119). The increased opportunities to work with colleagues during the data review and decision-making process were also cited as significant benefits. Negative aspects of the process included the additional pressure put on special education teachers’ schedules and the increase in paperwork for a profession already inundated with written reports and record-keeping. An expanded caseload of students and lack of sufficient support staff were also cited as barriers to the RtI procedure. This study shows an alignment in thoughts and opinions between regular and special educators regarding RtI. It suggests the need for districts to carefully examine their procedures for documentation and evidence collection and to streamline these practices to make them more efficient for all RtI participants. It also suggests a need to analyze resources in order to provide sufficient support in terms of both personnel and supplies necessary for successful implementation of RtI (p. 124).

Research conducted by Brendle (2015) provides additional evidence that special educators’ background and experience working with struggling readers identifies them as key
participants in the RtI process. While general educators possess some knowledge of practices for implementing intervention strategies and monitoring student progress, Brendle (2015) collected data that showed special education teachers generally have significantly more understanding of the struggling reader and the intervention process. Results of this study also emphasized that teachers with the most training in the RtI process were the most effective in identifying students who were at risk and in need of early intervention. This suggests that both general as well as special education teachers should be provided with on-going professional development training opportunities regarding best practices for implementing interventions.

Administrators at both the building and district levels should also be highly involved in the development of an effective RtI model. School leaders are instrumental in shaping a school’s vision and beliefs, and work to establish a culture in which it is understood that all children can, and will succeed. Those educators in leadership roles are responsible for providing necessary resources, designing quality professional development opportunities, and ensuring that education reform is on-going for a continuous increase in student achievement.

In a study done by Swindlehurst, Shepherd, Salembier & Hurley (2015), the aspects of RtI implementation, as perceived by school principals, were examined at the local school level, with patterns and trends identified across schools. This quantitative research incorporated a survey designed to closely analyze the elements of multi-tiered systems of support, core instruction, supplemental instruction, interventions and schoolwide practices (p.11). The researchers included a qualitative component of open-ended interview questions to expand upon the survey data. A response rate of 62.4% was accomplished, with the majority of respondents being from the elementary level. Results indicated that elementary principals (59.6%) viewed RtI as a higher priority than middle (43.5%) or high school (25.0%) administrators. Additional
elements surveyed indicated that all principals who responded indicated at least partial to full implementation, with on-going professional development provided, and consistent use of universal screening along with regular progress monitoring. Research-based instructional practices were used by staff involved in RtI and data meetings were conducted regularly. The findings from this study suggest the importance of implementing an RtI model with integrity and fidelity.

**Summary**

Three main bodies of literature were investigated in this review. Research into the reading process provided information as to the instructional concepts, activities and procedures that are key components in beginning reading instruction. The convergence of these components informs educators about what good readers do as they read, how good readers differ from poor readers, and the kind of instruction needed to help kindergarten students become effective readers. The second body of literature furnished an overview of the RtI process, with the historical perspective yielding the rationale and legislation leading up to this process. A comprehensive review of research related to RtI granted an understanding of the purpose, goals and essential components of an effective model. The third main body of research yielded insight into how different implementation conditions have impacted educators’ perceptions of the RtI model and shed light on the current issues impacting successful building-level implementation. Teachers’ perceptions are vital in planning for and undertaking school reform efforts and it is important to capture the guidance and recommendations provided by the literature during the implementation process.

The theoretical lens of Vygotsky (1934/1978) and the literature surrounding sociocultural theory was essential to review in regard to the link with reading development and student
achievement. Vygotsky’s writings on the cultural and social aspect of the development of knowledge, the relationship between language and thinking, and the zone of proximal development as it relates to kindergarten readers informed this study. It is essential for teachers to consider the developmental levels of each individual child in order to meet students at their developmental/instructional levels in reading and best accommodate their needs.
Chapter III: Methodology

Qualitative Case Study

The purpose of this case study was to examine the effectiveness of the RtI model at meeting the needs of all kindergarten students at the study site and to investigate what could be done to make this framework more successful. The following research question was designed to advance this goal and to generate useful results: How do teachers perceive the effectiveness of a tiered instruction program in reading in full day kindergarten? This research question framed the qualitative study by helping to focus the study and providing guidance for how to execute it (Miles & Huberman, 1994, p. 22).

The research question being examined was analyzed through the lens of Vygotsky’s sociocultural theory. The theory of Lev Vygotsky (1934/1978) reinforced the awareness that students do better when supported in their learning by an adult. This support goes beyond an adult simply showing a student what to do. The engagement process between the learner and the More Knowledgeable Other (MKO) consists of discussion of thoughts and ideas, and this social interaction allows the learner to expand his/her thinking and create new ideas, thus generating new knowledge. For the teacher to stretch each student’s learning, an awareness of individual developmental levels is crucial. Knowing each student’s zone of proximal development (ZPD) allows the MKO to record what a child cannot do, what he/she can do with help, and what he/she can do alone (Atherton, 2013, p.1). This knowledge is central to student placement in the correct instructional tier and is essential in informing teachers as they work to provide targeted instruction that will increase reading achievement for all students.

This qualitative research case study was influenced by the broad research paradigm of interpretivism, or social constructivism (Creswell, 2009, p.8). When viewed through this lens of
natural inquiry, interpretations were made during communications between the researcher and study participants, consisting of dialogue and social interactions. This shared process allowed for multiple and varied meanings to be developed during the research study based on the experiences of the participants. Broad and open-ended questions were used during the interviews and focus group to expand discussions and allowed the researcher to develop a theory based on interpretation of the data collected in the field (Creswell, 2009, p.8). This researcher aimed to understand the subjective meanings of the study participants by analyzing the information collected, reconstructing it and using it when theorizing, all key aspects of the interpretivist paradigm (Goldkuhl, 2012, p. 139).

**Research Design**

Qualitative research is the process of “studying people’s lives within real world conditions” (Yin, 2011, p.8). During a qualitative study, people carry out their daily activities, interact socially, and express their thoughts and opinions within a natural setting. Qualitative research encompasses the use of multiple sources of data to arrive at conclusions that involve the insight of all participants, the development of new concepts or the expansion of existing ones. Flexible, interactive research designs are used to study the relationships among the components of the research (Maxwell, 2005). Since qualitative research examines the human side of an issue, this researcher sought to understand the issue through the lens of the people experiencing it in their immediate environment.

A qualitative research design was the most suited methodology for conducting the research study. The research question of how teachers perceive the effectiveness of a tiered instruction program in reading in full day kindergarten was designed to gain an in-depth understanding of the complex issues surrounding teachers’ thoughts regarding the RtI model in
place. This researcher proposed to construct descriptions of participants’ understandings, knowledge and experiences. This was done in a natural setting to make sense of the context in which the problem existed. In this study, the researcher collected and analyzed multiple sources of data to construct patterns and themes. Results of the study allowed the researcher to gain an understanding of how teachers support kindergarten readers and increase student achievement. Results provided an in-depth understanding of the research problem, making it applicable for a qualitative approach.

A research design should also be based on the researcher’s paradigm, i.e., cognitive framework or logical beliefs, and how these suppositions link to the strategies and methods used in a study (Maxwell, 2005, p. 36). The study was situated in the belief that teachers at the research site are faced with the challenge of providing high-quality reading instruction to beginning kindergarten readers and intervening with those readers who are struggling to make adequate progress. In order to do this, it is important to determine how this instruction is provided within a tiered program so teachers can be supported in developing effective practices.

The use of qualitative research to represent the views, opinions and perceptions of the participants in this study provided sufficient insight into the problem of practice.

This researcher believed that beginning readers require a highly structured approach to reading instruction, with key components as necessary targets in reading development. Additional convictions on the part of this researcher included the opinion that specific supports and interventions for readers needed to be provided at increasing levels of intensity, and teachers must have knowledge, training, experience and support with an effective model of instruction in order to increase reading achievement for all. By acknowledging these assumptions, this researcher attempted to provide insight into how this research could be impacted by prior
knowledge and experiences. The study was “grounded in the actual data collected” to eliminate any confusion from prior theory and assumptions (Maxwell, 2005, p. 43). By focusing solely on the results of explicit evidence collected, along with the holistic, rich description provided from study subjects, conclusions reached were likely to be free from researcher bias (Yin, 2011).

**Research Tradition**

The study was conducted through a descriptive case study method. The qualitative case study is an approach to research that involves closely examining an occurrence, or fully investigating a circumstance. It informs professional practice through the use of evidence-based decision making determined by data collected through multiple sources. An issue is explored through more than one lens, allowing all angles to be exposed and understood by the researcher (Baxter & Jack, 2008). According to Yin (2003), the case study is used to answer questions that need to be explored within the context of a problem, specifically questions involving the how and why of a situation. Case studies are conducted within a “bounded system”, indicating that the study is constrained by boundaries of time, activity, specific groups or policies (Creswell, 2009, p. 13). In the case of this research, the bounded system was comprised of the kindergarten teachers, a special educator and a literacy specialist/coach who are involved in teaching reading and implementing an RtI model at the study site.

One of the features of case studies is that the data presented has been collected through a variety of sources. These include the use of interviews, direct observations, documentation and videos. Quantitative data can be combined and integrated, leading to a holistic analysis of the problem identified (Baxter & Jack, 2008). Yin (2009) explained that a case study must be designed in a sensible way, with the researcher deciding in advance on data collection and analysis procedures. He explained that the use of a holistic single case research design, in which
one situation is analyzed and data from multiple sources is combined, provides an opportunity to gain much insight into a case.

Descriptive case studies seek to provide rich, “thick” description and deep insight into the research problem being explored (Merriam, 2009, p.43). The descriptive case study method is appropriate for this study since the research question focused on exploring the phenomenon concerning how teachers perceive kindergarten students’ reading achievement within the specified context of an RtI framework. The detailed description will provide an in-depth analysis of what occurs when teachers support struggling readers as they engage in the RtI process.

In order to reach this level of rich description, elements of phenomenological research were incorporated into this study. As stated by Creswell (2009), phenomenological research focuses on a description of experiences as described by the participants themselves in order “to develop patterns and relationships of meaning” (p.13). The description that resulted from the analysis of the data in this study provided an understanding of an experience that study participants shared, the implementation of RtI for the struggling reader. In order to provide a holistic description of the phenomenon, this study applied the use of multiple sources of data, which is characteristic of the case study method.

Case study methods are useful when a researcher wants to highlight a particular situation in order to get a close, first-hand look at it. Yin (2003) explained that a case study approach is appropriate when “a ‘how’ or ‘why’ question is being asked about a contemporary set of events, over which the investigator has little or no control” (p. 9). The study met the criteria for a case study approach as it was designed to investigate participants’ understanding of a complex phenomenon occurring within its contextual setting. This case study was primarily descriptive in
nature and explored the phenomenon concerning how teachers perceive kindergarten students’
reading achievement within the specified context of an RtI framework. The holistic, detailed
description provided an in-depth analysis of what occurs when teachers support readers as they
engage in the RtI process. It was the intent of this researcher to identify patterns and themes
related to how the tiered model of instruction can best be implemented in order to increase
reading achievement for all full day kindergarten students at the site of this research.

Participants

The participants in this study were chosen through purposeful sampling. As described by
Maxwell (2005), this strategy involved choosing a setting with people who “are selected
deliberately in order to provide information that can’t be gotten as well from other choices” (p. 88).
Maxwell (2005) explained that purposeful selection is important in “achieving
representativeness or typicality of the settings, individuals, or activities selected…to deliberately
examine cases that are critical for the theories with which the study began” (p. 89). Purposeful
sampling is often used in qualitative research because it results in information-rich cases directly
related to the phenomenon being studied (Patton, 2002).

For the study, six participants were chosen because of their fit with the purpose. The
setting for this study was a public early childhood school located in southeastern New England
which was opened as a preschool/kindergarten facility in 2010. This early childhood setting was
purposefully selected because the teachers at the research site were fully invested in effectively
implementing the tiered instruction approach. They expressed concern as to how to reach high
goals and bring about school-level change in the reading abilities of kindergarten students.
Participants articulated an interest in analyzing the current framework in order to strengthen the
tiered support being provided to kindergarten readers.
Each teacher was recruited to take part in interviews and a focus group to provide her perceptions of the effectiveness of tiered instruction on the reading achievement of the students she works with. Three general educators were selected to participate. These educators were purposefully selected for the insight they would be able to provide since they were directly responsible for increasing the reading achievement of full day kindergarten students, were required to utilize tiered instruction within their classrooms, and were expected to provide effective interventions as they worked with struggling beginning readers.

In addition, a special needs educator and a literacy coach/reading specialist were identified to join this study. Both instructors worked closely with the kindergarten classroom teachers as well as with struggling beginning readers. The special education teacher has worked as an interventionist at the study site for the five years that this full day kindergarten program has been in existence. She was purposefully selected because she is responsible in assisting with the identification of students who move through the RtI process with limited academic success and required further testing through special education procedures. The half-time literacy coach/half-time reading specialist position had recently been added to the study site as of the beginning of this school year (2015-2016). She was purposefully selected due to her role as a support person for the classroom teacher, with the responsibility of modeling successful instructional practices in reading, collaborating with administration to design pertinent professional development offerings, and providing intervention to low-achieving readers.

This researcher also sought participation from the building administrator to gain her perspective concerning the framework for an effective RtI model at the study site. She was purposefully selected due to her role as a facilitator of RtI implementation within this early childhood building, providing support and professional development on RtI principles to the
educators directly involved in the process. Administrative involvement in RtI is crucial because “a principal grounded in a solid foundation of the RtI framework can support every phase and facet of implementation with confidence” (Heimbaugh, 2012, p.1). Profile information on each participant was gathered and is presented in Table 1. Pseudonyms were used to protect the identity of each participant.

Table 1

<table>
<thead>
<tr>
<th>Educator (Pseudonyms)</th>
<th>Position</th>
<th>Teaching Experience</th>
<th>Licensure &amp; Highest Level of Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary</td>
<td>Special Education Teacher</td>
<td>29 years</td>
<td>Teacher of Students with Moderate Disabilities, PK-8; Elementary 1-6; Masters in Special Education</td>
</tr>
<tr>
<td>Annie</td>
<td>Literacy Coach/Reading Specialist</td>
<td>24 years</td>
<td>Early Childhood PK-2 With and Without Disabilities; Elementary 1-6; Masters in Education</td>
</tr>
<tr>
<td>Melinda</td>
<td>Early Childhood Director/Building Administrator</td>
<td>23 years</td>
<td>Principal/Assistant Principal; Elementary K-6; Masters in Education</td>
</tr>
<tr>
<td>Catherine</td>
<td>Kindergarten Teacher</td>
<td>29 years</td>
<td>Early Childhood PreK-2 With and Without Disabilities; BS in Early Childhood Education</td>
</tr>
<tr>
<td>Collette</td>
<td>Kindergarten Teacher</td>
<td>15 years</td>
<td>Early Childhood PreK-2 With and Without Disabilities; Masters in Education</td>
</tr>
<tr>
<td>Maddie</td>
<td>Kindergarten Teacher</td>
<td>15 years</td>
<td>Early Childhood PreK-2 With and Without Disabilities; Masters in Reading</td>
</tr>
</tbody>
</table>
The unit of analysis, or the major entity this researcher proposed to analyze in this case study, was the group of educators to be interviewed. Data obtained from these individuals was used to answer the research question of how teachers perceive the effectiveness of a tiered model of instruction in reading in full day kindergarten.

**Recruitment and Access**

Gaining access to a study site is a formal process that involves requesting permission from the gatekeepers, i.e., the principal and district administrators (Feldman, Bell, & Berger, 2003; Marshall & Rossman, 2006). Even when access is gained, the researcher must consider the possibility of resistance on the part of the subjects selected. Negotiating access is easier when positive relationships are established (Bogden & Biklen, 2003). The research site for this study was readily accessible to this researcher who was an administrator in the district for ten years, four of these years at the study site (2011-2015), and a special educator in the district for twenty-five years prior to becoming an administrator.

Through informal conversations with the principal, the District Superintendent and District Assistant Superintendent, support was expressed for this study to be conducted. This researcher completed the formal recruitment process as outlined by the Institutional Review Board (IRB) at Northeastern University in order to conduct this research. A completed application for Approval for Use of Human Participants in Research was provided to seek IRB approval. A letter granting permission to conduct this research at the study site was requested from district administration (Appendix A). The kindergarten teachers, special educator and literacy coach/reading specialist were given a recruitment letter (Appendix B), as was the building principal (Appendix C). Request for informed consent was done through a formal document given to each of the selected participants which clearly outlined the nature of this
research and the subject’s personal involvement (Appendix D). All written communication was accompanied by oral explanation.

Yin (2011) offered guidance to maintain research ethics when protecting human subjects. In order to fulfill an obligation to the participants in this study, this researcher was open, truthful and respectful, and avoided any misrepresentation of the research project. All findings were reported to stakeholders and the rights of human subjects were protected. Each participant received a letter seeking their consent and voluntary participation. Information regarding the intent of the study was provided. This informed consent included the ways in which participants would benefit, their right to withdraw at any time, and steps that would be taken to ensure confidentiality (Creswell, 2009). The study site and participants remained anonymous. Pseudonyms were used for both the participants as well as the study site. Participation was voluntary and participants could opt out at any time. It was the intent of this researcher to report on the overall effectiveness of the RtI model currently in place and not the performance of individual subjects.

Data Collection

The following model outlines the steps that were used during the data collection and data analysis processes, and identifies the relationships among the data sets and the research question.
Types of research methods used included in-depth interviews, analysis of student data and a focus group. Researcher field notes were written to record observational data such as descriptive notes of participants, dialogue and the setting along with reflective notes to record the researcher’s personal thoughts, ideas and opinions (Bogdan & Biklen, 1992, p. 121 as cited in Creswell, 2009, p.182). These notes were maintained in the researcher’s journal and informed the analysis of preliminary themes, key events and strategies by “facilitating analytic thinking” (Maxwell, 2005, p.96). Researcher field notes were not analyzed for themes or categories. Data analyzed for themes and categories included written transcripts of the individual interviews and the focus group, and student assessment data (DIBELS and STAR Early Literacy Assessment).

**Qualitative Interview.** Qualitative research interviews are conducted for the purpose of gaining descriptive insight into a research problem. Ideally, these interviews should be conducted in a relaxed, conversational manner that encourages participants to provide specific details regarding their involvement with the research phenomena. The topic of the qualitative
interview is the participant’s experiences along with their beliefs and knowledge about the issue being studied (Kvale, 1996). Valuable data can be gathered through an in-depth interview when the researcher “approaches a problem in its natural setting, explores related and contradictory themes and concepts, and points out the missing and the subtle as well as the explicit and the obvious” (Rubin & Rubin, 2012, p. xv).

For the initial step in this study, data from six individual, face-to-face interviews (forty-five to sixty minutes) was collected during the spring of 2016. Each participant was individually interviewed utilizing a predetermined framework of questions as a guide (Appendix E). This is different from a structured script in that the interviewer was able to probe for more information and the interviewee was encouraged to elaborate on open-ended questions. The interview process used in this study was primarily conversational in nature, and provided the opportunity for two-way interaction (Yin, 2011). Open-ended questions were asked to encourage each participant to use her own words to discuss the topic. Follow-up questions and probes were used by the researcher in a nonjudgmental, nondirective manner.

Individual interviews were digitally recorded using a primary audio device along with a back-up machine, and were conducted in the participant’s natural setting (classroom or office) during a time and date that was convenient for the interviewee. Through the interview process, this researcher sought to collect information and evidence from the teachers regarding their understanding, knowledge and opinions of the tiered model of instruction in reading currently in place, including strengths, weaknesses and suggestions for improvement. Data collected also included the effect this model had on the reading achievement of kindergarten students, including struggling readers.

Following each interview, a short debriefing period was held to thank each educator for
her willingness to participate in the study, to clarify any questions regarding the purpose of the study and to ensure the anonymity of each participant along with confidentiality of individual responses. The researcher used this opportunity to explain that aggregated data would be analyzed for general patterns and themes that emerged. Each study participant was provided with a transcript of her individual interview to allow for clarification of responses given.

The interview questions (Appendix E) were formulated within Vygotsky’s (1938/1978) theoretical framework stating that, while it is up to the individual student to construct learning in his or her own mind, the teacher acts as a guide or facilitator (More Knowledgeable Other) during this process (p. 86). The zone of proximal development (ZPD) serves as a guide to support the teacher (MKO). Interview questions reflected the stages of Vygotsky’s ZPD by relating stages to tiers on the RtI model. This researcher sought to answer questions about teachers’ perceptions of the effectiveness of student achievement in reading as related to their developmental levels within individual ZPDs.

The design of these open-ended questions elicited common themes such as teachers’ overall understanding/view of RtI, the effect of tiered instruction on the reading achievement of kindergarten students, the benefits of RtI, the challenges of RtI, the use of assessment data (universal screenings, progress monitoring), collaboration with colleagues (data review, problem solving) and suggestions for improving the RtI model. In addition, the data reflected how staff can alter the structure, framework and procedures of the current RtI model to benefit kindergarten readers.

**Student assessment data.** Data analyzed during the course of a qualitative study represent a source of evidence that can contribute significantly by providing a context in which to view other findings (Yin, 2011). The second method of data collection utilized during this
study was an in-depth analysis of kindergarten student assessment data in reading. This process was used to help the researcher establish strengths and weaknesses in reading instruction and student achievement and to determine any themes relative to specific data (individual and grade level). The researcher recorded data trends and themes and compared these to themes that emerged from the interviews. Questions included identifying which content standards were being assessed and what percentage of students had demonstrated proficiency in a targeted area of reading. Analysis included the percentage of students who were determined to be at risk for reading difficulties. Data was analyzed to determine what re-teaching or interventions were suggested as being necessary. The analysis of student data was presented to the focus group participants in narrative form for discussion as to how the themes presented could inform future instruction.

The data sets that were collected included both the universal screenings as well as the progress monitoring data from the following subtests of the Dynamic Indicators of Basic Literacy Skills (DIBELS) kindergarten assessment: Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF), and Nonsense Word Fluency (NWF). DIBELS data for the beginning, middle and end of the 2013-2014, 2014-2015 and 2015-2016 school years was collected from the literacy coach/reading specialist and the special educator. At the study site, DIBELS assessment data is primarily gathered by the administrator and/or the literacy coach/reading specialist. This data is then presented to the classroom teachers and special education interventionist for review and analysis. However, since this was the first year in their respective roles at this building, the administrator and literacy coach/reading specialist had not collected historical DIBELS data for 2013-2014 and 2014-2015. The researcher was provided with access to this data by the special education interventionist. Data sets collected included
both universal screenings as well as progress monitoring from the following subtests of the DIBELS: Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF) and Nonsense Word Fluency (NWF).

The results of the STAR Early Literacy Test universal screening, which assesses the kindergarten skill domains of print concepts, phonological awareness, phonics and word recognition, fluency, and vocabulary acquisition and use, were also collected as a data set. The results of the STAR Early Literacy beginning of year (BOY) assessment for 2015-2016, the initial year of implementation, were provided to the researcher from the building administrator and the special education interventionist. The administrator presented individual class benchmark records and class summary reports. The special educator furnished student diagnostic reports containing skill set scores within each sub-domain and samples of instructional planning reports. Sub-domain data collected included alphabetic principle, concept of word, phonemic awareness, phonics, structural analysis, vocabulary, sentence level comprehension and paragraph level comprehension. Group level data was collected to allow for computation of median scores and benchmark levels for kindergarten classrooms. Individual student data was collected for analysis and comparison of learning progressions in order to understand the use of this data to design instructional programs and interventions tailored to specific student needs.

Each of these assessment tools has benefits. The DIBELS, which measures phonemic awareness, pseudo-word fluency and letter naming fluency is quick to administer individually and can be used frequently for progress monitoring. The Star Early Literacy Test has proven to be a useful measure of general readiness in reading, phonemic awareness, structural analysis, vocabulary and comprehension, and can be used as a whole group progress monitoring tool (Pool
& Johnson, 2016, p.3). Using both sets of data provided teachers with more information regarding kindergarten students’ reading performance in the core areas of reading instruction (phonemic awareness, phonics, fluency, vocabulary and comprehension).

Analysis of student assessments included data that was both current and historical and was viewed through the lens of Vygotsky’s (1934/1978) ZPDs, relating the tiered levels to students’ developmental levels. Tier 1 (at benchmark) correlated to a child’s current development (what a child can do without assistance), tier 2 (low risk) correlated to potential development (what a child can do with some support), and tier 3 (high risk) correlated to what was currently beyond a child’s ability (needing intensive intervention from an MKO). DIBELS assessments in the areas of LNF, PSF and NWF that were administered during September, December and June of 2013-2014, 2014-2015 and 2015-2016 were examined.

This researcher proposed to analyze DIBELS student data from benchmark testing done over the past three years to gauge kindergarten student achievement over time in the areas of LNF, PSF, and NWF. These DIBELS subtests were examined to identify the percentage of kindergarten students at benchmark (Tier 1), somewhat below benchmark and needing support (Tier 2), and well below benchmark, needing intensive support (Tier 3). The use of multiple years of data allowed for a broader comparison of themes “to maximize the similarities and differences of information” (Creswell, 2003, p.14). Data was organized into table form for easier viewing (Appendix F), with NN representing the number of students at each level.

The STAR Early Literacy assessment also measures a student’s performance in beginning reading skills. STAR data from the fall universal screening was reviewed to identify where students fell in regard to the benchmarks. This instrument is new to the study site and has only been implemented once (October, 2015). The STAR assesses skills similar to the DIBELS
(alphabetic principle, phonemic awareness and phonics), but incorporates comprehension skills for kindergarten readers (vocabulary, sentence-level and paragraph level). The STAR has grade-level anchors and grade-level specific expectations that can be analyzed in conjunction with DIBELS benchmarks to provide more information as to a student’s reading achievement over time (STAR Early Literacy Technical Manual, 2016). Data was organized into table form for easier viewing (Appendix F), with NN representing the number of students in each kindergarten classroom.

The data obtained from STAR Early Literacy was used to supplement data from the DIBELS, adding information regarding students’ comprehension and progress toward anchor standards/grade-level expectations. Data from the DIBELS and STAR was not analyzed statistically. Analysis of student data focused on the identification of themes related to the research question of how teachers perceived the effectiveness of a tiered instruction program in reading in full day kindergarten. Student assessment data was analyzed after the individual interviews to compare and contrast emerging themes and categories, further supporting the research project.

**Focus Group.** Focus groups are also used in qualitative research to gather a detailed understanding of participants’ views and beliefs. These are different from individual interviews in that information is collected based on the interaction of the study participants during a group discussion. Strong group interaction occurs as a result of shared experiences and beliefs along with a secure, pre-existing relationship (Morgan, 2014). Focus groups are used when the researcher hopes to gain additional information to add to what was gathered through individual interviews. Yin (2011) discussed this method of data collection, stating that people may be more apt to express thoughts and opinions during a group format that they may not have readily
revealed during a one-to-one experience. During a focus group, the researcher acts as a moderator to ensure smooth flow of conversation without guiding it, making certain that all subjects are able to participate without one or two individuals dominating the discussion.

As the third data set for this study, a focus group was conducted during the latter part of June 2016. The purpose of this focus group was for member checking and accuracy, and to provide additional data regarding the effectiveness of the RtI model in use at the study site on the reading achievement of kindergarten students. This allowed the researcher the opportunity to corroborate and clarify “specific findings that the researcher thinks have been established” (Ryan, 2015, p. 63). It also provided an opportunity for study participants to confirm and/or clarify findings from the interviews and add additional perceptions of the effectiveness of the RtI model in place on kindergarten reading achievement based on the findings of student data.

All six educators (three kindergarten classroom teachers, a special education interventionist, a literacy coach/reading specialist and an administrator) volunteered to participate. A date, time and location that were convenient for all, outside of regular school hours, were agreed upon. This group interview was 60 minutes in duration and was digitally recorded with the consent of all study participants. In addition to the use of a formal set of framed questions (Appendix G), preliminary results of the semi-structured interviews and student assessment data were used to inform the focus group discussion. The researcher presented the emergent patterns and themes generated from the individual, semi-structured interviews and from student assessment data (DIBELS and STAR Early Literacy) in written form (Appendix H) to all participants prior to the focus group being conducted. Discussion of student data centered on how these results could be used to guide future instruction, including the implementation of differentiated instruction and immediate, intensive interventions.
The focus group was executed to gather any additional evidence as well as to substantiate evidence that had already been collected. Information collected from the focus group became the primary source of data because the questions were generated based on the results and themes most likely to emerge from the interviews and student assessment data. The data collected from this focus group consisted of a digitally recorded discussion and the transcript which was produced. This researcher’s decision to conduct a focus group connects with Vygotsky’s sociocultural theory, specifically the role that socialization has in acquiring and providing knowledge. A focus group provides an opportunity for participants to interact with others who share similar experiences and to make sense of these experiences. It was anticipated that the data collected from this focus group would enhance the data that was gathered during individual interviews since increased discussion would lead to increased stimulation of thoughts and result in additional evidence.

This semi-structured group interview process was guided by the use of a more formal set of framed questions (Appendix G) which still allowed discussion to emerge (Yin, 2011). Focus group questions were developed with consideration given to Vygotsky’s (1978) socio-cultural theories concerning MKOs and ZPDs. By analyzing the information identified through interviews and student assessment data, the MKOs involved had a more thorough understanding of students’ ZPDs. This understanding reinforced the need to target instruction based on individualized student needs. This resulted in a thorough review of the educational processes used when teaching reading to kindergarten students following a tiered model of instruction.

Data Storage

The data collected throughout this research project was carefully stored to ensure its safekeeping and confidentiality. Yin (2011) maintained that the creation of a database increases
the reliability of the research because “more orderly data will lead to stronger analyses, and ultimately to more rigorous qualitative research” (p. 186). A database also allows for easier access to specific files, notes, transcripts or recordings. During this study, case study notes written by hand and student assessment data collected were stored in a locked file cabinet. Transcriptions from the interviews and focus group were stored on the hard drive of the researcher’s computer. A back-up file was stored on a flash drive. Audio recordings were labeled with participant identifiers (pseudonyms) and stored in the locked file cabinet with hard copies of transcripts and the back-up computer drive. Only the researcher had access to the data that was collected. All transcripts (electronic and hard copies), audio recordings, case study notes, and any other written forms of documentation collected by this researcher will be destroyed three years after the publication of this thesis.

**Data Analysis**

The data collected in this study was analyzed through the lens of Vygotsky’s sociocultural theory (1934/1978) of knowledge development and the role of the more knowledgeable other (MKO) when addressing individual students’ zones of proximal development (ZPD). In the Vygotskian- sociocultural view, individuals are viewed within the context of their social and physical environments. The environment does not simply have an influence on development; rather, it is the foundation which facilitates development. A key component of sociocultural theory is that a culture specifies what knowledge and skills children need to obtain, and provides them with language and strategies for functioning successfully within that culture (Vygotsky, 1978, p. 102). The research question being examined was grounded in this theory as this researcher proposed to examine teachers’ perceptions of the characteristics of children during the dynamic activities of reading (being read to, reading in a
group, and reading independently with assistance). The importance of the ZPD, the development of intellectual functioning and a discussion of the child-in-context participating in events were analyzed in order to answer the question that was posed.

**Semi-structured interview data.** Analysis of interview data was done following Saldaña’s two-cycle coding process (2009). Table 8 depicts the data analysis/coding process that was used.

Table 8

*Data Analysis/Coding Process (adapted from Creswell, 2009, p. 185.)*

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Coding</td>
<td>First Cycle Coding</td>
<td>Second Cycle Coding</td>
</tr>
<tr>
<td><strong>Read and Analyze</strong></td>
<td><strong>Categorize and Code</strong></td>
<td><strong>Analyze with NVivo10 Software</strong></td>
</tr>
<tr>
<td>Organize and prepare raw data, read through all data (transcriptions and student assessments)</td>
<td>Identify significant ideas, cluster together similar topics into categories, abbreviate as codes. Identify emerging themes.</td>
<td>Determine major themes related to the theoretical framework.</td>
</tr>
</tbody>
</table>

The initial step in the data analysis process for this research study involved making sense out of the data collected during the six individual, semi-structured interviews. The researcher reviewed audiotapes and transcript narratives and “pre-code[d]by circling, highlighting, bolding and underlining” information that appeared significant (Saldaña, 2009, p. 16). This assisted the process of constructing provisional conclusions regarding categories and relationships prior to conducting formal analysis (Maxwell, 2005, p. 96). During this process the researcher continually recorded thoughts and ideas in memo form to use for future reference, with a focus on sorting important thoughts from unimportant ones (Yin, 2011, p. 186). Care was taken to reduce the data without losing the meaning, concisely capturing the significant ideas or issues.

During the first cycle of coding, descriptive coding was used to summarize the basic
topics using a word or a short phrase (Saldaña, 2011, p.70). “Description is the foundation for qualitative inquiry and its primary goal is to assist the reader” with what he/she saw or heard. (Saldaña, 2009, p.71). In Vivo Coding was also used to capture the language of the participants by using direct quotations to bring the data alive. This type of coding is useful when trying to understand the participants’ realities (Saldaña, 2011, p.74). As Saldaña (2009) notes, while the purpose of this first cycle is to identify significant ideas and categories related to the research question, when “carefully reading and reviewing the data and formally coding them, [the researcher] can't help but notice a theme or two (or a pattern, trend, or concept) here and there” (p.13).

During this first cycle of coding, the researcher was particularly cognizant of participants’ responses that led to the identification of categories related to Vygotsky’s sociocultural theory. Categories included the role of the MKO, discussion of students’ ZPDs, differentiated instruction, scaffolding, benchmarking and reading instruction. Relationship to the research question of how teachers’ perceive the effect of a tiered model of instruction on the reading achievement of kindergarten students was a key focus. Key phrases included teacher training and support, resources (time and staff), student assessment and evaluation.

During the second cycle of coding of the semi-structured interviews, the focus was on sorting the evidence from the interviews into major themes that reflected the ideas identified in the literature review and the conceptual framework used to guide this research. For the second cycle of coding, pattern coding was used to “reorganize and reanalyze data…to develop a sense of categorical, thematic, conceptual and/or theoretical organization” Saldaña, 2011, p.148). As explained by Miles and Huberman (1994), pattern coding takes large amounts of data set summaries and reduces these into smaller sets or themes (p.69). First cycle codes were assessed
to decide upon shared characteristics and features and then the researcher assigned a pattern code, or label, to identify major themes (Saldaña, 2011, p.154).

In this study, the researcher wanted to know what teachers’ perceptions were of a tiered instruction model and its effectiveness on the reading achievement of kindergarten students. The themes likely to emerge from the data analysis included overall understanding of RTI, student placement within tiers, instructional strategies used in RtI and assessment practices to monitor student progress. Additional themes included benefits of the RtI model, barriers to an effective RtI program, professional development opportunities, suggestions for improvement and overall effectiveness of RtI on reading achievement among full day kindergarten students. Categories would likely include delivery of instruction (differentiated learning experiences, scaffolding), evaluation of student progress, instructional groupings, interventions, and collaboration. The roles of the MKO as well as the students’ ZPDs were embedded in the interview questions. Categories and themes were modified as necessary throughout the data analysis process since Saldaña recommended that the researcher “remain open to changing them if they are not generating substantive discoveries” (2009, p. 48).

Interview questions with a sample of the themes and descriptive codes that were used can be found in Appendix I. The interview questions were developed based on the Vygotskian socio-cultural theory which was embedded in the questions as this researcher sought to gain the perspective of the adults who were guiding students’ development in reading. The tiered model of instruction acts to define a student’s zone of proximal development (ZPD) as instructors close the distance between actual developmental levels and potential developmental levels. It was the goal of this researcher to examine the scaffolding structure that currently supports the skilled people who were working to develop emerging skills. The teacher, as the more knowledgeable
other (MKO), carefully monitors students’ progress and provides instruction tailored to their needs. Vygotsky’s ZPD and the role of the MKO are instrumental in providing appropriate instruction and scaffolding to guide differentiated learning experiences.

However, since Vygotsky maintains in his sociocultural theory that what a child learns is greatly influenced by the environment in which he or she is part of, it is essential that an efficient school-wide RtI model be in place to improve student outcomes. In conjunction with sociocultural theory stating that adults (MKOs) must adjust their levels of support based on student needs, this researcher hoped to gain insight as to the best ways to adjust the RtI model by focusing on change (Mills, 202, p. 380).

Codes were developed based on the themes and categories this researcher has determined were likely to emerge. For instructional staff these included overall knowledge of the RtI model (TEACH-UND), roles in the tiered instruction process (TEACH-MKO), professional development and other necessary supports to implement the RtI model (TEACH-SUP), and student groupings (TEACH-INSTR-GR). For students, interview questions elicited responses regarding support provided throughout the three tiers (STUD-SUP, STUD-T1, STUD-T2, STUD-T3) and instructional practices that provided this support, such as differentiated instruction, scaffolding and targeted interventions (STUD-DI, STUD-SCAF, STUD-INT). Students’ developmental and learning levels were investigated (STUD-ZPD) along with achievement as measured by evaluations (STUD-EVAL) in phonetic analysis (STUD-ACH-PA), phonics (STUD-ACH-PH) and reading comprehension (STUD-ACH-COM). Challenges were identified and included lack of staff, resources and time (CH-STA, CH-RES, CH-TIME). Suggestions for improving the current RtI model were sought (TEACH-SUGG).

**Analysis of student assessment data.** Following the analysis of the individual interview
data, this researcher conducted an analysis of student assessment data. This analysis was done after the interview process to allow the researcher to compare themes from the data analysis to those that emerged from the interviews, identifying similarities and differences. The themes from the student data analysis and interviews were presented to the focus group participants prior to the focus group for review. This data was used to inform the focus group discussion of common themes which could guide future instruction and implementation.

Two sets of student assessment data were analyzed to support the research topic. The data collected from The Dynamic Assessment of Early Literacy Skills (DIBELS) and the STAR Early Literacy Assessment provided evidence of student achievement in reading and the effect of the tiered model of instruction being used. The data obtained from the STAR expanded upon the subtests assessed by DIBELS, providing teachers with a broader picture of the development of early reading skills among kindergarten students. These assessments were both curriculum-based measurements (CBMs) designed to be efficient indicators of a student’s progress in reading development. These research-based measures identified individual student’s areas of proficiency and areas for possible intervention. Student assessment data was viewed through the theoretical lens of Vygotsky’s ZPD, in particular, how kindergarten students developed reading benchmarks by working in collaboration with their peers and an MKO.

Universal screening and progress monitoring are foundational components of most RtI models (RTI Action Network, 2015). Both the DIBELS and the STAR assessments act as universal screeners, and the data obtained guided teachers in initially targeting those students in need of reading assistance. Both measures can be used for progress monitoring, also, to help determine the levels of assistance required and the student’s response to interventions.

The DIBELS subtests at the kindergarten level assess phonemic awareness, alphabetic
principle and phonics (Kaminski, Cummings, Powell-Smith & Good, 2008). Data for Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF) and Nonsense Word Fluency (NWF) subtests for 2013-2014, 2014-2015, and 2015-2016 was disaggregated to provide evidence of kindergarteners’ performance in reading and the development of reading benchmarks. This data allows teachers to compare and contrast the performance of students who are on target with those students who are at-risk and to discuss instructional implications. Performance on these assessments was not analyzed statistically. Rather, assessment data was analyzed for themes which were presented to the focus group participants prior to the focus group interview (Appendix H).

Student assessment data from The STAR Early Literacy Assessment (SEL) was analyzed in conjunction with DIBELS to provide teachers with additional information as they adopted this new instrument for reading assessment. While the STAR assesses similar aspects of reading as DIBELS (phonemic awareness and phonics), it goes beyond DIBELS by testing early levels of comprehension, structural analysis and vocabulary (Renaissance Learning, 2008). The reports that were generated for the STAR kindergarten screening done in October of 2015 were analyzed to identify the percentage of students scoring at or above benchmark, needing to be watched, needing intervention, and needing urgent intervention. Reliable data regarding student performance in the key areas of reading development was obtained from this research-based measure. The data obtained from the STAR was added to the data obtained from DIBELS to provide teachers with additional information regarding kindergarten student achievement in reading.

Table 9 (Appendix F) provides a sample of how the DIBELS data was displayed after analysis. The mean scores and benchmark levels for the DIBELS subtests of letter naming
fluency (LNF), phoneme segmentation fluency (PSF) and nonsense word fluency (NWF) are presented. Table 10 (Appendix F) provides a sample of how the STAR Early Literacy Assessment data was displayed after analysis. STAR Early Literacy sub-domain distribution by percentile rank for each kindergarten classroom is presented. Sub-domains include alphabetic principle, concept of word, phonemic awareness, phonics, structural analysis, vocabulary, sentence-level comprehension and paragraph-level comprehension. Themes were identified and compared to those found during the individual interviews. These themes were presented to the focus group participants to be included in a discussion to identify reasons why specific classroom performance was at, above, or below grade level average.

**Analysis of focus group data.** The purpose of this focus group was to identify data resulting from the collaboration of people and ideas and to use that data to guide children as they move through their zones of development. The patterns and themes that emerged from the semi-structured interviews and the student data were used to inform the focus group discussion by expanding upon the strengths and weaknesses of the RtI model and its effect on the reading achievement of kindergarten students. Student assessment data from the DIBELS and the STAR was discussed to determine what conclusions could be drawn to guide future instruction. The data obtained from the focus group was analyzed and coded as described for the semi-structured interviews, using Saldaña’s (2011) two-cycle coding process.

Focus group questions with a sample of the themes and descriptive codes that were used can be found in Appendix J. The focus group questions were designed to reflect Vygotsky’s premise that development is a process of collaboration and change (Vygotsky, 1978, p. 33). Development can best be understood by looking closely at students’ actions and realizing that learning is possible when all participants share a common goal and a common focus of attention.
Following Vygotsky’s theory that interactions among two or more individuals lead to conversation, which in turn leads to problem-solving, it was anticipated that the results from this focus group would reflect shared experiences. These experiences, along with a shared understanding of the common goal to improve reading achievement for all students, would likely produce positive change.

Codes were developed based on the themes this researcher had determined were likely to emerge. Since the research question focused heavily on teachers’ perceptions of the current RtI model, focus group questions included thoughts and opinions regarding communication (TEACH-PER-COM), collaboration (TEACH-PER-COLL), evaluation (TEACH-PER-EVAL, STUD-EVAL-T1, T2, T3)) and instruction (TEACH-PER-INSTR). The focus of this research was to determine teachers’ perceptions of the benefits and challenges (TEACH-PER-BEN, TEACH-PER-CHAL) of the current RtI model, the model’s effectiveness on student achievement in reading (STUD-ACH, TEACH-PER-EFF), and suggestions for improvement (TEACH-PER-SUGG).

The clarifications, confirmations and suggestions that emerged from this focus group led to a better understanding of the RtI model currently in place at the study site. This researcher hoped to use these findings to provide suggestions and guidance on how best to strengthen the existing framework to better help full day kindergarten students achieve reading proficiency. Teacher perceptions regarding the barriers to successful implementation of a tiered instruction model in reading in kindergarten were identified and ideas for improvement were generated. Implications for future practices and instructional change were addressed.

The data from these three sets (semi-structured interviews, student assessment data, and focus group) was triangulated to enhance the trustworthiness of this research. Each set of data
was analyzed independently but acted to inform each other by assessing whether “sources converge and lead to the same findings” (Yin, 2011, p. 153). Themes that emerged from the interviews were considered when analyzing student assessment data, looking for similarities and differences in patterns and categories.

Evidence collected from the interviews and student assessments informed the focus group discussion, leading to identification of teachers’ perceptions regarding the effectiveness of a tiered model of instruction on the reading achievement of full day kindergarten students. Common themes and patterns that emerged were noted, and this corroboration served to strengthen the credibility of the study. Each set of data worked to validate the next by confirming viewpoints presented. Information from the interviews was compared and contrasted to the information gained from student assessment data. Overall themes and patterns that emerged from the first two sets of data were triangulated through confirmation during the focus group. This was done by member checking to ensure the researcher had correctly interpreted the participant’s view.

**Trustworthiness**

According to Lincoln and Guba (1985), the element of trustworthiness is essential in any study in order to determine its value, increase its credibility and persuade an audience that a study is worthy of attention (p. 290). Trustworthiness includes credibility, transferability, dependability and confirmability. Lincoln and Guba (1985) described a series of techniques to be used by a researcher to achieve the four criteria characteristic of trustworthiness.

**Credibility.** Credibility involves establishing trust, both between the researcher and participants as well as trust in the results or findings of a study. Credibility was established with the interviewees and members of the focus group by providing a document that outlined
participant confidentiality. Pseudonyms were used to provide anonymity, ensuring that the 
information gathered would not be used against specific individuals. Member checking 
(Creswell, 2009, Lincoln & Guba, 1985) was used during this study to determine the accuracy of 
findings. The researcher provided participants with transcripts to allow them to add any 
additional information. Participants were also given the opportunity to review the researcher’s 
reports generated from the interviews and focus group, and to review these to determine whether 
participants believed those reports were accurate in terms of the information presented and the 
themes identified.

The specific values, opinions and expectations a researcher brings to a study can 
influence its outcome, either positively or negatively (Creswell, 2009, p. 192). In order to lessen 
the threat of researcher bias on the credibility of the study, it is necessary to describe any 
possible biases on the part of this researcher and explain how the researcher dealt with this. 
This researcher had specific thoughts and opinions regarding the framework of an effective RtI 
model, the strategies and supports that needed to be used with a struggling reader, and the 
knowledge, training and support that teachers needed in order to effectively operate within a 
tiered model of instruction. While researcher bias cannot be fully eliminated, by identifying and 
reflecting upon the researcher’s preconceived ideas, researcher bias could be minimized 
(Maxwell, 2005). In addition, grounding the study in the evidence contributed positively to the 
lessening of researcher bias (Yin, 2011).

Reactivity, described by Maxwell (2005) as “the influence of the researcher on the setting 
or individuals studied”, can also be a threat to credibility (p. 108). Since the researcher is a 
former colleague and administrator to the participants, it was possible that they might feel 
pressured to participate in this study. The researcher assured the selected subjects that their
participation was totally voluntary and they had the right to withdraw at any time. Participants may have felt that they need to provide information during the interviews and focus group that they perceived as being desired by the researcher. Interview protocols contained neutral questions which did not suggest the need for a particularly positive or negative response.

Triangulation of data, another component of credibility, was used to enable this researcher to examine the consistency of the findings produced from the interviews, the student data and the focus group (Creswell, 2009, p. 191). By triangulating the data collected from multiple sources, study credibility was increased (Yin, 2011). The first data set, themes identified from individual interviews, was compared and contrasted to the themes identified through the second data set, the analyses of student assessment data. The researcher looked for similarities and differences in the patterns and trends that emerged from the interview and assessment data. These similarities and differences were presented to the focus group participants to provide the basis for discussion. Common themes which could guide future instruction and implementation of the RtI model in reading were established through the third data set, the focus group discussion.

**Transferability.** Transferability means showing that the findings of a study can be transferred to other settings or are applicable in other contexts (Lincoln and Guba, 1985, p. 248). This researcher hoped to achieve transferability through the use of thick description. As stated by Creswell (2009), providing rich, detailed information “may transport readers to the setting and give the discussion an element of shared experiences” (p. 191). By giving adequate information and explaining the phenomenon thoroughly, paying particular attention to detail, this researcher sought to transfer the findings to similar situations and populations. To address transferability, this researcher has a complete set of the data analysis documents used to answer
the research question, which are available upon request. The knowledge that was gained by studying a tiered model of instruction and recording teacher perceptions regarding its effectiveness on reading achievement among kindergarteners will hopefully be useful to other investigators. Specific concepts and themes developed during the course of this study may allow others to make associations during their own research.

**Dependability.** Dependability in qualitative research is defined as being able to replicate a study and achieve consistent results. Creswell (2009) stated that to achieve dependability, “the researcher checks for the accuracy of the findings by employing certain procedures” (p. 190). Yin (2003) asserted that if a researcher thoroughly records the steps and processes of case studies and manages a detailed database, dependability is enhanced. Gibbs (2007) provided additional suggestions for procedures to increase dependability. During this study, transcripts were carefully constructed and continually checked by the researcher to avoid any mistakes when transferring data. The coding process used remained consistent throughout the data analysis process. Information and evidence gathered from interviews, the focus group and the analysis of documents was cross-checked and examined for converging themes. Lincoln and Guba (1985) stressed that there is a direct link between credibility and dependability. The more credible a study is, the stronger the dependability. This researcher utilized the “overlapping” methods of interviews as well as a focus group to enhance the dependability of this research (Shenton, 2004, p.71).

**Confirmability.** In order for research to be trustworthy, the data must be confirmable by others (Lincoln & Guba, 1985, p. 248). A researcher must be able to demonstrate that the findings are the result of the evidence collected and not a result of the researcher’s mind-set or bias (Shenton, 2004, p.63). An outside observer, or third party, must be able to trace the trail of
documents from a research study. To address confirmability, this researcher compiled and maintained a database as suggested by Yin (2011). This database consists of original transcripts, data analysis documents, journal notes and the text of the thesis itself. This will allow third party access in order to verify data and trace findings back to the original data (Lincoln & Guba, 1985, p.248).
Chapter IV: Research Findings

Introduction

The purpose of this descriptive case study was to examine how kindergarten classroom teachers, specialized personnel and building administration at a public early childhood school in southeastern New England understand and support kindergarten readers using a tiered instruction model. In order to assist with the building goal of improving the framework and structure of the response to intervention (RtI) model currently in place at the study site, this researcher chronicled the perceptions of six educators directly involved in the process of teaching reading to kindergarten students. The goal of this research was to determine the effectiveness of the current RtI model at meeting the reading needs of kindergarten students. Results of this study will be used to determine areas of the reading curriculum that need to be strengthened or changed. Results will also provide suggestions for improvement of the tiered instruction framework being utilized along with implications for future RtI implementation at the research site.

Review of Research Problem

The roles and responsibilities of general educators and intervention specialists have changed since the introduction of the tiered model of instruction. The 2004 reauthorization of the No Child Left Behind legislation (NCLB) and the Individuals with Disabilities Education Improvement Act (IDEA, 2004) both included discussion of response to intervention (RtI), with the emphasis being on quality instruction in the general education setting. However, no one specific model for tiered instruction has been defined as being best or most effective. Rather, school districts and individual schools themselves must construct a model that best suits the educational needs of the students at hand (Murphy, 2015).

Generally, a common framework for an RtI reading model includes three tiers of
intervention, with varying levels of support provided at each tier. Tier 1 consists of classroom delivery of high quality reading instruction utilizing research-based curriculum, with differentiated instructional interventions provided by the general educator. Tier 2 includes targeted small group instruction and interventions for students identified as struggling somewhat with the general reading curriculum. This intervention is usually done within the classroom by the general educator, paraprofessional, or in some cases, the intervention specialists. Tier 3 involves intense interventions and/or replacement of core curriculum, provided to small groups or individuals identified as struggling significantly with reading skills and being at risk for meeting standardized benchmarks of achievement. This level of intervention is generally provided by the special education teacher and is most often done in a setting outside of the general education classroom (Murphy, 2015).

Since successful RtI implementation involves a number of practitioners, responsibility for each educator varies. The freedom to develop individual RtI models and frameworks for tiered instruction in reading can lead to confusion among those directly involved in the implementation. The purpose of this study was to analyze teachers’ perceptions regarding the effectiveness of the RtI reading model in place at the study site and to identify gaps in practice that would affect the reading achievement of kindergarten students. Participants were interviewed to gather data regarding individual perceptions of the implementation of the current RtI structure along with the supports and resources necessary for successful implementation, monitoring and assessment of interventions at the three tiers of instruction.

**Review of Research Question**

In order to address the problem of practice, this study explored the following central question: How do teachers perceive the effectiveness of a tiered instruction program in reading
in full day kindergarten? This investigation utilized a qualitative case study methodology which allowed the researcher to collect data from multiple sources, within a natural setting, in order to descriptively answer an explanatory question developed through a theoretical perspective (Yin, 2003). This case study was guided by the theoretical framework of sociocultural theory, in particular the work of Lev Vygotsky (1934/1978) surrounding the zone of proximal development (ZPD) and the concept of the More Knowledgeable Other (MKO). Structuring this investigation around Vygotsky’s concepts of ZPD and MKO ensured that results obtained would provide valuable insight for educators to plan curriculum, structure activities and scaffold instruction in a way that is developmentally appropriate for kindergarten readers.

**Data Analysis**

Data for this study was collected in the spring of 2016 following a three step process.

*Figure 2. Data Collection Process*

As depicted by Figure 2, the first step in the research process was the collecting of information from the semi-structured interviews, with emergent themes identified after transcription. The second step involved the collecting of two types of student assessment data
used for universal screening and progress monitoring. Emergent themes were identified after reviewing patterns within the data. The information gathered from the individual interviews and assessment data was used to guide the focus group discussion, which was the third step of data collection. The three data sets were then triangulated to examine the consistency of the findings and to make recommendations to improve the current model of tiered instruction in reading for kindergarten students at the study site.

Three sets of data (semi-structured interviews, student assessments, and focus group) were analyzed to gain descriptive insight into the research question. Analysis of each data set focused on the identification of themes related to how teachers at a suburban early childhood school perceived the effectiveness of a tiered instruction program in reading in full day kindergarten.

The data collected in this study was analyzed through the lens of Vygotsky’s sociocultural theory (1934/1978) of knowledge development and the role of the more knowledgeable other (MKO) when addressing individual students’ zones of proximal development (ZPD). The research question examined is grounded in this theory as the researcher examined teachers’ perceptions of the characteristics of children during the dynamic activities of reading (being read to, reading in a group, and reading independently with assistance).

Data from this study was analyzed throughout the summer of 2016. The process that was used in this analysis is outlined below.
As depicted by Figure 3, the goal of data analysis is to make large amounts of data manageable while searching for commonalities, which lead to categories or themes (Hesse-Bieber, 2010). A two-cycle coding process was utilized when analyzing the raw data collected during the semi-structured interviews and focus group processes. For the first cycle, descriptive coding summarized basic topics from interview and focus group data using words and short phrases, while In Vivo coding expanded upon the richness of the information by capturing the language of each study participant (Saldaña, 2011). The second cycle of data reduction for raw interview and focus group data involved pattern coding. Participants’ responses to each question were carefully evaluated for codes, categories and themes that emerged. These themes were compared to those the researcher predicted would emerge based on the theoretical framework used and the review of related literature.

Matching emerging codes, categories and themes with the predetermined codes, categories and themes provided direction for this analysis. Reorganizing and reanalyzing while

**Figure 3. Data Analysis Process**
searching for contrasts/comparisons allowed for additional physical reduction of the transcript data. Both first-cycle and second-cycle coding was done by hand rather than with the assistance of coding software. This process provided the opportunity for the researcher to become closer to the data gathered from the individual interviews and the focus group discussion.

**Semi-structured interviews.** The initial step in the data analysis process involved reviewing the audiotapes and developing transcript narratives from the semi-structured, individual interviews. Rev Transcription Services, a confidential, web-based transcription service was utilized to transcribe the digitally recorded interviews. First-cycle coding was conducted, identifying significant information by highlighting, bolding and underlining the interview transcripts. Transcripts of interviews were color-coded by highlighting words and short phrases that provided descriptive information. Expressive quotations that captured the language of the participants were identified. Categories were developed using colored Post-it notes on a display board. The researcher chunked descriptive information and participants’ direct language from the interview transcripts into clusters to begin drawing conclusions and identifying emergent themes.

Preliminary categories and themes that emerged from descriptive and InVivo coding were very similar to those predicted by the researcher. These included knowledge of the RtI model, the teacher as the MKO for reading, student placement within the tiers, instructional supports and student groupings, students’ developmental and learning levels, and student achievement in reading. Second-cycle coding was then conducted to sort evidence from interviews into major themes connected to the theoretical framework. Data was reorganized and reanalyzed using pattern coding. Categorical, thematic and theoretical organization helped to reduce large amounts of data into significant, meaningful sets and themes.
First cycle codes and preliminary themes were assessed for shared characteristics, and the researcher assigned a pattern code to identify major themes. Major themes identified through second-cycle coding were very similar to those predicted at the onset of this research study. These included teachers’ perceptions of RtI for reading, effectiveness of RtI on reading achievement, staff roles in the RtI process, instructional practices, evaluation and assessment, professional development, supports necessary to implement the model, challenges and suggestions for improvement.

Table 11 presents the comparison of first-cycle and second-cycle coding of the individual interview data, showing expected themes/codes that emerged from the interview data along with revised themes/codes. Related preliminary themes which were identified from the first cycle of coding were grouped together during the second cycle of coding, resulting in revised themes which more thoroughly addressed the research question: How do teachers perceive the effectiveness of a tiered instruction program in reading in full day kindergarten?
Table 11

Comparison of Expected Codes/Themes and Revised Codes/Themes from Semi-Structured Interview Data

<table>
<thead>
<tr>
<th>First-Cycle Coding – Expected Themes that Emerged from Interviews</th>
<th>Interview Questions Where Related Initial Codes Appeared</th>
<th>Second-Cycle Coding – Revised Themes from Interviews</th>
<th>Interview Questions Where Related Revised Codes Appeared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall knowledge of the RtI model</td>
<td>Questions 1, 2, 3 TEACH-UND</td>
<td>Teachers’ Perceptions of RtI in Reading</td>
<td>Question 1, 2 TEACH-PERC</td>
</tr>
<tr>
<td>Roles in the tiered instruction process (More Knowledgeable Other)</td>
<td>Questions 4, 5, 8, 9 TEACH-MKO</td>
<td>Educators’ Roles in RtI Process</td>
<td>Questions 1, 3 TEACH-ROLES</td>
</tr>
<tr>
<td>Professional development and other necessary RtI supports</td>
<td>Questions 1, 2, 5 TEACH-SUP</td>
<td>Professional Development and Training</td>
<td>Questions 5, 11 PROF DEV; RTI-CHALL</td>
</tr>
<tr>
<td>Student groupings</td>
<td>Questions 2, 3, 4, 6, 7, 8 TEACH-INSTR-GR</td>
<td>Student Evaluation and Assessment Student Support and Achievement in Reading</td>
<td>Questions 2, 7, 8, 9 STUD-EVAL; STUD-ASSESS</td>
</tr>
<tr>
<td>Student support throughout the tiers</td>
<td>Questions 1, 2, 3, 4, 6, 7, 8, 9 STUD-SUP, STUD-T1, STUD-T2, STUD-T3</td>
<td>Teachers’ Perceptions of RtI in Reading; Student Support and Achievement in Reading;</td>
<td>Questions 1, 9, 10 STUD-INSTR; STUD-ACHIEV</td>
</tr>
<tr>
<td>Instructional Practices (differentiated instruction and scaffolding)</td>
<td>Questions 1, 4 STUD-DI, STUD-SCAF, STUD-INTR</td>
<td>Teachers’ Perceptions of RtI in Reading; Educators’ Roles in RtI Process Student Support and Achievement in Reading</td>
<td>Questions 4, 6 TEACH-PERC; TEACH-ROLES; STUD-INSTR; STUD-ACHIEV</td>
</tr>
<tr>
<td>Developmental and learning levels (zones of proximal development), Assessment practices</td>
<td>Questions 6, 7, 8, 9 STUD-ZPD STUD-EVAL</td>
<td>Student Evaluation and Assessment Student Support and Achievement in Reading</td>
<td>Questions 7, 8 STUD-INSTR; STUD-EVAL; STUD-ACHIEV</td>
</tr>
<tr>
<td>Student achievement (in phonemic awareness, phonics, and reading comprehension)</td>
<td>Questions 2, 6, 7, 8, 9, 10 STUD-ACH-PA, STUD-ACH-PH, STUD-ACH-COMP</td>
<td>Student Evaluation and Assessment Student Support and Achievement in Reading</td>
<td>Question 10 STUD-INSTR; STUD-EVAL; ACHIEV</td>
</tr>
<tr>
<td>Challenges (staff, resources, time)</td>
<td>Questions 5, 11 CH-STA CH-RES CH-TIME</td>
<td>Challenges of RtI Model in Reading</td>
<td>Question 11 RTI-CHALL; TEACH-SUGG</td>
</tr>
</tbody>
</table>
In order to understand the perceptions of early childhood educators regarding the school’s RtI process, structure, implementation and impact on the achievement of kindergarten readers, the first data set (semi-structured interviews) was guided by eleven comprehensive questions (Appendix E). Based on the review and reorganization of interview data, several major themes emerged from the second-cycle of coding. Table 12 presents the major themes identified after conducting second-cycle coding, comparing and revising preliminary themes from within and across individual interviews (Table 11). The section that follows includes further discussion of each theme.

Table 12

<table>
<thead>
<tr>
<th>Major Themes Identified from Semi-structured Interviews</th>
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<tbody>
<tr>
<td>Major Themes Identified From Second-Cycle Coding of Semi-structured Interview Data</td>
</tr>
<tr>
<td>1. Teachers’ Perceptions of RtI</td>
</tr>
<tr>
<td>2. Student Support and Achievement in Reading</td>
</tr>
<tr>
<td>3. Student Evaluation and Assessment</td>
</tr>
<tr>
<td>4. Challenges of RtI Model in Reading</td>
</tr>
<tr>
<td>5. Educators’ Roles in RtI Process</td>
</tr>
<tr>
<td>6. Professional Development and Training</td>
</tr>
</tbody>
</table>

**Teachers’ perceptions of RtI.** As interviewees spoke about the support provided by RtI, they also presented their perceptions about and their overall understanding of tiered instruction. All study participants expressed the belief that the tiered model of instruction was beneficial for both students and teachers at the study site. Benefits for the educators included a framework to follow to increase student achievement along with increased opportunities for collaboration with
other educators. Benefits for students included early instructional intervention for those students who needed it and consistent use of research-based practices during core reading instruction. Study participants demonstrated an overall understanding of the RtI model as they each cited the use of high-quality instruction and strategic interventions, continuous monitoring of student progress and the use of a collaborative approach as increasingly intensive levels of support are being provided for struggling readers.

The three general educators agreed that, because the tiered instruction model in reading at the study site was structured with a clear process for student identification, this benefitted the teacher. If students were not being successful in the regular classroom, RtI paperwork would be filled out and submitted to the building administrator. A meeting was then held with all team participants and support would be provided for the student, either by the teacher in the general education classroom or by a specialist outside of the classroom. Another way this model benefitted teachers as well as students was by encouraging collaboration not only with grade level peers but also with the reading specialist and the special education interventionist. Educators met as needed to discuss kindergarten student performance with literacy skills, with consensus being that this model helped “to hone in on performance, to look closely to see which group of students is most in need”. Also stressed was the extra support the model provided to all students, but particularly to those struggling to meet reading benchmarks. All teachers agreed that the model provided them with “a clear and precise picture of the group or individuals who needed more differentiated instruction”.

The administrator further explained the RtI process and discussed the flow chart used for reference and the forms that needed to be filled out to track student achievement within the tiered instruction process. She outlined the procedure teachers follow, noting that it was the
responsibility of classroom teachers to consult appropriate building specialists. Strategies and interventions which were suggested were then implemented for six to eight weeks before being assessed for success. The key, she noted, is “ongoing progress monitoring to determine the next steps in the process”.

Building specialists also agreed that the RtI model provided structure and support for both students and teachers. The special education teacher spoke about the layers of support that could be delivered through tiered instruction and noted that this model provided a welcome change for her instruction. Most beneficial was the fact that she could now work with all struggling readers, not just those identified as special education. The reading specialist added to this theme by explaining that she saw this process as a way for teachers to watch students during the year, rather than simply assess them at the end. She noted that with an RtI model, teachers understood that there was something in place for them to report on students’ progress using data. She added that the tiered model ensured that teachers strengthen classroom core reading instruction, stating “The first thing teachers do, especially when they notice a good chunk of their class really is struggling, is change their tier 1.”

*Student support and achievement in reading.* Each participant in this study expressed the opinion that tiered instruction was very effective with all kindergarten readers, but particularly with those who struggled. Differentiated instruction and scaffolding were cited as highly productive strategies, as long as sufficient time was available to plan and prepare adequately. Common planning time (CPT) was noted by the classroom teachers as periods (two times per week for 40 minutes) they could use to work together to develop lessons that met each child where he/she was individually. This focus on students’ zones of proximal development (ZPD) helped classroom teachers to teach and differentiate efficiently.
The process of differentiation and selecting instructional interventions was described as a collaborative effort that involved all the educators who worked with kindergarten readers. It was noted that a team process was used to identify instructional practices and interventions. Differentiation and scaffolding of instruction were cited as key to the RtI reading process. Classroom teachers differentiated by instructing small groups and utilizing teacher assistants to work with small groups of students at the tier 2 level. Students were grouped “strategically, with the focus on differentiating instruction”. Together the teacher and assistant used reading and activity materials designed to address targeted skills within each student’s ability level, or ZPD. At times the classroom teachers felt they may not be differentiating as effectively as they could due to the wide range of ability levels and high number of students in their classes. However, with the assistance of the education specialists in the building, “each reader can get the support they need”. Teachers’ perception was that tiered instruction has “absolutely increased students’ reading achievement.”

While all participants agreed that significant gains have been made by kindergarten readers using the tiered instruction model, consensus was that it often takes much time to notice these gains. It was stated that kindergarten students often need extended time and exposure to instruction in order to develop grade-level reading skills. When varied academic readiness is confronting a teacher, it can be a challenge to ensure adequate academic growth for all students. The administrator also spoke to this, saying “significant time and energy” was spent on lower-level reading skills since a large number of students are entering kindergarten lacking in basic reading readiness. The educators agreed that RtI works to address this by shifting one’s mindset, allowing different students to have different growth experiences.

The special education interventionist expanded upon the theme of growth experiences,
noting that students are reading at higher levels than in past years, “absolutely, hands down.”
She attributed this to the tiered instruction model and her ability to target more students in the
natural setting of the classroom. She credited the school’s reading specialist in her part time role
as literacy coach with supporting teachers and presenting strategies for intervention. The reading
specialist confirmed that teachers are utilizing this knowledge, “providing strategies that a reader
needs at their own particular level.” She confirmed that the RtI model has had “a tremendous
effect” on kindergarten students’ achievement in reading, and attributed this success to the use of
RtI.

Student evaluation and assessment. The importance of data analysis proved to be a
recurring discussion among all study participants. Teachers cited the results of assessment data
as essential for creating curricular improvements, designing interventions and deciding which
students would benefit from additional tiered instruction. The RtI team members spoke about
the importance of analyzing data at each of the tiers of instruction, using this problem-solving
process for a variety of purposes. One classroom teacher summed this up by saying that
assessment data allows for identification of both whole group and individual strengths and
weaknesses, leading to effective selection of individualized instructional strategies designed to
increase student achievement.

At the tier 1 level, all participants talked about holding team meetings to discuss results
of grade-level universal screenings from the DIBELS and the STAR Early Literacy assessments.
The results assisted teachers with developing curriculum and instructional strategies that would
help them to differentiate based on varied student abilities and skill levels. This data was
considered essential to create reading groups and drive teacher instruction in reading. It was
noted that “DIBELS and STAR provide a pretty good idea of where readers will fall and what
reading group will be appropriate, and there are usually no surprises.”

Participants noted that “in a perfect world, [all data] would be coming in at the same time, but with district-wide scheduling of assessments, it doesn’t always work that way.” STAR data, which was administered several weeks after the beginning of year DIBELS assessment, grouped students based on strengths and needs, both within each classroom and in the grade level as a whole. This was determined to be very useful when administration had discussions with classroom teachers regarding student placement. While teachers looked only within their own group of students, the administrator worked to ensure that intensive intervention was provided to the most needy, “globally, the lowest of the low in the kindergarten cohort.”

Each classroom teacher stated that she utilized DIBELS and STAR for initial reading group placement, but supplemented these formalized assessments with on-going progress monitoring to keep groups flexible. Teachers used their individual classroom performance data at RtI team meetings to design instruction and place students into higher tiers (tier 2 and tier 3). One participant cited the need for caution when using universal student assessment data, noting that “it is just one snapshot of a student” and doesn’t necessarily indicate true weakness in a particular area. This sentiment was shared by the other participants, particularly since STAR Early Literacy assessment is in the first year of implementation and has not fully “impressed” them with the data it reveals. The STAR was described as “not necessarily a great depiction of how … students are doing,” due to a variety of possibilities such as “some students are good guessers” and “some children are more technologically savvy than others”.

The three classroom teachers said that overall, results of universal student assessments were effective guidelines for initial planning, goal setting and decision-making but must be used in conjunction with progress monitoring and classroom performance. All study participants
spoke positively about the on-going use of progress monitoring. The educators directly involved in the teaching of reading to kindergarten students designed their own informal assessments for basic early literacy skills and relied heavily on the data they collected from these checklists. The special education teacher utilized DIBELS for progress monitoring, while the reading specialist conducted frequent running records for leveling students according to the Fountas and Pinnell leveling system. Classroom performance was another variable taken into account to “help appreciate the differences of learners.” As explained by a classroom teacher, “one data point is never enough to determine a need for placement in tier 2 or tier 3. For a clear, true picture of a child’s performance, multiple data points are necessary.”

**Challenges of RtI model in reading.** The foundation of an effective RtI reading model is the use of high-quality, research-based core curriculum used at the tier 1 level. Along with being scientifically sound, an appropriate reading curriculum at the kindergarten level must include the five components of effective early reading instruction, as determined by the National Reading Panel (2000). This ensures that inadequate instruction in the areas of phonemic awareness, phonics, fluency, vocabulary and reading comprehension is not the reason for lack of student progress.

All participants in this investigation expressed concern with the reading curriculum currently in use. This curriculum was adopted at the elementary level district-wide in 2004 in response to updates in the Massachusetts English Language Arts curriculum. Teachers explained that it was implemented with fidelity for a number of years, and then district elementary educators gradually began to supplement the core program based on student need. Positive aspects of the instruction included differentiation built in to each lesson and strategies provided for lower level readers.
The classroom teacher who had taught at the kindergarten level for the greatest number of years was the most enthusiastic about the core instructional program, noting that it was successful particularly for vocabulary instruction and guided reading. However, the core reading program needed to be supplemented with additional literature and phonemic awareness/phonetic skill practice. While word decoding is stressed in this instruction at the kindergarten level, comprehension practice is limited. Benchmark assessments from this program are no longer used by any of the kindergarten teachers as “they weren’t found to be helpful at all.” The classroom teachers disagreed on the benefits of continued use of this program in the future. One participant noted that she intends to continue using this curriculum in a supplementary way in the future because of the success she’s had in specific areas. Another pointed out that the modeling and guided practice found within the program was a positive, but the curriculum provided limited opportunities for students to practice newly learned skills.

One participant was very vocal about the weaknesses with the core instruction currently in place. She stated that a number of other things need to be added to this instruction, particularly rich literature and read alouds. Limited intervention strategies are provided for those students who are very low or who need enrichment. This participant felt constrained by the core curriculum to the point where she volunteered to participate in a district-wide screening of a newer model of reading instruction. She expressed how fortunate she felt that she piloted a new type of reading program which provided her students with a reading experience unlike any she’s seen before. This pilot program was also discussed by the other classroom teachers during their interviews, with all planning to attend future training in this new model of reading instruction.

The reading specialist further discussed the components missing in the current core instruction program. While it covered “the basics, such as some phonics, phonemic awareness
and vocabulary”, she expressed concern that it lacked adequate coverage for reading fluency and comprehension. She is also involved in the piloting of the new workshop model which she described as a “mix”, with equal focus on phonemic awareness, phonics, vocabulary, fluency and comprehension. While the special education teacher noted that the “reading levels are quite high” in one classroom, she attributed this not to the use of the current core instruction but to the use of the pilot reading model. Support was expressed for the use of the newer workshop model for the grade level in the future. Data revealed that the current model of instruction “is now going by the wayside”, and there was currently a lack of structure and organization with kindergarten reading instruction because of “all these different programs” (referring to both core instruction programs and reading intervention programs at the study site).

Another core principle of tiered instruction is that adequate resources must be in place to ensure effective implementation of RtI systems. While all study participants agreed that sufficient resources were not available, they differed in their perceptions of which specific resources were lacking. A common theme among the kindergarten classroom teachers was that sufficient staff members were not in place to help make tiered instruction as successful as it could be. All three respondents cited limited intervention specialist and special education support. Large class size was mentioned as a significant problem for individualizing instruction, and more staff at the classroom level was mentioned as being needed.

Staffing was not considered to be an issue by the administrator, the reading specialist or the special education teacher. The administrator noted that each classroom had a full-time teaching assistant, and her long term goal was to have a full-time special educator in each kindergarten class for coteaching. She stated that as of the current year, the school had a full-time interventionist who acted as half-time reading specialist and half-time literacy coach,
providing ample support within the kindergarten grade level. The two service providers interviewed expressed similar thoughts regarding adequate support personnel being in place. The reading specialist stated, “I think that having a para in with them all day in kindergarten is incredibly helpful.”

Sufficient time to schedule interventions was described as lacking by some participants. It was noted that “there’s never enough time in the day” to provide struggling readers with the core instruction and extra supports necessary to ensure they reach reading benchmarks. The special educator stated that a lack of time affected her ability to effectively implement interventions and to collaborate with other kindergarten educators. The reading specialist cautioned, “I think teachers have to make time, carve out time no matter what, in order to deliver tiered instruction to their students.”

Lack of materials was also discussed during some interviews. Classroom teachers noted that they were lacking books that ranged in complexity from predictable, easy-to-read books to those of a more challenging nature. The district is currently working to build classroom libraries by providing more books that target a range of skills: at grade level, above and below grade level. Teachers also cited a need for more games, activities and structured kits for reading interventions. It was noted that in order to implement tier 2 effectively in the classroom, “teachers need to be equipped with the necessary tools.”

**Educators’ roles in RtI process.** With the tiered instruction model has come a shift in roles for educators. Fundamental changes have occurred in the way general education and special education teachers collaborate and engage in instruction, assessment and intervention activities. A successful RtI model depends on a school-wide understanding of each teacher’s individual role in this process.
The three kindergarten classroom teachers in this study expressed differing perceptions and viewpoints regarding general educator and special educator assignments within the tiered instruction model in reading. Interview data indicated that while it was generally understood that tier 1 instruction was usually provided by the classroom teacher only, and tier 2 supports could be delivered by both the classroom teacher and the teacher assistant, the model offers some flexibility. According to one participant, the special educator was not viewed as part of the classroom instruction or intervention process. It was her perception that the special educator was considered to be a tier 3 interventionist, with the eligible students being “pulled out of the regular classroom” to receive intervention in the special education room. The other two general educators viewed the special educator as having a broader role in the classroom RtI reading process, with both agreeing that the special education teacher should work alongside the classroom teacher to deliver not only tier 2 and tier 3 interventions but also tier 1 core instruction as well.

The special educator’s perception of her role was different from the general educators’ perceptions. The special educator viewed herself as an interventionist who provided support where it is needed. She noted that simply her presence alone didn’t qualify as tier 3 intervention. Rather, she explained, the levels of intensity of interventions and individualized instruction determined the tiered level. She gave an example of this, explaining that “when students are struggling somewhat, they might have just a tier 2 within the classroom. This support can be delivered by either the teacher, the teacher assistant or by me.” She also mentioned that the reading specialist worked in the kindergarten classrooms and provided tier 2 support as well as doing tier 3 interventions in a separate setting.

In her opinion, the reading specialist did not view herself as having any role in the RtI
process. She explained that she is not invited to RtI meetings to discuss student concerns and does not participate in designing reading interventions. Rather, classroom teachers notify her as to which students are struggling and provide her with the recommendations for support delivered by the team. She believed that the classroom teachers and the building administrator viewed her primarily as a literacy coach whose job role is to provide on-going training and support for teachers of reading.

The administrator explained her perceptions of teachers’ roles within the RtI process as “changing”. She noted that currently, tier 1 instruction was provided by the classroom teacher and by the teacher assistant in the absence of the regular education teacher. She is working to change that by having the special education interventionist work primarily within each kindergarten classroom, providing core instruction along with intervention. Her past experience has been that the reading specialist/literacy coach does not participate in initial RtI meetings but does in fact provide tier 2 and tier 3 supports. However, she noted that since the reading specialist/literacy coach is Title I grant funded, she is limited as to which students she can support. “Ideally”, the administrator is hoping to get more special education support personnel in the future to work with struggling kindergarten readers.

**Professional development and training.** Professional development opportunities were cited by all participants as being critical to the success of tiered instruction in reading. Respondents expressed a need for additional direct training to increase the knowledge and skills necessary for RtI implementation. Classroom teachers noted that they would welcome the chance for consultation with others to clarify and/or address immediate questions and concerns. This would include reflective supervision, or opportunities to think about their own practices and discuss them with someone to help target strengths and needs. All study participants spoke about
needing job-embedded training in this area for increased student achievement.

Each educator interviewed noted that “some professional development” has been provided over the years, but “nothing formalized”. All participants referred to the use of a flow chart on the RtI process which was handed out to educators at the beginning of each school year. This “informal” brochure was designed to be “basically a detailed guide of steps to take when … a student is not making appropriate progress.” The three classroom teachers agreed that a lack of formalized professional development and training in the RtI process has resulted in confusion about a number of aspects of the tiered instruction. It was noted that much has changed, particularly over the course of the last five years, and RtI “looks very different now than it did then.” The special education teacher expressed similar concerns, noting that formalized training was provided “years ago” and “hasn’t been updated.” She explained that current professional development would ensure that everyone understood the differences among the tiers and would clarify each person’s role in the RtI process.

The reading specialist stated that she has received a “good deal” of professional development for RtI but noted that it was in her previous district. This training was formalized and provided to the whole district. She has not been “invited to participate in any RtI training” in the study district. The building administrator explained that she herself has received “nothing, zip” in the way of formalized training. She worked closely with administrators and staff at her previous building to develop a protocol to be used in the RtI process, and has been working with staff at the study site to “tweak” that process. Much of her knowledge regarding the use of tiered instruction in reading came from staff members who have since retired. She summed up by saying, “Everyone would benefit from formalized RtI training to increase their knowledge and skills for instruction and intervention.” All the participants expressed the perception that they
could implement the tiered instruction model with more success if “continuous training in RtI” was done each year.

These semi-structured interviews provided rich description and a deep insight into the research problem. Study participants freely discussed their perceptions of a tiered instruction program and its effect on the reading achievement of full day kindergarten students. Analysis of the data gathered regarding the educators’ experiences, along with their beliefs and knowledge about this issue supported the predicted themes. The emergent themes that were identified from first-cycle coding of the semi-structured interview data were presented to the study participants in written form prior to the focus group discussion (Appendix H).

**Student assessment data.** For the second step in the data analysis process, the researcher conducted an in-depth analysis of the results from kindergarten universal screening/progress monitoring evaluation instruments for reading that were used at the study site. The two types of assessment data that were analyzed to support the research topic were the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) end of year (EOY) assessment (both current and historical) and STAR Early Literacy beginning of year (BOY) assessment (current year). DIBELS data was analyzed for strengths and weaknesses in reading instruction and student achievement. The data obtained from the STAR expanded upon the data obtained from the DIBELS and provided a more targeted view of kindergarten student achievement in the core areas of reading development. Data trends and themes from both sets of achievement data were recorded and compared to the themes which emerged from the individual interviews.

The DIBELS assessments are standardized curriculum-based screening measures (CBM) which are used to monitor student progress, identify instructional needs and effectively predict long-term reading achievement. These short (one minute) fluency measures are designed to be
used regularly (three times per year) to monitor students’ early reading and literacy achievement. Data from the EOY benchmark testing administered over the past three years in the areas of Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF), and Nonsense Word Fluency (NWF) was examined to gauge kindergarten achievement over time and for broader identification and comparison of emergent themes.

The STAR Early Literacy Assessment is a computer-based CBM that is also used as a screening and progress monitoring tool. It is designed to allow educators to “set goals, respond quickly to student needs, monitor progress, and maximize growth” (Renaissance Learning, 2008, p.1). The STAR Early Literacy is designed to be administered twice a year (beginning and end) and assesses skills similar to the DIBELS, but incorporates comprehension skills for kindergarten readers (vocabulary, sentence-level and paragraph level). In this first year of implementation at the study site, only the beginning of the year assessment data was administered. In the future, the STAR Early Literacy will be used as a district-determined measure (DDM) and will be administered two times per year (beginning and end). For this study individual BOY classroom and grade-level benchmarks from the STAR Early Literacy were analyzed to supplement themes which emerged from analysis of DIBELS.

**DIBELS.** Subtest scores for DIBELS are compared against a standardized set of benchmarks to provide teachers with a way of gauging student performance. The benchmarks represent goals or levels of performance that students must reach in order to become effective readers. These benchmarks are research-based and criterion-referenced, and indicate minimum levels of performance (University of Oregon, 2016). The scores are used by teachers to determine the levels of instructional support necessary for students falling within the “some risk” and “at risk” categories, in order to prevent them from becoming struggling readers at some point
in the future. Table 13 presents the cutoff scores for each DIBELS measure at each level of scoring. This table may be referred to as discussion is presented regarding each individual subtest and the overall mean scores identified during this study.

Table 13

*DIBELS Benchmark Goals and Indicators of Risk for the Three Assessment Periods Per Year*

<table>
<thead>
<tr>
<th>DIBELS Measure</th>
<th>Beginning of Year Month 1-3</th>
<th>Middle of Year Month 4-6</th>
<th>End of Year Month 7-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Naming Fluency (LNF)</td>
<td>&lt;2 = At Risk</td>
<td>&lt;15 = At Risk</td>
<td>&lt;29 = At Risk</td>
</tr>
<tr>
<td></td>
<td>&lt;8 = Some Risk</td>
<td>&lt;27 = Some Risk</td>
<td>&lt;40 = Some Risk</td>
</tr>
<tr>
<td></td>
<td>&gt;8 = Low Risk</td>
<td>&gt;27 = Low Risk</td>
<td>&gt;40 = Low Risk</td>
</tr>
<tr>
<td>Phoneme Segmentation Fluency</td>
<td></td>
<td>&lt;7 = At Risk</td>
<td>&lt;10 = Deficit</td>
</tr>
<tr>
<td>(PSF)</td>
<td></td>
<td>&lt;18 = Some Risk</td>
<td>&lt;35 = Emerging</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;18 = Low Risk</td>
<td>&gt;35 = Established</td>
</tr>
<tr>
<td>Nonsense Word Fluency (NWF)</td>
<td></td>
<td>&lt;5 = At Risk</td>
<td>&lt;15 = At Risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;13 = Some Risk</td>
<td>&lt;25 = Some Risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;13 = Low Risk</td>
<td>&gt;25 = Low Risk</td>
</tr>
</tbody>
</table>

Analysis of DIBELS assessments includes data that is both current and historical and will be viewed through the lens of Vygotsky’s (1934/1978) ZPDs, relating the tiered levels to students’ developmental levels. Tier 1 (at benchmark) correlates to a child’s current development (what a child can do without assistance), tier 2 (low risk) correlates to potential development (what a child can do with some support), and tier 3 (high risk) correlates to what is currently beyond a child’s ability (needing intensive intervention from an MKO). DIBELS assessments in the areas of LNF, PSF and NWF that were administered during September, December and June of 2013-2014, 2014-2015, and 2015-2016 were examined. Mean grade-level data from the DIBELS was organized in table form, with NN representing the number of students at each level. The percentage of students scoring at each benchmark level in kindergarten is provided for comparison from beginning to end of each year.
Table 14

*DIBELS Letter Naming Fluency (LNF) Mean Benchmark Scores*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>Low Risk (green)</td>
<td>NN= 48</td>
<td>NN= 58</td>
<td>NN= 58</td>
</tr>
<tr>
<td></td>
<td>% = 76</td>
<td>% = 92</td>
<td>% = 92</td>
</tr>
<tr>
<td>Some Risk (yellow)</td>
<td>NN= 11</td>
<td>NN= 4</td>
<td>NN= 6</td>
</tr>
<tr>
<td></td>
<td>% = 17</td>
<td>% = 6</td>
<td>% = 8</td>
</tr>
<tr>
<td>At Risk (red)</td>
<td>NN= 4</td>
<td>NN= 1</td>
<td>NN= 0</td>
</tr>
<tr>
<td></td>
<td>% = 7</td>
<td>% = 2</td>
<td>% = 0</td>
</tr>
</tbody>
</table>

The data presented in Table 14 shows the number and percentage of kindergarten students at benchmark, somewhat below benchmark, and at risk to meet benchmark expectations for Letter Naming Fluency (LNF). This subtest measures a student’s ability to identify upper- and lower-case letters presented in random order. For LNF, students are considered at risk for meeting early reading benchmarks if they perform in the lowest 20% of students within the district. Students are considered to be at some risk for reading difficulties if they perform between the 20%ile and the 40%ile based on district norms (University of Oregon, 2016).

Table 14 shows that over the three years analyzed an average of 76% of incoming kindergarten students showed no risk for achieving the LNF benchmark, based on initial screenings conducted at the beginning of each year (BOY). An average of 16% of students demonstrated some risk for reading difficulties at the beginning of each year, with an average of 8% of kindergarten students determined to be at risk for meeting the LNF benchmark. Mid-year benchmark testing (MOY) reflected an increase of 15% of students showing low risk, up to an
average of 91%. A decrease of 8% of students showing some risk was noted, down to an average of 8%. Slightly less than 1% was identified at mid-year as being at risk for not meeting the LNF benchmark, which was a decrease of about 7%. End of year testing (EOY) reflected an average of 95% of students scoring low risk (increase of an additional 4% from mid-year), slightly less than 5% of students in the some risk category (decrease of an additional 3% from mid-year) and less than 1% of students determined to be at risk for Letter Naming Fluency (consistent from mid-year).

Table 15

**DIBELS Phoneme Segmentation Fluency (PSF) Mean Benchmark Scores**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Fall</td>
</tr>
<tr>
<td>Establish (green)</td>
<td>NN= 50</td>
<td>NN= 63</td>
<td>NN= 55</td>
</tr>
<tr>
<td></td>
<td>% = 79</td>
<td>% = 98</td>
<td>% = 77</td>
</tr>
<tr>
<td>Emerging (yellow)</td>
<td>NN= 13</td>
<td>NN= 1</td>
<td>NN= 14</td>
</tr>
<tr>
<td></td>
<td>% = 21</td>
<td>% = 2</td>
<td>% = 19</td>
</tr>
<tr>
<td>Deficit (red)</td>
<td>NN= 0</td>
<td>NN= 0</td>
<td>NN= 3</td>
</tr>
<tr>
<td></td>
<td>% = 0</td>
<td>% = 0</td>
<td>% = 4</td>
</tr>
</tbody>
</table>

The data presented in Table 15 shows the number and percentage of kindergarten students at benchmark, somewhat below benchmark, and at risk to meet benchmark expectations for Phoneme Segmentation Fluency (PSF). This subtest measures a student’s ability to break down words containing three and four phonemes into individual phoneme sounds. The score is calculated by the number of phonemes produced in one minute. This subtest is noted to be a
good indicator of future reading achievement (University of Oregon, 2016). No data is presented for BOY for each of the school years portrayed as this subtest is not initially administered until MOY in kindergarten.

Table 15 indicates significant student progress in PSF from MOY to EOY, along with a steady decrease in the number of students falling into the emerging and deficit categories. An average of 79% of students assessed during MOY testing scored at or above benchmark expectations. Data collected during this period reflects that 18% of students scored somewhat below benchmark with emerging skills identified, and 3% scored within the at risk category, demonstrating a deficit in PSF. EOY assessment showed that 98% of students demonstrated established ability to segment phoneme sounds, which is an increase of 19% from MOY. Approximately 1% of students scored somewhat below benchmark (emerging skills), reflecting a decrease of 17% from MOY. A decrease of 2% was noted for students scoring well below benchmark, with 1% of students continued to demonstrate a deficit in PSF skills for EOY.

Table 16

**DIBELS Nonsense Word Fluency (NWF) Mean Benchmark Scores**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>Low Risk (green)</td>
<td>NN= 34</td>
<td>NN= 61</td>
<td>% = 53</td>
</tr>
<tr>
<td>Some Risk (yellow)</td>
<td>NN= 26</td>
<td>NN= 3</td>
<td>% = 42</td>
</tr>
<tr>
<td>At Risk (red)</td>
<td>NN= 3</td>
<td>NN= 0</td>
<td>% = 5</td>
</tr>
</tbody>
</table>
The data presented in Table 16 shows the number and percentage of kindergarten students at benchmark, somewhat below benchmark, and at risk to not meet benchmark expectations for Nonsense Word Fluency (NWF). This subtest measures a student’s ability to use the most common sounds of letters and blend these sounds into nonsense words. A score is based on the number of letter sounds correctly produced in one minute. The purpose of this subtest is to assess how fluently and quickly a student can blend letter sounds into unfamiliar whole words that have no meaning. This subtest is considered to be a good indicator of a student’s word identification abilities (University of Oregon, 2016). No data is presented for BOY for each of the school years portrayed as this subtest is not initially administered until MOY in kindergarten.

As the data in Table 16 indicates, an average of 56% of students scored at benchmark during the MOY assessment. An average of 32% scored somewhat below benchmark, with 12% scoring at risk for not meeting MOY benchmark standards. A significant increase was noted during the EOY assessment, with an average of 88% of students scoring at benchmark for NWF, indicating an increase of 32%. A significant decrease of 21% was noted for the percentage of students scoring in the some in the “some risk” category, with an average of 11% noted as being somewhat below benchmark for EOY. Data revealed that only 1% of students were at risk to meet the EOY benchmark for NWF, which is a decrease of 11%.
Table 17

**DIBELS EOY Subtest Assessment Data Mean Analysis with Themes Identified**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Classroom A Mean Score and Benchmark</th>
<th>Classroom B Mean Score and Benchmark</th>
<th>Classroom C Mean Score and Benchmark</th>
<th>K Grade Level Mean Score and Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>NWF</td>
<td>Score: 33 Benchmark: Low Risk (green)</td>
<td>Score: 36 Benchmark: Low Risk (green)</td>
<td>Score: 29 Benchmark: Low Risk (green)</td>
<td>Score: 33 Benchmark: Low Risk (green)</td>
</tr>
</tbody>
</table>

Themes Identified from DIBELS Data:

- Alphabetic Principle
- Phonemic Awareness
- Phonetic Analysis
- Fluency
- Vocabulary Knowledge
- Word Comprehension
- Student Achievement in Early Literacy Skills

The mean scores from the analysis of DIBELS subtests in LNF for 2013-2014, 2014-2015 and 2015-2016 show an overall increase from BOY to EOY (Table 14). The mean scores from the analysis of DIBELS subtests in PSF and NWF for 2013-2014, 2014-2015 and 2015-2016 show an overall increase from MOY to EOY (Table 15 and Table 16). Further analysis of mean grade-level scores shows that kindergarten students were significantly stronger with their ability to segment phonetic sounds (PSF) by the end of the year. This 20 point difference is indicated by comparing the grade-level mean score achieved of 55 (Table 16) to the benchmark goals and indicator minimum achievement level of 35 (Table 13). Kindergarten students were
somewhat stronger in their ability to fluently blend letters and sounds into unfamiliar words (NWF) by the end of the year. This 8 point difference is indicated by comparing the grade-level mean score achieved of 33 (Table 17) to the benchmark goals and indicator minimum achievement level of 25 (Table 13). Data indicates that kindergarten students were only slightly stronger in their ability to identify quickly and correctly upper-and lower-case letters presented in random order (LNF) by the end of the year. This 2 point difference is indicated by comparing the grade-level mean score achieved of 42 (Table 16) to the benchmark goals and indicator minimum achievement level of 40 (Table 13).

Table 17 indicates that mean individual classroom and overall grade level scores are at benchmark (green) for all DIBELS subtests administered during this three year period. Based on the data analyzed, mean scores for the DIBELS fluency measures administered during a three year period (2013-2016) are predictive of future reading success for the majority of kindergarten students assessed (93%). An average of 6% of students identified during this period were eligible for some extra support and intervention in reading, while approximately 1% of students tested were eligible for intensive intervention and individualized reading instruction.

The themes identified from DIBELS data represent literacy skills that need to be mastered at the kindergarten level for young learners to become effective readers. Alphabetic principle refers to the initial understanding that words are composed of letters which produce sounds. Knowledge of the relationship between letters and sounds, or sound-symbol correspondence, leads to the phonological process of word reading. Phonemic awareness, or the ability to hear and manipulate these different sounds, is essential to the reading process as it is a good predictor of future reading success or difficulty. Phonetic analysis is the understanding that individual sounds represent speech patterns and mastery leads to use in the written word.
Fluency is the ability to read words quickly and smoothly, and is essential since it acts as a bridge between word recognition and comprehension. Vocabulary knowledge, or the process of learning new words to be used daily, is an essential skill in improving reading ability.

Instruction in this area is critical to increase comprehension of the spoken word and written text. Comprehension, or the ability to understand meaning, is the crux of reading development.

Measuring student achievement in early literacy skills is necessary for the identification of needs among kindergarten readers (Douvikas, 2014).

Results of the DIBELS are used to help teachers gauge students’ progress and to identify areas that need to be re-taught. These results are also used to help make decisions for instructional planning, grouping and differentiation. The themes derived from DIBELS data (Table 8) are related to the key areas assessed at the kindergarten level. These correlate with the findings of the National Reading Panel (2000) as to the critical areas in learning to read. These themes were similar to those predicted to emerge as a result of an investigation of the literature on beginning reading skills and the theoretical framework referencing students’ developmental levels.

**STAR Early Literacy Assessment.** As explained by Renaissance Learning (2008), data from the STAR Early Literacy assessment “can be used for multiple purposes such as screening, placement, planning instruction, benchmarking, and outcomes measurement” (p. 7). This assessment provides scaled scores to classify individual students into one of three broad categories of development: emergent reader (early emergent and late emergent), transitional reader and probable reader. Data analysis also includes approximate grade level scores and zones of proximal development (ZPDs) for each reader. This information is helpful for kindergarten teachers to identify strengths and weaknesses in order to provide targeted
intervention at the tier 2 or tier 3 level, and to provide optimal reading materials for each reader (not too hard and not too easy, within a student’s ZPD).

The STAR Early Literacy can also be used as a diagnostic assessment to identify whole group specific areas of strengths and weaknesses and help teachers determine appropriate instruction and intervention strategies. Related data provides a classroom-level summary which includes the number of students in each of the broad categories of development. Class diagnostic reports identify the number of students with specific names identified at each score range for sub-domain assessments. These reports “allow teachers to group students for instruction by the skills that need improvement so that instruction can be both efficient and effective” (p.127).

Table 18, Table 19 and Table 20 present the STAR Early Literacy BOY sub-domain score distribution by percentile rank for individual kindergarten classrooms. This information is helpful for instructional planning and setting long-term goals for students’ reading achievement. Table 21 presents mean BOY grade-level sub-domain score distribution by percentile ranks. This information is helpful when planning intervention support to be provided by either the reading specialist or the special education teacher. Since the STAR Early Literacy is a criterion-referenced test, broad percentile categories (0-25; 26-50; 51-75; 76-100) indicate the percentage of skills or concepts achieved. These percentile categories reflect cut-off or passing scores which measure students’ performance against learning standards. The October 2015 administration was designed to find out how much students know before instruction began and to identify skills to include in curriculum instruction. Scores were compared to the 76-100%ile category as this was determined to be the proficiency level to determine grade-level learning gaps or academic deficits to be addressed.
Table 18

Classroom A STAR Early Literacy Sub-Domain Score Distribution by Percentile Rank

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Alphabetic Principle</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Concept of Word</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Phonics</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>4.3</td>
</tr>
<tr>
<td>Structural Analysis</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>17.4</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sentence-Level Comprehension</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>4.3</td>
</tr>
<tr>
<td>Paragraph Level Comprehension</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>17.4</td>
</tr>
</tbody>
</table>

Table 18 outlines the areas and skills that may be challenging for some kindergarten students in Classroom A. Analysis of scores indicates that alphabet knowledge, sequencing and letter sounds, along with print concepts are areas of relative strength for the class as a whole. Further analysis shows that more than 50% of students show weaker knowledge for phonemic awareness, phonics, structural analysis, sentence-level comprehension and paragraph-level comprehension. Comprehension skills present as areas of significant challenge for this classroom, as 60.8% of students scored below the 76-100%ile for sentence-level and 73.9% scored below the 76-100%ile for paragraph-level. Only slightly more than 50% of students scored between 76-100%ile for vocabulary skills, indicating a relative weakness in this area.
Table 19

*Classroom B STAR Early Literacy Sub-Domain Score Distribution by Percentile Rank*

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Alphabetic Principle</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Concept of Word</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>13.6</td>
</tr>
<tr>
<td>Phonics</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>27.3</td>
</tr>
<tr>
<td>Structural Analysis</td>
<td>0</td>
<td>0.0</td>
<td>8</td>
<td>36.4</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>9.1</td>
</tr>
<tr>
<td>Sentence-Level Comprehension</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>27.3</td>
</tr>
<tr>
<td>Paragraph Level Comprehension</td>
<td>0</td>
<td>0.0</td>
<td>8</td>
<td>36.4</td>
</tr>
</tbody>
</table>

Table 19 outlines the areas and skills that may be challenging for some kindergarten students in Classroom B. Analysis of scores indicates that almost 75% of this class demonstrated adequate alphabet knowledge, sequencing and letter sounds. A substantial percentage of the class (86.4%) demonstrated a solid understanding of print concepts. Further analysis shows that between 63.6% and 68.2% of students tested demonstrated weakness with phonemic awareness, phonics, vocabulary, and sentence-level comprehension skills. Structural analysis and paragraph-level comprehension abilities were challenging for 77.3% of students assessed who scored below the 76-100%ile.
### Table 20

*Classroom C STAR Early Literacy Sub-Domain Score Distribution by Percentile Rank*

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Alphabetic Principle</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Concept of Word</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>13.1</td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>17.4</td>
</tr>
<tr>
<td>Phonics</td>
<td>1</td>
<td>4.3</td>
<td>10</td>
<td>43.5</td>
</tr>
<tr>
<td>Structural Analysis</td>
<td>1</td>
<td>4.3</td>
<td>6</td>
<td>26.1</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>13.1</td>
</tr>
<tr>
<td>Sentence-Level Comprehension</td>
<td>1</td>
<td>4.3</td>
<td>6</td>
<td>26.1</td>
</tr>
<tr>
<td>Paragraph Level Comprehension</td>
<td>1</td>
<td>4.3</td>
<td>10</td>
<td>43.5</td>
</tr>
</tbody>
</table>

Table 20 outlines the areas and skills that may be challenging for some kindergarten students in Classroom C. Analysis of scores indicates that a substantial percentage of the class demonstrated adequate alphabet knowledge, sequencing and letter sounds (82.6%) along with a solid understanding of print concepts (87%). Significantly less well developed skill ability was noted for the six other sub-domains assessed by this instrument. Data analysis reflects that 78.3% of students scored below the 76-100%ile for phonemic awareness and phonics skills, 82.6% scored below the 76-100%ile for structural analysis abilities, and 78.3% scored below this percentile for vocabulary comprehension. Data shows that sentence-level comprehension was challenging for 78.2% of students and paragraph-level comprehension was challenging for 86.9% of Class C.
Table 21

*Kindergarten Grade-Level STAR Early Literacy Mean Sub-Domain Score Distribution by Percentile Rank with Themes*

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Alphabetic Principle</td>
<td>0.0</td>
<td>0.0</td>
<td>11.0</td>
<td>16.3</td>
</tr>
<tr>
<td>Concept of Word</td>
<td>0.0</td>
<td>0.0</td>
<td>6.0</td>
<td>8.9</td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td>0.0</td>
<td>0.0</td>
<td>6.0</td>
<td>8.9</td>
</tr>
<tr>
<td>Phonics</td>
<td>0.0</td>
<td>0.0</td>
<td>11.0</td>
<td>16.3</td>
</tr>
<tr>
<td>Structural Analysis</td>
<td>1.0</td>
<td>1.4</td>
<td>22.0</td>
<td>32.4</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>0.0</td>
<td>0.0</td>
<td>5.0</td>
<td>7.4</td>
</tr>
<tr>
<td>Sentence-Level Comprehension</td>
<td>1.0</td>
<td>1.4</td>
<td>13.0</td>
<td>19.3</td>
</tr>
<tr>
<td>Paragraph Level Comprehension</td>
<td>1.0</td>
<td>1.4</td>
<td>22.0</td>
<td>32.4</td>
</tr>
</tbody>
</table>

**Themes:**
- Letter Identification
- Alphabetic Sequencing
- Sound-Symbol Correspondence
- Concepts of Print
- Phonological Skills
- Vocabulary Use
- Reading Comprehension
- Student Achievement in Early Literacy Skills

Table 21 presents the mean sub-domain score distribution by percentile rank for the kindergarten grade-level. An overall strength was noted for early identification of letters and letter sounds along with alphabetic sequencing, with 83.7% of students scoring in the 76-100%ile. Concepts of print for letters and words also presented as a significant strength for the kindergarten grade level, with 91.1% of students scoring in the 76-100%ile. Areas of relative weakness and challenge reflect those identified during individual class subtest analysis.
Phonemic awareness was difficult for 66.0% of students, phonics was difficult for 67.6% of students, and vocabulary comprehension was difficult for 63.2% of the students. Structural analysis was significantly challenging for the grade level, as reflected by 75.0% of students scoring below the 76-100%ile. Grade level reading comprehension skills were noted to be weak, with 69.1% of students scoring below the 76-100%ile for sentence-level comprehension and 79.4% of students scoring below the 76-100%ile for paragraph-level comprehension.

Like the DIBELS, the STAR Early Literacy Assessment contains foundational skills needed for learning to read. It is a continuum of reading skills and strategies necessary to become an accomplished reader. The themes derived from the STAR data (Table 21) are aligned with the Common Core State Standards for the Language Strand at the kindergarten level. These highlight early literacy needs to assist the teachers in developing targeted instruction and intervention to improve the skills of all beginning readers. As with the DIBELS, these themes were similar to those predicted to emerge as a result of an investigation of the literature on beginning reading skills and the theoretical framework referencing students’ developmental levels.

The themes identified from STAR assessment data also represent early literacy skills that are directly related to future reading success. Letter identification and alphabetic sequencing are strong predictors of reading success. The ability to discriminate among and recognize letters in or out of order, and to do this automatically and fluidly, contributes to future decoding abilities. Sound-symbol correspondence is a related skill which expands upon identification of the structure of letters, linking the sounds made by individual letters. This ability is a beginning step to independent reading and understanding concepts of print. Early readers must understand that print has meaning, the difference between letters, words, sentences and speech, and the
appearance of written text. Phonological skills follow a progression from understanding the structure of spoken language to reading print at the word, syllable, sentence and paragraph levels. This skill is also a strong predictor of future reading ability. Vocabulary use and comprehension are essential for both oral and written communication. Student achievement in these early literacy skills provide proficiency levels that are directly related to young students’ future success as readers (Renaissance Learning, 2008).

Student data from the DIBELS and the STAR Early Literacy provided a context in which to view the findings of the semi-structured interviews. Data trends were recorded and themes were identified and compared to the findings of the first data set. Findings from student assessment data supported many perceptions and opinions from study participants regarding the use of data in the tiered instruction process along with teachers’ concerns about the core curriculum being used. The emergent themes that were identified from analysis of student assessment data were also presented to the study participants in written form prior to the focus group discussion (Appendix H). These include using data to: change instructional methods, target areas for extra support or significant intervention, drive whole group, small group and individual instruction, design flexible reading groups, and identify gaps within the research-based core curriculum currently being used.

**Focus group.** The third step in the data analysis process involved analyzing the data collected from the primary data set, the focus group discussion that was conducted during this study. The focus group was used as the primary source of data because the questions used to structure this group discussion were generated based on the themes that were most likely to occur as a result of an overview of the literature and theoretical framework researched. Discussion questions were designed following Vygotsky’s (1934/1978) theory that development
is a process of collaboration and change, during which all participants share a common goal along with common experiences (p. 33). This shared interaction of experiences leads to conversations which produce positive change for all participants.

The focus group discussion allowed for member checking and accuracy of the data gathered by the researcher from the first two data sets. It also allowed study participants to confirm and/or clarify emergent themes from the semi-structured interviews and student assessment data. The patterns and themes that emerged from the semi-structured interviews and the student data were used to inform the focus group discussion by expanding upon the strengths and weaknesses of the RtI model and its effect on the reading achievement of kindergarten students. Student assessment data themes from the DIBELS and the STAR were discussed to determine what conclusions could be drawn to guide future instruction. This discussion also gave educators a chance to add additional perceptions regarding the effect of a tiered model of instruction on the reading achievement of kindergarten students.

Initially, the raw data from the focus group audio-tape was submitted to Rev Transcription Services to transcribe the digitally recorded interviews into narrative form. The researcher conducted first-cycle coding to identify emergent themes which had previously been determined as likely to occur. As with the analysis of the interview data, significant information in the focus group transcript was emboldened and underlined, with codes assigned. Descriptive and InVivo coding was used during this first round of data analysis. Codes were developed to address directly the research question of teachers’ perceptions of the current RtI model and its effect on the reading achievement of kindergarten students. Categories were developed after chunking the descriptive phrases and the direct language of the participants’. The preliminary categories and themes that were developed were again very similar to those predicted by the
As with the interview data, raw data collected from the focus group discussion was reorganized and reanalyzed during a second-cycle of coding. This cycle was conducted to move from codes and categories to themes and concepts which were related to the theoretical framework and answered the research question. Data was examined to determine where larger segments of text were better suited to just one key code rather than several smaller ones. Through pattern coding, the researcher was able to reduce multiple codes produced from large amounts of data down to a few major codes, categories and themes related to the theoretical framework. These themes were again very similar to those predicted as likely to emerge.

Table 22 presents the comparison of first- and second-cycle coding of the focus group data, showing preliminary (expected) themes/codes that emerged from the interview data along with revised themes/codes.
Table 22

Comparison of Expected Codes/Themes and Revised Codes/Themes from Focus Group Data

<table>
<thead>
<tr>
<th>First-Cycle Coding – Expected Themes that Emerged from focus group discussion</th>
<th>Focus Group Questions Where Related Initial Codes Appeared</th>
<th>Second-Cycle Coding – Revised Themes from Focus Group Discussion</th>
<th>Focus Group Questions Where Related Revised Codes Appeared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ perceptions regarding communication</td>
<td>Question 1 TEACH-PER-COM</td>
<td>Collaboration and Communication</td>
<td>Question 1 COMM-COLL</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding collaboration</td>
<td>Question 1 TEACH-PER-COLL</td>
<td>Collaboration and Communication</td>
<td>Question 1 COMM-COLL</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding evaluation</td>
<td>Question 2, 3, 4 TEACH-PER-EVAL STUD-EVAL-T1, STUD-EVAL-T2, STUD-EVAL-T3</td>
<td>Assessment and Decision-Making</td>
<td>Question 2 STUD-ASSESS-EVAL</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding instruction</td>
<td>Question 2, 3, 4, 5, 6 TEACH-PER-INST, STUD-EVAL, STUD-ACH</td>
<td>Delivery of Instruction and Instructional Practices</td>
<td>Question 4, 6 TEACH-INST-</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding benefits of RtI model</td>
<td>Question 3, 7 TEACH-PER-BEN, TEACH-SUGG</td>
<td>Benefits, Challenges and Suggestions for Improvement</td>
<td>Question 3 BEN-CHALL-SUGG</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding challenges of RtI model</td>
<td>Question 3, 7 TEACH-PER-CHALL, TEACH-SUGG</td>
<td>Benefits, Challenges and Suggestions for Improvement</td>
<td>Question 3 BEN-CHALL-SUGG</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding effectiveness of RtI model on reading achievement</td>
<td>Question 4, 7 STUD-ACH, TEACH-INST, TEACH-PER-EFF</td>
<td>Effectiveness of Tiered Instruction on Kindergarten Reading Achievement</td>
<td>Question 4 EFF-STUD-ACH</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding suggestions for improvement of RtI reading model</td>
<td>Question 5, 7 TEACH-SUGG, TEACH-INST, STUD-EVAL</td>
<td>Benefits, Challenges and Suggestions for Improvement</td>
<td>Question 5, 7 BEN-CHALL-SUGG</td>
</tr>
</tbody>
</table>
Analysis of focus group data revealed five major themes that confirmed the emergent themes from the semi-structured interviews and the review of DIBELS and STAR Early Literacy data. Table 23 presents the themes identified from within and across focus group discussion. The section that follows includes further discussion of each theme.

Table 23

<table>
<thead>
<tr>
<th>Major Themes Identified from Focus Group Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Collaboration and Communication</td>
</tr>
<tr>
<td>2. Delivery of Instruction and Instructional Practices</td>
</tr>
<tr>
<td>3. Assessment and Decision-Making</td>
</tr>
<tr>
<td>4. Effectiveness of Tiered Instruction on Kindergarten Reading Achievement</td>
</tr>
<tr>
<td>5. Benefits, Challenges and Suggestions for Improvement</td>
</tr>
</tbody>
</table>

**Collaboration and communication.** A successful tiered instructional model requires professional collaboration and consistent communication among all educators. According to the RTI Action Network (2015), it is important “to recognize that traditionally held notions about who works with whom, and toward what end, may no longer apply” (p.1). Special educators within an RtI model may work with struggling students regardless of their label or eligibility for special education. General educators within this model also teach students who are struggling, within the realm of their expertise (RTI Action Network, 2015, p.2). Collaborative teaming allows for peer support and shared talent, resulting in successful outcomes for each student.

Focus group participants responded openly about the ways they collaborated and communicated during the tiered instruction reading model. As stated in both the semi-structured
interviews and focus group discussion, this model encouraged collaboration not only with grade level peers but also with the reading specialist and the special education teacher. During the focus group discussion, the special education teacher discussed specific benefits for collaboration, such as the opportunity to meet individually or collectively with kindergarten educators to discuss the progress being made by students and to ask, “What do you think?” Whether meeting formally or “on the fly”, study participants all agreed that these conversations “are vital to student success”. One classroom teacher noted that she’s “fortunate” to be able to communicate and collaborate so effectively with her peers. She explained that in case of a question she can say, “Okay, can you just quickly take a peek at this kiddo and tell me what you think I could do differently?”

As noted in both the semi-structured interviews (data set 1) and the focus group (data set 3), common planning time (CPT) is valued by the study participants as a formal opportunity to collaborate and discuss students’ ability with phonemic awareness, phonics, vocabulary, structural analysis and comprehension skills, all themes identified through analysis of student assessment data (data set 2). The special education teacher stated that, “When we sit down at CPTs we go over my progress monitoring data from DIBELS.” A classroom teacher added, “We are always collaborating as far as deciding who our lowest students are. From there we formalize our [student] groupings.” The reading specialist explained that her work “is never really separate from the classroom teachers”, so she feels comfortable asking to benchmark students frequently. She says, “So we’ll collect even more data from DIBELS or STAR before we move forward or try to shift something we’re doing.”

During both the structured interviews and focus group process, study participants touched on the common theme of welcoming the chance for consultation with other professionals to
clarify and/or address immediate questions and concerns. This willingness to learn from each other improves both teacher effectiveness and students’ learning outcomes. As noted by the reading specialist and affirmed by focus group participants, “There isn’t one classroom that we didn’t have conversations about kids moving, for one reason or another, into another group.” A successful collaborative approach during the tiered instruction model results in a school-wide culture of best practices.

**Delivery of instruction and instructional practices.** According to the National Research Panel (as cited by RTI Network, 2015), a number of components must be in place for instruction and reading practices to be successful for beginning readers. Students must be provided with explicit instruction in phonemic awareness, phonics and vocabulary skills, and given ample opportunity to practice these skills in connected text (p.7). For reading skills to develop effectively, teachers must be willing to adapt and change their instruction to meet the different needs of learners. The following “powerful components of instruction” and instructional practices are integral to the tiered model of reading: a clear focus on grade-level essential skills and learning standards, differentiated instruction determined by assessments designed to address individual needs, teacher support and feedback, and continuous monitoring of student progress with reteaching done as needed. (RTI Action Network, 2015, p.2).

These components were referred to frequently by study participants during both the semi-structured interviews and focus group, and were noted during the analysis of student assessment data, leading to their classification as major themes emerging from this research. Focus group participants cited that a significant benefit of tiered instruction in reading is that it “gives direction to the teachers on what to do with instruction in the classroom to help students” and “it differentiates the kids… [giving them] whatever skills they need.” The reading specialist noted,
“It’s that direct, explicit instruction being done. Not just one size fits all.” She explained that different students need different ways of instruction, and teachers need to keep a clear focus on this. She added, “If instruction is really direct, then you don’t lose sight of what you’re doing, what you’re aiming for with each child.” The special education teacher cautioned that student performance often drops when the focus or explicit introduction in a particular area is removed. She said, “you need to watch carefully for patterns”, with one classroom teacher agreeing that if teachers don’t focus “directly on one skill, such as letter naming, that drops by the end of the year.” This was noted in the analysis of DIBELS data, with scores indicating weaker kindergarten grade-level EOY ability with upper- and lower-case letter recognition (LNF), based on outcomes benchmarks.

Differentiated instruction and scaffolding based on results of assessment data were common themes mentioned by study participants during both the focus group and the individual interviews. The special education teacher enthusiastically said, “The assessing is wonderful in that we’re always coming around and giving each other strategies to work on” based on student data. One classroom teacher noted that she welcomed data meetings where a specialist, or more knowledgeable other, gives her “a couple of ideas” related to best practices and she can “then implement them in the regular education classroom.” These perceptions directly correlate to the themes of collaboration/communication and data analysis as being critical components of an RtI framework.

The administrator sympathized with teacher concerns regarding some obstacles to effective delivery of instruction and use of best practices. One restriction was increasingly large class sizes which made it difficult to differentiate and implement small group instruction effectively. Another difficulty was the inconsistency of preschool experience for incoming
students. As mentioned by a general educator during her individual interview, it is hard to address all students’ needs when there is a wide range of ability levels. The administrator explained that she planned to design a schedule for the 2016-2017 school year that would more efficiently utilize the support of both the reading specialist and special education teacher, with both working for longer periods in the kindergarten classrooms.

**Assessment and decision-making.** Data-based decision making is securely embedded in a tiered instruction program. Analysis of data from universal screenings and progress monitoring is necessary for instructional planning, determining instructional strategies, designing interventions, moving students between the tiers and improving reading curriculum. By monitoring student progress, teachers can make instructional changes throughout the RtI process that increase reading achievement for all. The participants on an RtI data decision-making team all share a common goal and purpose of identifying and responding to students’ academic difficulties and rely heavily on the accuracy of the data collected.

The participants in this study were asked how confident they were in using the assessment instruments available at the study site to identify the needs of kindergarten readers. All the educators who participated in the focus group responded positively about the DIBELS assessments which they had been using for a number of years. One classroom teacher noted that DIBELS are standardized; they align with the Common Core State Standards and work well with the reading curriculum in place. The reading specialist added that DIBELS subtests assess critical areas for reading development in kindergarten, such as phonemic awareness and phonics. The special education teacher said she particularly liked DIBELS because “they are reliable measures” for progress monitoring and predicting long-term reading achievement. As stated in the individual interviews, DIBELS are accurate screening and progress monitoring measures and
are used by all teachers to drive instruction.

Respondents in the focus group were less enthusiastic about the use of STAR Early Literacy assessment, a perception that was also discussed in the semi-structured interviews. The classroom teachers agreed that because this instrument was new to them, they were hesitant to rely heavily on the accuracy of data from this assessment. The reading specialist explained that “you really have to delve deeper” when analyzing data from the STAR “because there’s so much overwhelming information… that comes out of it.” Several of the participants felt that the structure of this test may have affected student outcomes. The test is taken “in a whole group, with iPads, and some kids are just not good test takers when left on their own.” Teachers’ perceptions were that “a lot of kids were guessing”, “they’re looking around and they’re not really engaged”, and “they’re not trying their best because we can’t encourage them.”

The administrator noted that some students “who seem great in all aspects” don’t score well on the STAR. A number of students were individually retested this year with the STAR assessment, and results reflected significantly different scores. These scores were determined to reflect more accurately students’ ability based on observation and classroom performance. All participants agreed that changes in test administration would likely produce more accurate student outcomes. In moving forward with STAR, teachers plan to administer this test in small groups (two or three students) using headphones.

The administrator also thought that more frequent administration for progress monitoring would allow students to become familiar with the structure of the STAR, resulting in more accurate student results. She added that additional training would also be provided to her during the coming summer so that she could assist teachers when accessing useful reports. She agreed that “there’s so much that you can pull out of STAR data. It’s best to start in layers because if
you throw everything at them at once no one’s going to know what to do.” Examples of the types of reports include an individualized student planner which provides all the strengths and needs of each particular student along with a group planner that identifies the neediest students within the kindergarten grade level.

As noted in both the individual interviews and the focus group, teachers at the study site relied heavily on data to help them make decisions about student placement, instruction, strategies and interventions. All participants agreed that more than one data point is necessary to determine how much intervention needs to be provided. Classroom teachers used the results of the DIBELS and the STAR for reading group placement and designing interventions, but used teacher-made checklists and assessments to supplement progress monitoring. They expressed confidence in these individually designed evaluations because these are based on grade-level standards/expectations and are used consistently throughout the RtI process. In her individual interview, the administrator expressed less conviction for the usefulness of teacher-made assessments. She said, “The hardest thing is that other data points [the teachers] are collecting on their own, outside of these district benchmarks, are very rote-skill based. If I hear one more time how many letters they know and how many sounds…” The administrator did agree that some checklist data is useful to supplement other assessments, but data points need to include students’ ability to apply skills that are taught to them. All respondents agreed that there is a need for a formal instrument to assess comprehension skills in kindergarten as they are currently using only running records and anecdotal notes during guided reading groups.

**Effectiveness of tiered instruction on kindergarten reading achievement.** All focus group participants agreed that tiered instruction is highly beneficial to kindergarten students, and that implementing an RtI model in reading increases student achievement. All acknowledged
that significant improvement was noted on DIBELS EOY assessments for the core reading
components of phonemic awareness (as measured by LNF) and phonics (as measured by PSF
and NWF). The special education teacher clarified, “The number of students who didn’t make
significant progress fell within the RtI triangle of the correct percentage…it looked quite
balanced.”

As noted in both the focus group discussion and the semi-structured interviews, reading
achievement in kindergarten was definitely enhanced through the use of assessment data. One
teacher specified that the tiered instruction model has made her focus more on data driving her
instruction. She said of data gathered from STAR testing, “Looking at what the children know
and what they don’t know, what they need and pin-pointing [where more intervention is needed]
really helps me to differentiate according to student needs.” This in turn, she added, leads to
increased student performance in reading. Another teacher agreed, pointing out a success story
from her classroom. She explained that one student initially struggled so significantly in reading
that several staff members were considering referring this child for special education testing.
However, by using data to pinpoint specific areas of weakness, and providing targeted
intervention at the tier 3 level, this teacher said, “She was able to come back into the classroom
and she’s fine. I’m so thankful for that process that she got the extra support that she needed and
she got where she needed to be, and now she’s fine.”

The reading specialist expressed that she can see “the training teachers have had in
teaching comprehension skills.” She said, “It’s evident by the shift in how they’re asking
questions like, ‘How do you know that?’ The teachers embed comprehension instruction right
into their everyday lessons along with teaching it formally as a separate skill.” One classroom
teacher explained further, saying that not all of the reading materials in kindergarten “lend
themselves to deep comprehension”. She noted that by supplementing the core instruction with rich literature and “a story that has a lot of good meat to it where you can do a lot more discussing”, students shift from “learning to read to reading to learn.” Participants agreed that increased comprehension ability is crucial to increasing students’ reading achievement.

Focus group participants articulated the benefits of early intervention on students’ reading achievement. Classroom teachers noted that tiered instruction has emphasized the importance of providing sufficient opportunities for readers to engage with print and text. The special education teacher explained that all students receive the same opportunities for actively engaging with rich literature despite their incoming literacy levels and/or ability levels. The administrator noted that the use of RtI has increased “eyes on print, particularly for struggling students.” Differentiated instruction according to identified student needs with the support of all kindergarten staff further increased students’ performance and success. All focus group participants agreed that expanded active student engagement with printed text, differentiated instruction with increasingly intensive levels of intervention and a clear focus on reading comprehension has contributed significantly to increased reading achievement among kindergarten students.

**Benefits, challenges and suggestions for improvement.** Focus group discussion on the benefits of RtI closely mirrored teacher perceptions presented during the interviews. The special educator stated that she sees differentiation of instruction as one of the greatest benefits for students. She explained that special education students have always had instruction and assignments modified to match their developmental levels and levels of ability. With the tiered instruction model, groups of regular education students are now receiving curriculum tailored to individual strengths and needs, and “reading is no longer a one-size fits all” activity. The
reading specialist agreed, saying, “We have a great tier 2 going on in the classrooms where students are being grouped into their specific need.” Classroom teachers expressed the perception that, while differentiated instruction in reading is certainly highly productive for all students, it is difficult to manage in the classroom without assistance and support from other educators. As class sizes grow larger and a greater disparity is noted in students’ ability levels, differentiation becomes a daunting task. They noted that it is difficult to provide instruction that includes enrichment opportunities for higher-level learners while simultaneously scaffolding instruction and curriculum to assist lower-level learners. The administrator cautioned that it is certainly easier to “just teach to middle-level students” but this is contradictory to the whole idea of tiered instruction.

A classroom teacher pointed out that data meetings were beneficial for teachers and students alike, because she can present a problem and team members will provide suggestions for intervention and instructional strategies. The administrator agreed, saying that “everything doesn’t always need to be a tier 3 intervention.” She added that data analysis “really makes people pause and see if there’s a tier 2 intervention that can take place in the classroom.” All participants agreed, with one classroom teacher repeating, “Data drives delivery of instruction, interventions and strategies to use for each student in my classroom.” The reading specialist said that when tier decisions are based on “objective data from universal screenings and progress monitoring”, accurate decisions are made that are in the best interest of each student.

Data analysis, while clearly a benefit within the RtI model, could also be considered a challenge at times, according to some focus group participants. One classroom teacher felt that, during group meetings in particular, too much focus was put on “the colors identified by DIBELS…whether a student is in the red, yellow or green.” Her perception is that within a
tiered instruction model, interventions should be implemented based on an analysis of the whole child, saying, “Classroom performance really has to be taken into account.” The reading specialist agreed that sometimes teachers over focus on the colors, but her perception was that teachers want students to get “even greener” on DIBELS. She explained that this leads to an unnecessary emphasis on the lower level, rote reading skills because “people love to see kids go up. They were seventy and now they’re ninety. They were seventy! They were already way too high”. One classroom teacher agreed that “students don’t need to surpass the benchmark. Green is green”.

Other benefits of tiered instruction in reading were noted during the focus group discussion and echoed in the individual interviews. These included early intervention for struggling students, shared responsibility and accountability for decisions made, increased collaboration among administrators, teachers and support staff, and a clear goal of improved student learning for all kindergarten readers. The special education teacher noted that she “loves the RtI process” and expressed concern that her role within the RtI reading model may lessen as her caseload of special education students increases. The administrator reassured her that although some special education students may continue to be pulled out of the classroom setting for a while longer, full inclusion was a future goal. This would ensure that the special education teacher would continue to be involved in tier 1 and tier 2 of the reading process and not be restricted only to delivery of tier 3 interventions. The administrator noted that the reading specialist’s role in the RtI process would also increase in the future, with her becoming a member of the data decision-making team and providing more support in the kindergarten classrooms.

Other challenges produced during focus group discussion included limited time to deliver
targeted interventions, difficulty with scheduling, gaps in core reading instruction, not enough personnel, issues with resources, lack of formal training and limited continued professional development in this area. These themes were also noticed during participants’ interviews and were described as obstacles or barriers that are encountered during the RtI process. Perceptions of focus group members were that current staff members are working at their capacity, and while scores from the DIBELS show significant EOY achievement, BOY scores from STAR Early Literacy outline an “exhausting” list of needs. Some of the burden on teachers has been reduced with the addition of a half-time reading specialist, but current staffing challenges the sustainability of an effective tiered instruction reading model.

Study participants agreed that an RtI framework relies heavily on a “really strong tier 1 core reading program”, and the current program has gaps in significant areas that were identified through the STAR assessment. Comprehension skills for incoming kindergarteners during the 2015-2016 school year were weak, and the current core program provides limited instruction and practice in this key reading component. Teachers have to supplement their instruction using a comprehension toolkit which involved a significant amount of professional development. They also have to supply their student readers with a wide variety of literature, from easy to challenging, and currently have limited resources in this area. Limited time to schedule small group and individual instruction is available during the ninety minute reading block, with struggling students are receiving “thirty minutes a day when they really need to have forty-five minutes” from the special education interventionist and the reading teacher.

Many of the identified challenges were included in both the semi-structured interviews and the focus group discussion regarding suggestions for improving the current tiered instruction reading model. Classroom teachers recommended a change from the Story Town core reading
program to the more “RtI-friendly” reading workshop model. They proposed utilizing the Lucy Caulkin’s approach that is currently being piloted in Teacher C’s classroom, and possibly supplementing it with some of the most useful aspects of the Story Town curriculum. According to the reading specialist, the Lucy Caulkin’s workshop model “targets letter identification, phonemic awareness, phonics, vocabulary and comprehension, but does it in an embedded way.” She added that teachers are using different strategies and students are using reasoning skills to find meaning from text.

Changes in scheduling for the special education teacher and the reading specialist were suggested by the administrator as helpful to improve this model. This would lead to more time for interventions to be provided, either in the general education classrooms or in a separate setting. Study participants felt that additional staff members (regular and special education interventionists) would help to increase the effectiveness of instruction at all tiers. This would free up the reading specialist to act in her role as literacy coach to provide training and support to the teachers. More resources in the form of books and activity materials are needed in all classrooms to support all learners. Study participants suggested that additional space be identified for teachers or support staff to use as a quiet area when conducting small group or individual instruction and interventions. Professional development opportunities for both tiered instruction and reading workshop implementation were identified as being critical to the future success of this current RtI framework. Participants noted that it may take time to overcome the challenges that they identified, but they are all committed to the future success of this model.

Trustworthiness

Trustworthiness was a crucial concept related to this study, as it ensured the findings and conclusions were reliable and worthy of attention. This was addressed in several different
ways throughout this research. Credibility, one aspect of trustworthiness, was ensured through anonymity of study subjects, member checking, and triangulation. A document was provided that outlined participant confidentiality, with pseudonyms used to protect identities. Participants were given transcripts of the interviews and focus group discussion to review in order to determine the accuracy of information as well as to add any additional thoughts.

Other aspects of trustworthiness include transferability, dependability and confirmability. Purposive sampling was used in this research to address transferability. Participants in this study shared similar characteristics, knowledge and experiences representative of others in the field of early childhood education. This allowed the researcher to make generalizations based on this sample which could be transferred to similar settings. To further address transferability, a complete set of transcripts obtained from the participants of the interviews and the focus group is available for review. Dependability, or being able to replicate a study, was enhanced by thoroughly documenting the steps of this research study to allow for replication. Ensuring that credibility was established further enhanced dependability. Confirmability, or the ability to demonstrate that the findings were the result of evidence collected (and not any bias on the part of the researcher), was enhanced through the development of a comprehensive database. Original transcripts, journal notes and any other information pertinent to this study are available for third party access. Triangulation was accomplished by collecting data from different sources and examining the consistency of the findings through cross-verification of key themes from each of the data sets.

**Summary of Findings**

The findings from this research were based on the data gathered from the semi-structured individual interviews, analysis of student assessment data, and a focus group
interview/discussion. The six participants candidly and purposely discussed their perceptions of the effect of a tiered model of instruction on the reading achievement of full day kindergarten students. Evidence of teachers’ perceptions that was gathered through the semi-structured interviews and the focus group discussion provided thick, rich description and a deep insight into the strengths and weaknesses of the RtI model currently in place.

Analysis of assessment data revealed themes that validated teachers’ perceptions and supported the research topic.

Data from the semi-structured interviews suggested the followings key findings:

a. Specialized support personnel reported more knowledge of the RtI team process than general education teachers reported.

b. The tiered model of instruction provides structure and support for students and teachers, leading to increased student achievement in reading.

c. Bona fide collaboration and close communication among all RtI team participants is not only beneficial but essential for increasing student achievement.

d. Student assessment is integral to the tiered instruction process.

e. There are challenges with the core reading curriculum and available resources that present obstacles to the tiered instruction model.

f. A mixed understanding of educators’ roles in the RtI process for reading instruction leads to confusion among service delivery providers.

g. Professional development and on-going training opportunities are essential to the success of the tiered instruction model.

The following findings were generated from the analysis of student assessment data:

a. Overall improvement was evident in students’ skills from beginning to the end of the
b. Stronger skill development was evident for EOY phoneme segmenting fluency and nonsense word fluency than for letter naming fluency.

c. Beginning of year strengths included alphabetic principles and concepts of word.

d. Beginning of year weaknesses included phonemic awareness, phonics, structural analysis, vocabulary and comprehension.

Findings from the individual interviews and student data analysis were corroborated and expanded upon during the focus group discussion. These findings informed the focus group discussion by allowing individual participants to expand upon several key themes. These included communication/collaboration, instructional techniques such as scaffolding and differentiation, impact of tiered instruction on reading achievement and the benefits of early intervention. Findings from the interviews and student data also allowed the focus group participants to identify inadequacies in the RtI framework and inconsistencies in implementation from classroom to classroom. The themes identified from student data allowed focus group participants to reflect more closely on the findings that were generated from the use of DIBELS and STAR. Educators discussed the changing needs of kindergarten readers throughout the school year and the role that data has in this process.

*The following findings were generated from the focus group discussion:*

a. A successful collaborative approach during the tiered instruction process results in a school-wide culture of best practices.

b. Early intervention effectively increases students’ reading achievement.

c. Obstacles hinder effective delivery of instruction and use of best practices for tiered instruction among both general and special educators.
d. Mixed confidence in the reliability, accuracy and comprehensiveness of student assessments lessens usefulness of student data.

e. There is a need for clarification of educators’ roles within the RtI framework.

f. Strengthening of the data analysis process would lead to more effective identification and intervention for individual students.

g. Staff and scheduling problems should be addressed.

h. Research-based core instruction, materials and resources used should be reviewed and strengthened.

Examining the research question, “How do teachers perceive the effectiveness of a tiered instruction program in reading in full day kindergarten?” through more than one lens and collecting data through multiple sources led to evidence-based decision-making. Results of the three data sets, after triangulation, yielded consistency of the findings, thus increasing the credibility of this study. Common themes were identified to help guide future reading instruction and strengthen the tiered instruction model at the study site.

In summary, seven key findings were generated through triangulation of the data collected throughout this study:

1. Tiered instruction and the RtI framework is a general education model designed for early intervention and student improvement rather than a special education model designed for student referral.

2. A systematic approach to the teaching and learning of reading using an RtI framework requires active participation, close communication and genuine collaboration among all professionals: classroom teachers, special educators, literacy specialists, paraprofessionals and administrators.
3. The aspects of communication and collaboration regarding student learning are valued as leading to shared responsibility among all team members and increased individual accountability for student success.

4. A lack of comprehensive understanding regarding the structure of this model, insufficient core instruction, materials and resources along with limited training in best practices inhibits effective delivery of tiered instruction.

5. Targeted professional development and training based on research, data and best practices would increase teacher knowledge and instructional practices needed to implement RtI with fidelity.

6. A grade-level culture of support for the systematic implementation of tiered instruction in reading and willingness to improve implementation of the current RtI model are necessary for the success and sustainability of the RtI model.

7. Challenges in structural aspects of the RtI framework and tiered instruction supports hinder optimal implementation.

Conclusion

A tiered model of instruction is an effective way for teachers of beginning readers to vary instructional strategies and support. It allows for adapting of literacy instruction as necessary to address individual and diverse needs. A structured RtI framework provides the necessary guidance to ensure high quality implementation. This case study was conducted to examine teachers’ perceptions of a tiered model of instruction in reading for full day kindergarten students. The data that was collected in three separate and distinct phases revealed findings directly related to the research question. Triangulation of the data revealed seven key findings that presented no surprises to the researcher.
In the following and final chapter of this thesis, the researcher will look further into the findings generated through this study. Discussion will allow the major insights to be justified by the researcher based on the conclusions generated, the theoretical framework used and the literature reviewed. The discussion of these findings will include recommendations to strengthen the kindergarten model as well as implications for educational practice. Suggestions for future studies will be included.
Chapter V: Discussion of Research Findings

Introduction

In the final chapter of this qualitative case study, the researcher will discuss key findings identified in the previous chapter. The findings that emerged from the analysis of the three data sets, semi-structured interviews, student assessments and focus group discussion, were developed within the context of the theoretical framework and literature review. These findings will be connected to the sociocultural theoretical framework of Lev Vygotsky (1934/1978) employed in this study and to the bodies of literature researched. The researcher will discuss the implications of these findings for the educational community and provide recommendations for both educational practice and future research.

This qualitative case study was an investigation of teachers’ perceptions of the effectiveness of a tiered model of instruction at meeting the reading needs of kindergarten students. The research was driven by the belief that teachers’ understanding and knowledge are key factors to the successful implementation and sustainability of a response to intervention model in reading. This study contributes to the existing literature in the areas of beginning reading, tiered instruction, and teachers’ perceptions of the effectiveness of the tiered instruction model in reading in kindergarten.

This research provided insight into how teachers and administrators understood and supported kindergarten readers using responsive teaching and on-going assessments along with research-based tiered instruction and interventions. The study was guided by the sociocultural theory of Lev Vygotsky (1934/1978), in particular the concepts of ZPD and MKO. The engagement process between learner and MKO allows for a deeper understanding of each student’s ZPD. This understanding of individual learners is central to targeted instruction and the implementation of student supports to address varied levels of achievement. A review of
pertinent literature revealed major themes of beginning reading instruction, essential components of an effective RtI model, implementation conditions and the basic tenets of sociocultural theory as related to reading development.

The convergence of these themes informed the research question: How do teachers perceive the effectiveness of a tiered instruction program in reading in full day kindergarten? Responsive instruction combines the development of interpersonal relations and collaboration to allow the teacher to understand each student’s zone of proximal development (ZPD) in order to develop appropriate lessons and activities. It also allows for the provision of support from a More Knowledgeable Other (MKO), assistance that is targeted and individualized to the learner. Themes identified also contributed to the researcher’s approach to this study. A qualitative, descriptive case study methodology allowed for the use of broad, open-ended questions during the interviews. This enabled the researcher to investigate the themes through the lens of participants’ experiences in their immediate environment.

**Review of Themes from Research**

Analysis of three sources of data revealed themes which were validated and supported after triangulation. Semi-structured individual interview data from the six study participants yielded the following themes: a. teachers’ perceptions of RtI, b. student support and achievement in reading, c. student evaluation and assessment, d. challenges of the RtI model in reading, e. educators’ roles in the RtI process, and f. professional development and training. These themes were noted to be similar to those identified through the review of existing literature regarding the essential components and implementation conditions of a successful and sustainable model of tiered instruction. These themes are linked to the work of Vygotsky (1934/1978) through the concepts of knowledge building as a collaborative and social process,
and student learning as an individual procedure.

The areas assessed and analyzed through historical and current DIBELS and STAR student assessment data focused primarily on the components of beginning reading, as identified through research of bodies of literature. These included phonemic awareness, phonics, fluency, vocabulary and comprehension.

The areas identified are closely linked to Vygotsky’s (1934/1978) concept of the zone of proximal development (ZPD) which provides the basis for an analysis of effective teaching practices. These areas comprise the basic skills that are necessary to become a successful reader. Traditionally, beginning readers have been grouped into high, medium and lower levels of ability. Whether using this model of instruction, or using the more recent model of whole class reading instruction, grouping procedures need to be appropriate to specific literary needs. Changes in reading development are individualized and are an on-going process. Students need to be grouped based on specific strengths and needs which are determined by consistent assessment and identification of developmental levels. A thorough understanding of a student’s ZPD and the role of the MKO in the teaching and learning process is essential when studying reading instruction and looking at student data. This understanding allows for responsive instruction, leading to the ability to provide both proactive and reactive interventions. The end result is teaching and learning within the zone of proximal development, leading to independent functioning for all students.

Analysis of the information gathered from the primary data source, the focus group discussion, corroborated themes raised from research of literature. This analysis also confirmed the emergent themes from the semi-structured interviews and the review of student assessment data. The major themes identified from this study are as follows: a. effectiveness of tiered
instruction on kindergarten reading achievement, b. collaboration and communication, c. delivery of instruction and instructional practices, d. assessment and decision-making and e. benefits, challenges and suggestions for improvement.

Linked closely to Vygotsky’s (1934/1978) theory that learning comes from interacting with one’s environment, these themes reinforce the concept that proper instruction raises a student’s ability through the ZPD. Instruction and collaboration with others impacts learning by focusing on the role teachers and students play in the learning process. As noted by Vygotsky (1934/1978), educators who apply the sociocultural theory in their instructional design become aware of the impact learners have on each other, and the success that the tools of culture have within the learning environment. Sociocultural theory places emphasis on the process rather than the product, and instructional practices, communication and assessment procedures are a crucial part of this process.

**Discussion of Key Findings from Research**

Based on careful and thorough analysis of data sets from this study, major themes emerged that led the researcher to develop a number of conclusions. After studying these conclusions within the context of the literature and theory employed, seven key findings were generated from this research.

In relation to the theme of the effectiveness of tiered instruction on kindergarten reading achievement, the following key finding emerged:

**Finding 1:** Tiered instruction and the RtI framework is a general education model designed for early intervention and student improvement rather than a special education model designed for student referral.

Study participants expressed unqualified support for the use of an RtI framework as a
general education model of prevention against student failure. This framework was noted to allow teachers and specialist staff to provide immediate layers of increasingly intensive supports in reading to targeted students. The tiered instruction allowed educators to work with small groups of students, frequently monitoring student progress, in order to identify a small number of beginning readers who were not responding. The emphasis on research-based core instruction and interventions allowed educators to eliminate the possibility that student difficulty may be related to inadequate instruction.

Early intervention in reading was identified by participants as being essential to future reading success. The use of a successful RtI framework was cited as contributing significantly to reading proficiency. Since it is a general education model, screenings are administered to all students to determine who might need extra support. Progress is monitored frequently and focused on targeted skills in the core curriculum. Students are assessed as responding positively to instruction and support or as being non-responders. Educators noted that this allowed them to further modify aspects of instruction, such as the method or approach, the level of instruction, and/or the learning environment.

Participants discussed the difficulty identifying students at the kindergarten level as needing special education services in reading, adding further support for the use of the RtI general education model. It was noted that each classroom consisted of a wide range of student reading abilities, based on a number of different factors such as preschool experience, home support, socioeconomics, motivation and developmental levels. In order to address the needs of all learners, educators agreed that having an effective framework of tiered instruction at the early levels can prevent most reading problems.

In relation to the theme of collaboration and communication, the following key findings
Finding 2: A systematic approach to the teaching and learning of reading using an RtI framework requires active participation, close communication and genuine collaboration among all professionals: classroom teachers, special educators, literacy specialists, paraprofessionals and administrators.

Finding 3: The aspects of communication and collaboration regarding student learning are valued as leading to shared responsibility among all team members and increased individual accountability for student success.

In order for a tiered model of instruction to work optimally, communication and collaboration among all professionals is paramount. Participants in this study agreed that a grade level support team needs to exist for instructional planning and problem-solving. Sufficient time needs to be available for general and special educators to design instruction, identify specific areas of difficulty within the curriculum and discuss evidence-based reading interventions that support the core reading instruction. Study participants noted that a successful RtI team consists of members who are actively engaged in the collaboration process based on a shared vision of reading success for all kindergarten students. This process involves a change in thinking among both general and special educators since true collaboration involves a link between the two.

Clear agreement was evident among participants that successful communication and collaboration needed to be deliberate and on-going. All professionals working with kindergarten readers were cited as members of the grade-level RtI team. These included general education teachers, special educators, paraprofessionals, literacy coaches, reading specialists and administrators. In addition, participants noted that other building specialists should be invited to attend RtI team meetings based on need. Support staff such as speech/language pathologists,
occupational therapists and school psychologists should be called upon to provide specific information and suggestions related to individual student needs. In this way, collaboration and communication becomes a school-wide effort to share resources and expertise.

In relation to the theme of delivery of instruction and instructional practices along with the theme of assessment and decision-making, the following key findings emerged:

**Finding 4:** A lack of comprehensive understanding regarding the structure of this model, insufficient core instruction, materials and resources along with limited training in best practices inhibit effective delivery of tiered instruction.

**Finding 5:** Targeted professional development and training based on research, data and best practices would increase teacher knowledge and instructional practices needed to implement RtI with fidelity.

A successful RtI reading model is comprised of a number of components. High-quality, research-based instruction that is grounded in responsive practices is an essential element of tiered instruction. A strong core reading program that is linked to the Common Core State Standards and provides for differentiation of instruction at the tier 1 level is a key factor. An RtI framework consists of a multi-level system of instruction and support which allows for movement within the tiers. Students move back and forth between the levels of prevention depending upon documented response to interventions provided. Reliable assessment instruments for screening, progress monitoring and data-based decision-making are essential for accurately monitoring students’ levels of development and progress. Research-based interventions of varying levels of intensity are provided in addition to the core instruction and are a significant factor in the RtI framework. Widespread success within this model would not be possible without a culture of collaboration to problem solve. The purpose of RtI is for school
staff to work as a team, with a goal to maximize instruction in order to provide all students with opportunities to succeed.

Student success depends upon teacher understanding of both the purpose and the process of response to intervention. While participants in this study expressed overall understanding of the tiered instruction model of reading, several educators were aware of gaps in their knowledge. This lack of knowledge or understanding can be attributed to insufficient training prior to implementing the model along with limited on-going in-service trainings. Effective professional development would provide suggestions for implementation and evidence-based practices. Trainings on RtI would be beneficial for the educators who want to become more knowledgeable about this process and learn how to implement RtI more effectively.

Sufficient resources need to be available for teachers using a tiered instruction program. At the heart of RtI for reading is the instruction provided at the tier 1 level. A research-based core reading program at the kindergarten level needs to encompass the components of beginning reading as identified by the National Reading Panel (2000). Participants expressed concern regarding the use of a specific core reading program. They cited key areas that were lacking in the overall curriculum being used. Educator using the tiered reading model in kindergarten needed to supplement their current research-based core reading program with additional phonics training, comprehension exercises, opportunities to engage with rich literature, and reading activities to reinforce concepts being taught.

Materials and time are other critical resources when implementing tiered instruction. Limited additional research-based materials to supplement reading instruction created pressure on teachers who had to create these materials on their own. Study participants noted that time constraints within a ninety minute kindergarten reading block hindered their ability to schedule
small group instruction and individualized training. In addition, time restrictions necessitated that struggling readers be provided with less tier 3 support from the special education teacher than was optimal for their needs.

In relation to the theme of benefits, challenges and suggestions for improvement, the following key findings emerged:

**Finding 6:** A grade-level culture of support for the systematic implementation of tiered instruction in reading and willingness to improve implementation of the current RtI model are necessary for the success and sustainability of the RtI model.

**Finding 7:** Challenges in structural aspects of the RtI framework and tiered instruction supports hinder optimal implementation.

The understanding behind RtI is that a tiered instruction model is designed for school-wide improvement by expanding a school’s effectiveness when working with increasingly diverse populations of students (Swindlehurst et al., 2015). The culture of support for implementing tiered instruction to improve student achievement begins at the level of educators directly involved in the process. Participants in this study wholeheartedly agreed that grade-level staff must work closely with each other to establish a clear vision, mission and goals for a tiered reading instruction program. Developing a culturally responsive RtI framework strengthens its sustainability by targeting the needs of a specific site and determining whether the RtI framework in place needs to be strengthened (RtI Action Network, 2015).

Participants also agreed that the infrastructure must exist to support tiered instruction, and structural aids must be in place to ensure its success and sustainability. Backing from school and district leaders is essential as the plans are developed for implementation, evaluation and professional development. School and district leaders must be willing to allocate sufficient
resources to address educators’ and students’ needs. Participants in this study speculated that once a tiered model of reading instruction was accepted by all school staff, it would be implemented at all grade levels and carried out with fidelity.

Challenges were noted to exist within the RtI framework at the study site. A lack of confidence in the precision of assessment instruments used led to questions regarding the information provided from student assessment data. Participants considered the current instruments as effective guidelines for initial planning, goal-setting and decision-making, but cautioned that supplementing these assessments with teacher-made informal assessments provided increased accuracy. Concern was expressed regarding the core reading curriculum currently being used, with teachers noting that gaps were evident in skill instruction necessary at the kindergarten level. Educators needed to supplement this research-based curriculum with additional phonetic, vocabulary and comprehension exercises and provide additional opportunities to practice these skills. Insufficient staff to support student needs was identified and noted to hinder the effectiveness of the tiered reading instruction. Time to schedule interventions was limited to within the reading block, and a lack of necessary tools such as books and activities impeded the model’s success.

Challenges also existed outside of the RtI framework, and these were often beyond the educators’ control. Increasingly larger kindergarten class sizes made it difficult to differentiate and to implement small group instruction. Increasing diversity among incoming kindergarten students led to a wide range of ability levels for classroom teachers to target. Budget constraints hindered the replacement of the core reading program. A significant challenge noted by the participants was a lack of formal professional development and little to no on-going training opportunities.
Linking Findings to Theoretical Framework

The sociocultural theory of Lev Vygotsky (1934/1978) is directly related to the effectiveness of tiered instruction in reading, and supports the framework for RTI as a general education model. Vygotsky theorized that learning is a highly social process which involves active engagement between the learner, the teacher and other students. Interaction in a tiered model of reading instruction is fundamental and occurs at varying levels of intensity. Whole group activities occur at the tier 1 level, small group engagement is evident at the tier 2 level, and individualized interaction is the basic component of the tier 3 level. In conjunction with Vygotsky’s theory that learning occurs in social contexts, students are participants within their own learning environment, within their own community of learners.

Vygotsky theorized that optimal learning takes place within one’s own zone of proximal development (ZPD). For the teacher, this means knowing each child’s level of ability and providing high quality instruction. This instruction must directly target a student’s ability while at the same time stretching their thinking to just beyond their current development. Within a successful tiered model of instruction in reading, all students receive research-based instruction, on-going assessment to monitor progress and interventions matched to needs. The model incorporates tiered instruction according to a student’s identified ZPD and is fluid dependent upon students’ responsiveness to interventions and support.

Vygotsky’s (1934/1978) theory that individuals learn from working together is linked to findings regarding communication and collaboration. Vygotsky (1934/1978) asserted that there are benefits to learning within a group, such as exchanging ideas and participating in a shared practice. Each individual contributes his/her knowledge and ideas surrounding a specific topic. As with the communication and collaboration process among RtI team members, the goal is for
each individual to become an expert in the subject at hand. Vygotsky (1934/1978) stated that subjects involved in group learning possess different strengths and knowledge that needs to be shared. This is directly related to the idea that peers on an RtI team help one another to develop knowledge and skills to increase student achievement.

Vygotsky’s (1934/1978) analysis of the role of the teacher as MKO speaks directly to the issue of collaboration and communication. The MKO is part of a community of practice and it is essential that the MKO becomes engaged in the learning process. In order to co-construct knowledge with students, the MKO must work to co-construct knowledge with peers. This is done by challenging established beliefs and engaging in inquiry with other educators. As the MKO works to encourage students to stretch their thinking, so must the MKO work to stretch his/her own thinking by connecting with others (Eun, 2010).

A theory of human cognitive development such as Vygotsky’s sociocultural theory offers a fitting lens through which to view best practices in teaching and effective delivery of tiered instruction. Vygotsky theorized that learning occurs through participation in social activities and social engagement. Over time, individuals internalize ideas and knowledge that have been generated from meaningful lessons and activities, merging previous and new learning to develop ideas. According to Vygotsky (10934/1978), throughout the process of learning, the learner needs an environment that provides modelling, support and an ideal standard of achievement. Students need to be participants in learning activities that are personally meaningful to them. These concepts are closely linked to the finding that the quality of instruction, materials, resources and teacher effectiveness impacts the success of the tiered instruction model. In order for ideal standards of achievement to be realized, teacher training in best practices is necessary.

As discussed by Gredler (2011), Vygotsky proposed that the development of higher
cognitive functioning and movement within the zones of proximal development is dependent upon problem-solving. Vygotsky (1934/1978) identified situations where a child can function independently within his/her own ZPD. This is possible when a learner is provided with sufficient literature, exercises, activities and opportunities to engage in reading. The actions of a young learner are observed by the teacher and assessed frequently in order to determine what a child is able to do independently. Similarly, Vygotsky (1934/1978) theorized that when a child is presented with challenging tasks and supported through social engagement with peers and/or adults, learning is extended. Looking at the classroom needs for tiered reading instruction through a Vygotskian lens allows for rethinking of necessary resources.

Examining the needs of an optimal tiered learning environment through the lens of Vygotsky’s (1934/1978) sociocultural theory helps designers create more sustainable climates. In a responsive teaching setting, Vygotsky theorized that while the environment shapes the learner, the learner also impacts the environment. The nature of the interaction is both social and physical, as the environment is comprised of the learner, other students, the teacher and learning activities. For an environment to change for the long-term, all participants within the environment must embrace the change in the existing culture and work toward optimizing innovations and adjustments (Lippman, 2010).

Vygotsky (1934/1978) placed considerable emphasis on culture and socialization within one’s environment as contributing to cognitive development. Through both formal and informal education, adults interact with learners to help them attach meaning to objects and experiences. Adults within the learner’s circle engage the learner in challenging and meaningful activities to stretch learning. Challenging tasks promote maximum cognitive growth and target an individual’s ZPD (Eun, 2010).
Linking Findings to Literature

Participants in this study expressed a clear understanding of the changes to the Individuals with Disabilities Education Act (IDEA, 2004), which brought new language to educators regarding methods to help all students succeed and achieve high standards. Educators’ thinking began to shift toward eliminating a discrepancy model for identifying students as requiring special education, realizing that waiting for students to fail was doing a disservice to many. With these changes in federal law came the rise of tiered instruction and response to intervention (RtI). The basic premise behind RtI is the focus on a deficit in skills or performance rather than an identification of the child. Participants agreed that this is what good teachers have always done to help a struggling child, whether mandated by law or not.

Educators in this study cited the usefulness of a general education RtI approach as leading to more accurate diagnoses of students with reading disabilities. Evidence collected supported the thinking of researchers such as Keller-Margulis (2012) and Burns (2010) that assessment linked to instruction, frequent progress monitoring and increasing levels of intervention assisted practitioners of reading in determining students’ skills deficits. Educators expressed concern, however, regarding the amount of time that should be spent at tier 2 before moving to the more intensive level of tier 3. Results from this study substantiated findings from research conducted by Al Otaiba et al. (2014), which cautioned against the inadvertent use of tier 2 as a place where students might languish, waiting to fail. This researcher found confirmation of the results of Al Otaiba et al.’s 2014 study in which the authors noted that agreement is still lacking in the educational community regarding what constitutes responsiveness to intervention and how long students should receive tier 2 interventions.

Regardless of the challenges associated with RtI as a model of prevention, participants
unanimously agreed upon the benefits of an RtI framework for early reading intervention. This corroborates awareness by the National Reading Panel (2000) that early intervention and early identification of reading difficulties is essential to prevent future reading failure. Evidence was found to support teachers’ perceptions that the foundation for successful reading begins in early childhood, with the development of language and the opportunity to engage in pre-literacy experiences.

Participants noted that, due to the varied levels of ability and previous literary experience demonstrated by incoming kindergarteners, an RtI framework improves educators’ ability to target all learners. Greenwood et al. (2015) corroborated these perceptions in an investigation, finding that early intervention and tiered instruction allows all students to learn at their own pace, with or without necessary supports. Teachers’ perceptions regarding the success of using an RtI model in reading at the kindergarten level was further corroborated by researchers such as Swindlehurst et al. (2015), Castro-Villarreal & Rodriguez Moore (2014), and Swanson et al. (2012), all of whom noted that a frequently cited benefit of RtI is the ability to identify and address student needs early and provide targeted services quickly.

The perceptions of the participants in this study were consistent with the cited examples of existing research in the field of RtI, and investigations conducted by other researchers, such as Fuchs, Fuchs and Compton (2012), referencing the rethinking of general education and the implementation of tiered instruction. The educators interviewed agreed that a differentiated model of reading instruction that began at the kindergarten level greatly increased skills among beginning readers. Within the classroom, educators noted that this model allowed them to find the exact grouping for each student within their class and to provide the exact strategies that a particular reader needed at a given point in time through the use of universal screening, progress
monitoring and data-based decision-making.

Evidence supported the thinking that an offshoot of the implementation of an RtI model is the capacity for building change, both school and district-wide. Participants agreed that grade-level teams and support personnel needed to share resources, exchange ideas and expertise, and lean on each other. These perceptions were validated through the work of researchers such as Garcia and Ortiz (2008), who noted all RtI models should be based on specific principles, such as a school-wide belief in the importance of improving student achievement at all levels, and a common understanding that it is everyone’s responsibility to assist in this process. In order to achieve this, direct communication and active collaboration among all stakeholders is of primary importance.

Data gathered from participants in this study confirmed the findings of other researchers such Castro et al. (2014) and Swanson et al. (2012) regarding the importance of increased collaboration with all grade-level educators and the development of support teams for collaborative problem-solving. Study data revealed the perception that as educators worked together using purposeful communication they formed a community who held a shared vision for high quality instructional change. This perception was confirmed by the work of researchers such as Stuart and Rinaldi (2009), who found that the focus during the tiered instruction process must be on high expectations for student learning along with coordination between programs and educators. This researcher found evidence of teachers’ perceptions which are in agreement with the findings of Stuart and Rinaldi (2009), namely that that tiered instruction is strengthened through purposeful communication and collaborative problem-solving.

Data supported teachers’ perceptions that general and special educators need to work together to discuss student needs, problem-solve, share expertise and offer suggestions for
instructional techniques in order for tiered instruction to be successful. Study participants agreed that general educators must take a more active role in designing interventions to target identified needs. Researchers such as Keller-Margulis (2012) substantiated this belief, finding that general educators supported the idea of becoming directly involved in identifying the critical components for implementation and monitoring of interventions. Evidence showed that teachers believe educators need to respond to their new roles by embracing challenges, acknowledging differences in philosophies and personal style, and working through individual interpersonal issues.

In particular, there was noted to be a need for a close partnership between general educators and support personnel. A study conducted by Bean and Lillentein (2012) attested to this need, confirming teachers’ perceptions that this partnership needed to extend to special education teachers, reading and literacy specialists, coaches, administrators and other staff who worked directly with identified students. This researcher concluded that by understanding the complexity of collaboration, educators are able to work through the challenges associated with changing roles and responsibilities. This finding was supported by researchers such as Fuchs, Fuchs and Compton (2012) as they concluded that practitioners of tiered instruction in reading must accept and embrace “equally important, but uniquely different, responsibilities” than they previously had (p. 270).

The educators interviewed expressed perceptions regarding professional development that included the need for continuous training in RtI, encompassing the expectations, framework, components and educational practices involved in tiered instruction. This finding was supported by researchers such as Brendle (2015), Castro-Villarreal et al. (2014) and Swanson et al. (2012) in studies which cited teacher training as one of the most important criteria for a successful tiered
instruction program. This researcher also found evidence that suggested study participants lacked in-depth knowledge of RtI principles and had an organizational framework that did not provide a clear description of the tiered instruction process. General education teachers perceived that education specialists were better trained in the RtI process and therefore more prepared to implement tiered instruction. This belief was reinforced through a study conducted by Brendle (2015), who noted that special education teachers possessed a higher degree of knowledge regarding tiered instruction and the intervention process in general. Swanson et al. (2012) supported the perception that special education teachers possessed a strong ability to identify students’ academic needs early. However, these researchers concluded that special educators also required on-going training in research-based interventions, particularly at the tier 3 level, in order to assist struggling readers.

Participants in this study expressed concern regarding sufficient time to schedule interventions, along with limited materials to promote active engagement among students. This finding was confirmed by researchers such as Harlacher, Nelson-Walker and Sanford (2010) and Garcia and Ortiz (2008). Studies conducted by these investigators supported teachers’ perceptions by addressing the importance of resources and time within the tiered instruction model. Garcia and Ortiz (2008) presented an organizational framework for RtI design and implementation that incorporated both the classroom learning environment and the whole school environment. Harlacher, Nelson-Walker & Sanford (2010) noted that a lack of time to meet collaboratively, plan instruction, implement interventions and collect data to monitor progress can severely hinder the success of an RtI reading model. Suggestions such as building an RtI block into the school day and decreasing class size would increase the success of tiered instruction. Similarly, increasing resources such as staff, materials and available interventions
would optimize implementation of tiered instruction.

Data obtained from participants in this study revealed a clear goal of improved student learning for all students within this early childhood setting, from beyond the individual classroom or grade level to the school as a whole. The educators interviewed believed that this shared goal would contribute to the sustainability of the RtI model and lead to school-wide student success. This finding was supported by researchers such as Harlacher, Walker and Sandford (2010), as they theorized that legislative changes regarding the implementation of research-based instruction and evaluation of students’ responsiveness would lead to school-wide reform. These researchers noted that the impact of school culture and climate contributed to the finding that a widespread practice of support for tiered instruction and responsive teaching led to increased success and sustainability. Participants in this current study expressed concern, however, regarding the increasing diversity of students entering kindergarten and questioned whether the current tiered model could be used to target all learners. Garcia and Ortiz (2008) conducted a study that addressed this concern, analyzing an RtI framework that would be culturally responsive for all learners. The authors theorized that if the primary focus of interventions was on the learning environment rather than student deficit, more consistent success would be noted. The framework supported by the authors included more explicit attention to the school-wide supports surrounding tiered instruction. This would lead to a schoolwide target of shared responsibility, accomplished through culturally responsive professional development and collaborative relationships (p. 34).

A challenge noted by participants in this study was that limited resources presented as a significant factor hindering the success of tiered instruction. The lack of funding affected several key components of a successful RtI framework, such as hiring additional staff and purchasing
assessment instruments and core instructional materials. Fuchs, Fuchs and Compton (2012) confirmed this perception, noting that early intervention using an RtI model required the use of assessments and interventions that were new and costly to systems. The researchers discussed a number of ways for schools to practice RtI most efficiently, reducing costs and maximizing success, citing the use of a large staff of educators currently available within the existing environment, including classroom teachers and specialists, to use individual expertise when dealing with different children at different levels. Results of multistage assessments at the tier 1 and tier 2 levels were noted to be critical in determining students who truly failed to respond to interventions. This knowledge informed educators of existing needs, lessening the possibility of providing supports to students who did not require them. The authors encouraged educators working within a tiered instruction model to explore new ideas, be innovative in their thinking and planning, and work together toward a common vision and shared goals.

This current study produced teachers’ perceptions as to the components necessary for a successful model of tiered instruction in reading. The educators interviewed cited features that included assessment, targeted interventions and increasing levels of support throughout the tiers. The participants acknowledged that data-based decision making was a key factor in identifying student needs, but expressed concern regarding the instruments available. McConnell et al. (2015) confirmed that efficient and effective measurement was essential for an RtI program and acknowledged that challenges with assessment instruments existed at the early childhood levels. This researcher found that study participants showed substantial support for an RtI model, citing the benefits of screening, progress monitoring, targeted instruction, supports and interventions as leading to the identification and remediation of student deficits. Gonzales (2014) supported this perception, theorizing that educators’ thoughts and perceptions of RtI’s components were
essential factors that could either hinder or augment the success of the model.

Researchers such as Gilber et al. (2013) and Ellis et al. (2008) conducted studies which substantiated other perceptions identified by this researcher. These included that sufficient training provided to all educators and school leaders would greatly enhance the success of a tiered reading model. School administrators and staff acknowledged that collaborating and working as a team resulted in the development of best practices for instruction, curriculum modification and intervention. Overall, this researcher found that educators accepted a tiered model of instruction as being highly beneficial to student success, despite any challenges encountered.

**Study Limitations**

A noted strength of this study was the in-depth analysis of teachers’ experiences using this RtI model in reading with kindergarten students over multiple years. This was accomplished through individual interviews and a follow-up focus group which identified instructional practices that have been both successful and unsuccessful, providing an opportunity to strengthen the existing RtI model. However, the limitation existed that the data gained from this study was obtained from six participants who likely share common training due to their years in the district. This limitation was addressed through the analysis of each participant’s unique perspectives and experiences gained from their individual roles in both the classroom and this research experience.

While purposive sampling targets a very specific population and may provide detailed insight to the problem of practice, results may not be representative of a larger population (Maxwell, 2005, p. 89). Perspectives and reflections from these specific participants may not necessarily be transferable to other full day kindergarten environments. Information gathered
from the analysis of student assessment data was used to support the patterns and themes that emerged from the interviews and focus group. The DIBELS and STAR Early Learning Assessment are widely used tools for the screening of early reading skills due to their predictive validity and the criterion measures used (RtI Action Network, 2016, p.3).

Implications for Educational Practice

The findings from this qualitative case study identified significant data that has implications for educational practice, particularly among the participants at the study site. In order for a tiered model of instruction in reading to be effective, RtI intervention teams need direct training, clear practices and organized procedures. Team members need to demonstrate a thorough understanding of the team process in order to communicate and collaborate productively. Team members also need to possess a comprehensive aptitude for intervention practices, including assessment and monitoring of student progress. Both general and special education teachers need to be involved in tiered instruction and intervention in order to partner and share expertise and skills. All RtI team members should be involved in extensive professional development opportunities that focus on developing best practices for instruction, intervention and team problem-solving.

In order to ensure sustainability of the tiered model of reading instruction, all educators involved (teachers, administrators, paraprofessionals and related service providers) must demonstrate qualifications to implement RtI at all levels of support. This includes an understanding of individual roles and responsibilities, along with knowledge of the supports necessary at both the classroom and building levels. If educators are going to move forward with a tiered model of reading instruction at the kindergarten level, barriers and challenges must be identified and dealt with. Partnerships and collaboration among school and district leaders will
ensure that improvements of RtI practices can be made and supports can be enhanced, leading to increased achievement among kindergarten readers.

**Implications for Future Research**

This study focused on teachers’ perceptions of the effectiveness of tiered instruction on the reading achievement of kindergarten students. Future studies could focus on researchers’ observations to determine the extent that research-based instructional practices and interventions are implemented on a daily basis. Observational studies would allow practitioners to identify critical aspects of the RtI process that may be missing in order to improve teacher practice and instructional quality. Since tiered instruction is being carried out with varying degrees of success throughout the study district, additional RtI studies may help to identify components necessary for effective implementation at the district level. Future studies that focus on using tiered instruction to target math and behavioral needs in kindergarten would address concerns noted by study participants. Since fidelity of implementation is an important factor in the tiered instruction process, this is an aspect that should be investigated in future studies. It is important for all RtI team members to agree upon ways to implement tiered instruction with fidelity to increase student outcomes.

**Conclusion**

As a result of the reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004), along with other changes in federal education law (NCLB, 2001), language was introduced regarding education interventions for struggling students. This language led to changes in reading instruction, with educators using tiered instruction and a response to intervention (RtI) framework to target student needs and increase achievement for all individuals. This researcher analyzed teachers’ perceptions regarding the effectiveness of a
tiered model of instruction on the reading achievement of kindergarten students. The participants (general educators, special educator, literacy/reading specialist and administrator) engaged in individual, semi-structured interviews and a focus group, with discussion designed to be open-ended in order to provide rich qualitative data. Assessment data provided additional information regarding student achievement.

Guided by the sociocultural theory of Lev Vygotsky (1934/1978), implications for teaching and learning were applied to the development of reading using tiered instruction. This research was framed through the lens of Vygotsky’s zone of proximal development (ZPD) and the role of the more knowledgeable other (MKO) to address the relationship between learning and development in young children. An understanding of individual ZPD’s is essential when implementing a tiered reading program as it allows for responsive instruction, leading to the provision of both proactive and reactive interventions. This deeper understanding allows for the individualization of instruction and learning activities, and also allows for the provision of targeted support from a More Knowledgeable Other (MKO). When support and interventions are combined with formative and summative assessment data and more frequent progress monitoring, it is assumed that all kindergarten students will become successful readers.

Findings from this study confirmed the effectiveness of tiered instruction and targeted interventions on the reading development of kindergarten students. Essential components of an RtI framework, such as research-based core instruction and interventions, communication, collaboration, team problem-solving and quality professional development were identified. Challenges and barriers such as resources, time, scheduling, staff and adequate assessment instruments were disclosed. The results of this study will be used specifically to assist and guide practitioners at a small, suburban early education public school in Southeastern Massachusetts
but can be applied to similar settings in other school districts. Findings will help educators to determine areas of their RtI model that need to be strengthened. The findings of this study will also inform district administrators and other stakeholders as to what needs to be accomplished within kindergarten classrooms to support beginning readers and to help them obtain grade level skills.
References


Burns, M. (2010). Response-to-intervention research: Is the sum of the parts as great as the


Curtis-Whipple, J. (2011). Literacy block: Literacy instruction and differentiation; A qualitative, summative program review. College of Professional Studies, Northeastern University, Boston, MA.


Gonzales, M. (2014). Educator perceptions of an applied RTI model: School-level conditions that support or inhibit effective RTI implementation. College of Professional Studies, Northeastern University, Boston, MA.


Individuals with Disabilities Education Improvement Act of 2004, PL 108-446, 20 U.S.C §1400 et seq.


Merriam, S. B. (2009). Qualitative research: A guide to design and implementation. San


efficacy and perceptions of response to intervention outcome. Journal of Instructional

kindergarten: Essential instruction content. Journal of Educational Psychology, 87, 202-
217.

Oslund, E. L., Hagan-Burke, S., Taylor, A. B., Simmons, D. C., Simmons, L., Kwok, O.,
reading intervention: An examination of progress-monitoring measures. Reading
Psychology, 33, 78-103.

Ozuru, Y., Dempsey, K., & McNamara, D.S. (2009). Prior knowledge, reading skill, and text
cohesion in the comprehension of science texts. Learning and Instruction, 19(3), 228–
242.

CA: Sage.

Perceived effects of state-mandated testing programs on teaching and learning: Findings
from a national survey of teachers. Chestnut Hill, MA: National Board on Educational
Testing and Public Policy.

Pelletier, N. (2011). Literacy block: Meeting the needs of all learners; A summative program
evaluation. College of Professional Studies, Northeastern University, Boston, MA.

Polikoff, M. S. (2012). Instructional alignment under no child left behind. American Journal of


Rosenburg, L. (2015). The effects of multisensory, explicit, and systematic instructional practices on elementary school students with learning impairments in encoding and oral reading. College of Professional Studies, Northeastern University, Boston, MA.


Ryan, M. S. (2015). Teacher perceptions of mobility among English Language Learners in full day kindergarten: A case study. College of Professional Studies, Northeastern University, Boston, MA.


STAR Early Literacy Technical Manual (2016). Renaissance Learning, Wisconsin Rapids, WI.


Appendices
Appendix A

Informed Consent to Participate in a Research Study: Superintendent of Schools

Date

Dear (Name of Superintendent)

I am a doctoral student enrolled in the College of Professional Studies at Northeastern University. I am writing to request permission to conduct my doctoral research at the (name of school) in order to fulfill my doctoral requirements. The purpose of this case study is to understand how teachers perceive the effectiveness of the current RtI model on the reading achievement of kindergarten students. I am also seeking the building administrator’s perspective on this subject as she is the facilitator of the RtI implementation within the building and provides support and professional development to the educators directly involved in the process.

In order to conduct this study, I will need access to (name of school) kindergarten DIBELS data from Fall, Winter and Spring of 2013-2014 and 2015-2016, along with Fall and Winter of 2015. I will also need to review the STAR Early Literacy Assessment given to kindergarten students at (school) in October of 2015.

The kindergarten staff at (school) (three classroom teachers, a special education teacher, a literacy coach/reading specialist and the building administrator) will be asked to engage in a one-on-one interview with the researcher and be a participant in a focus group with five other colleagues. Participation is completely voluntary. All information collected during this research will be kept confidential. No written reports or publications will contain any information that would identify the study location or its participants. While there is no direct benefit to any of the participants, it is hoped that the information learned from this study may benefit them as they implement a tiered model of instruction in reading.

Thank you for your anticipated support. I greatly appreciate your consideration of my request.

Sincerely,

Nancy J. Lally
Appendix B

Recruitment Letter - Teachers

Date

Dear Colleagues,

   As most of you know, I am a doctoral student enrolled in the College of Professional Studies at Northeastern University. I am asking you to consider participating in a research study I am conducting in order to complete my requirements to obtain a Doctorate in Education. The purpose of my study is to understand how teachers perceive the effectiveness of the current RtI model on the reading achievement of kindergarten students.

   If you decide to take part in this study, you will be asked to engage in a one-on-one interview with the researcher and be a participant in a focus group with five other colleagues. The individual interviews will last between 45 and 60 minutes, and will take place in your classroom at your convenience. The focus group will last for approximately 60 minutes and will be conducted at a time that is convenient for all participants.

   Your participation is completely voluntary, and you may withdraw from the study at any time. All information collected during this research will be kept confidential. A pseudonym will be used in place of your name. No written reports or publications will contain any information that would identify the study location or its participants.

   If you agree to participate in this project, or have any questions regarding the procedures involved, please contact me by email or telephone. My email is lally.n@husky.neu.edu, and my telephone number is 508-441-2869. Thank you for your consideration.

Sincerely,

Nancy Lally
Appendix C
Recruitment Letter - Principal

Date

Dear Administrator,

As you know, I am a doctoral student enrolled in the College of Professional Studies at Northeastern University. I am asking you to consider participating in a research study I am conducting in order to complete my requirements to obtain a Doctorate in Education. The purpose of my study is to understand how teachers perceive the effectiveness of the current RtI model on the reading achievement of kindergarten students. As a participant, I am seeking your perspective regarding the role of facilitator of the RtI implementation within the building, including providing support and professional development to the educators directly involved in the process.

If you decide to take part in this study, you will be asked to engage in a one-on-one interview with the researcher and be a participant in a focus group with five other colleagues. The individual interview will last between 45 and 60 minutes, and will take place in your office at your convenience. The focus group will last for approximately 60 minutes and will be conducted at a time that is convenient for all participants.

Your participation is completely voluntary, and you may withdraw from the study at any time. All information collected during this research will be kept confidential. A pseudonym will be used in place of your name. No written reports or publications will contain any information that would identify the study location or its participants.

If you agree to participate in this project, or have any questions regarding the procedures involved, please contact me by email or telephone. My email is lally.n@husky.neu.edu, and my telephone number is 508-441-2869. Thank you for your consideration.

Sincerely,

Nancy Lally
Appendix D
Informed Consent Form

Northeastern University, College of Professional Studies

Name of Investigator(s):
• Dr. Margaret Dougherty, Principal Investigator
• Nancy J. Lally, Doctor of Education Student in the College of Professional Studies at Northeastern University

Title of Project: Teachers’ Perceptions of the Implementation of a Tiered Model of Instruction in Reading in Full Day Kindergarten: A Case Study

Informed Consent to Participate Study in a Research
You are being invited to take part in a research study. This form will tell you about the study, but the researcher will explain it to you first. You may ask this person any questions that you have. When you are ready to make a decision, you may tell the researcher if you want to participate or not. You do not have to participate if you do not want to. If you decide to participate, the researcher will ask you to sign this statement and will give you a copy to keep.

Why am I being asked to take part in this research study?
You are being asked to take part in this research because you are an educator who works with a tiered instruction model in reading in full day kindergarten.

Why is this research study being done?
The purpose of this study is to understand how teachers perceive the effectiveness of the current RtI model on the reading achievement of kindergarten students, including struggling readers.

What will I be asked to do?
If you decide to take part in this study, you will be asked to participate in a one-on-one audio-recorded interview with the researcher. This interview will be conversational in nature and will be recorded only for the purpose of transcription by the researcher. You will also be asked to participate in a focus group with five other study participants. This group will follow a semi-structured questioning format which will also lend itself to group conversation regarding the research topic. All information gathered by the researcher will be shared with you at the end of the study.

Where will this take place and how much of my time will it take?
The individual interview will take place in your classroom at a time and date that is convenient for you. The interview will last between 45 and 60 minutes. After each individual interview has been conducted, the focus group will be scheduled at a time and date that is convenient for all of
the participants. The focus group will take place in a classroom at the study site that is agreeable to all participants. The focus group will last for approximately 60 minutes.

**Will there be any risk or discomfort to me?**
There is no foreseeable risk or discomfort anticipated.

**Will I benefit by being in this research?**
There is no direct benefit to you for taking part in the study. However, the information learned from this study may benefit you as you implement a tiered model of instruction in reading.

**Who will see the information about me?**
Your part in this study will be confidential. Only the researcher on this study will see the information about you. A pseudonym will be used to protect your identity. No reports or publications will use information that can identify you in any way or any individual as being of this project. The researcher will keep the data collected for the study and will not share it with others. Audio recordings will be destroyed after being transcribed by the researcher.

In rare instances, authorized people may request to see research information about you and other people in this study. This is done only to be sure that the research is done properly. Only people who are authorized by the Northeastern University Institutional Review Board will be permitted to see this information.

**Can I stop my participation in this study?**
Your participation in this research is completely voluntary. You do not have to participate if you do not want to and you can refuse to answer any question. Even if you begin the study, you may quit at any time. If you do not participate or if you decide to quit, you will not lose any rights, benefits, or services that you would otherwise have as an employee at the study site.

**Who can I contact if I have questions or problems?**
If you have questions or problems you can contact the person mainly responsible for this research: Nancy Lally, Doctor of Education Student, 6 Donna Lane, Acushnet, MA; telephone: 508-441-2869, email: lally.n@husky.neu.edu.

I have read, understood, and had the opportunity to ask questions regarding this consent form. I fully understand the nature of my involvement in this research and the potential risks. I agree to volunteer to be a participant in this study.

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Appendix E

INTERVIEW PROTOCOL

**Purpose:** The purpose of this interview is to discuss teachers’ perceptions of the tiered instruction model currently in place, and its effectiveness on reading achievement among full day kindergarten students.

**Date:** ______________________________________________________

**Location:** ______________________________________________________

**Interviewee:** ______________________________________________________

**Duration:** 45-60 Minutes

The researcher will inform the participant of the intention to audio record the interview to allow for repeated access to the data, and assure the participant that the audio-recording will be destroyed once the data has been transcribed.

**Interview questions to be used for purpose of discussion:**

1. What does the RtI kindergarten reading model provide for the teachers and students at this school?

2. How is the RtI process used by teachers to improve reading outcomes for groups of kindergarten students? For individual kindergarten students?

3. How do you feel about the structure and effectiveness of the RtI tiers?

4. How are instructional methods and interventions selected? Describe how you scaffold instruction and provide differentiated learning experiences for individual students.

5. Describe the training that has been provided to you for implementation of the RtI model? Are there enough staff members/materials in place to implement the model effectively? In what specific areas of implementation would you like to have support?

6. How is assessment data used to drive instructional practices for groups of students? For individual students?

7. Describe how you access the data necessary to determine the percent of students in core instruction who are achieving benchmarks (grade-level standards) in reading.

8. How do you use data to make decisions about Tier 2 placement for individuals and/or
groups of students? How do you use data to make decisions about Tier 3 placement for individuals and/or groups of students?

9. Describe how students’ responsiveness to interventions is monitored. What measures are used for progress monitoring? How are they used? Do you think that these assessments are appropriate? Why or why not?

10. Describe the effect you believe the RtI model at your school has had on kindergarten students’ achievement in reading, specifically letter recognition, phonetic analysis, phonics and comprehension.

11. What are the challenges facing the implementation of RtI in reading within your school? What difficulties do you foresee when implementing RtI in reading in the future? How do you think the current RtI model in reading can be improved upon?
Appendix F
DIBELS and STAR Data Tables

Table 2
*DIBELS Letter Naming Fluency (LNF)*

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<td>NN=</td>
<td>%</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>
### Table 4

**DIBELS Nonsense Word Fluency (NWF)**

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
<td>Fall</td>
</tr>
<tr>
<td>Low Risk (green)</td>
<td>NN=</td>
<td>%=</td>
<td>NN=</td>
</tr>
<tr>
<td>Some Risk (yellow)</td>
<td>NN=</td>
<td>%=</td>
<td>NN=</td>
</tr>
<tr>
<td>At Risk (red)</td>
<td>NN=</td>
<td>%=</td>
<td>NN=</td>
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### Table 5

**Classroom A STAR Early Literacy Sub-Domain Score Distribution by Percentile Rank**

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
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</thead>
<tbody>
<tr>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
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</table>

- Alphabetic Principle
- Concept of Word
- Phonemic Awareness
- Phonics
- Structural Analysis
- Vocabulary
- Sentence-Level Comprehension
- Paragraph Level Comprehension
### Table 6

*Classroom B STAR Early Literacy Sub-Domain Score Distribution by Percentile Rank*

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alphabetic Principle</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Concept of Word</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Phonics</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Structural Analysis</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Sentence-Level Comprehension</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Paragraph Level Comprehension</td>
<td>NN=</td>
<td>%</td>
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</tr>
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</table>

### Table 7

*Classroom C STAR Early Literacy Sub-Domain Score Distribution by Percentile Rank*

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alphabetic Principle</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Concept of Word</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Phonics</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Structural Analysis</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Sentence-Level Comprehension</td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Paragraph Level Comprehension</td>
<td>NN=</td>
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</tr>
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</table>
### Table 9

**DIBELS Subtest EOY Mean Assessment Data Analysis with Themes**

<table>
<thead>
<tr>
<th>Category</th>
<th>Classroom A Mean Score and Benchmark</th>
<th>Classroom B Mean Score and Benchmark</th>
<th>Classroom C Mean Score and Benchmark</th>
<th>K Grade Level Mean Score and Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNF</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
</tr>
<tr>
<td>PSF</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
</tr>
<tr>
<td>NWF</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
<td>Score: Benchmark:</td>
</tr>
</tbody>
</table>

Themes:

### Table 10

**Kindergarten Grade-Level STAR Early Literacy Sub-domain Score Distribution by Percentile Rank with Themes**

<table>
<thead>
<tr>
<th>Sub-Domain</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NN=</td>
<td>%</td>
<td>NN=</td>
<td>%</td>
</tr>
<tr>
<td>Alphabetic Principle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept of Word</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonemic Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentence-Level Comprehension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paragraph Level Comprehension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Themes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix G

FOCUS GROUP PROTOCOL

**Purpose:** The purpose of this focus group is to gather additional evidence as well as to substantiate evidence that has already been collected. Trends from the analysis of student data and themes generated during individual interviews will be presented.

**Date:** ____________________________________________________________

**Location:** __________________________________________________________

**Participants:** _______________________________________________________

**Duration:** 60 Minutes

The researcher will remind the participants of the intention to audio record the focus group discussion to allow for repeated access to the data, and assure the participants that the audio-recording will be destroyed once the data has been transcribed.

The following questions will be used to guide the focus group discussion. They were developed to expand upon the information collected during individual interviews.

8. How is collaboration and continued momentum for RtI implementation ensured among the kindergarten instructional staff? Describe the collaboration process used among RtI team members.

9. How confident are you in using the RTI benchmark or progress monitoring assessments to identify the needs of kindergarten readers? How confident are you in using Tier 2 or Tier 3 programs or strategies to meet the needs of different learners?

10. What are the benefits of the current assessment, decision making, and instructional components of RtI applied within the school? What are the challenges in using the current assessment, decision making, and instructional components of RtI applied within in the school?

11. What do the themes that emerged from an analysis of DIBELS and STAR Early Literacy student assessment data tell you about the reading achievement of kindergarten students under the current RtI framework? How can you use these findings to guide future instructional decisions in reading?

12. How can the information presented to you on the implementation of the RtI model in this
13. What practices would you, as intervention team members, identify as most useful in the RtI process in reading to better serve the needs of kindergarten readers?

14. Based upon the evidence presented, do you think the current RtI model in reading is working efficiently? Why, or why not?
Appendix H

Information for Focus Group Participants

Overall Knowledge of RtI Model

- Effectiveness of Tiered Instruction on Reading Achievement
- Staff Roles in Tiered Instruction Process
- Instructional Practices
- Assessment and Evaluation
- Professional Development and Training
- Students’ Developmental and Learning Levels (ZPD’s)
- Student Groupings
- Student Support
- Intervention Strategies
- Effectiveness of Tiered Instruction on Reading Achievement
- Challenges with RtI Reading Model
- Necessary Supports for Effective Implementation

Emergent Themes from Student Assessment Data

DIBELS:

- Alphabetic Principle
- Phonemic Awareness
- Phonetic Analysis
- Fluency
- Vocabulary Knowledge
• Word Comprehension

• Student Achievement in Early Literacy Skills

**STAR:**

• Letter Identification

• Alphabetic Sequencing

• Sound-Symbol Correspondence

• Concepts of Print

• Phonological Skills

• Vocabulary Use

• Reading Comprehension

• Student Achievement in Early Literacy Skills
## Appendix I

### Interview Questions with Themes and Codes

<table>
<thead>
<tr>
<th>INTERVIEW QUESTIONS</th>
<th>THEMES</th>
<th>CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What does the RtI kindergarten reading model provide for the teachers and students at this school?</td>
<td>Overall Understanding of RtI</td>
<td>TEACH-UND</td>
</tr>
<tr>
<td>How is the RtI process used by teachers to improve reading outcomes for groups of kindergarten students? For individual kindergarten students?</td>
<td>Benefits of the RtI Model; Effectiveness of RtI on Reading Achievement among Full Day Kindergarten Students</td>
<td>TEACH-MKO</td>
</tr>
<tr>
<td>How do you feel about the structure and effectiveness of the RtI tiers?</td>
<td>Overall Understanding of RtI; Student Placement within Tiers</td>
<td>STUD-SUP</td>
</tr>
<tr>
<td>How are instructional methods and interventions selected? Describe how you scaffold instruction and provide differentiated learning experiences for individual students.</td>
<td>Instructional Strategies; Delivery of Instruction; Interventions</td>
<td>STUD-DI STU-D-SCAF STU-D-INT</td>
</tr>
<tr>
<td>Describe the training that has been provided to you for implementation of the RtI model? Are there enough staff members/materials in place to implement the model effectively? In what specific areas of implementation would you like to have support?</td>
<td>Professional Development; Barriers to an Effective RtI Program; Suggestions for Improvement</td>
<td>TEACH-SUP</td>
</tr>
<tr>
<td>How is assessment data used to drive instructional practices for groups of students? For individual students?</td>
<td>Assessment Practices; Evaluation of Student Progress; Instructional Groupings</td>
<td>STUD-ZPD TEACH-INST-GR</td>
</tr>
<tr>
<td>Describe how you access the data necessary to determine the percent of students in core instruction who are achieving benchmarks (grade-level standards) in reading.</td>
<td>Evaluation of Student Progress; Student Placement within Tiers; Instructional Groupings</td>
<td>STUD-T1</td>
</tr>
<tr>
<td>How do you use data to make decisions about Tier 2 placement for individuals and/or groups of students? How do you use data to make decisions about Tier 3 placement for individuals and/or groups of students?</td>
<td>Student Placement within Tiers; Instructional Groupings; Assessment Practices; Evaluation of Student Progress</td>
<td>STUD-T2 STUD-T3</td>
</tr>
<tr>
<td>Describe how students’ responsiveness to interventions is monitored. What measures are used for progress monitoring? How are they used? Do you think that these assessments are</td>
<td>Assessment Practices; Evaluation of Student Progress</td>
<td>STUD-EVAL</td>
</tr>
<tr>
<td>appropriate? Why or why not?</td>
<td>Effectiveness of RtI on Reading Achievement among Full Day Kindergarten Students</td>
<td>STUD-ACH-PA STUD-ACH-PH STUD-ACH-COM</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Describe the effect you believe the RtI model at your school has had on kindergarten students’ achievement in reading, specifically letter recognition, phonetic analysis, phonics and comprehension.</td>
<td>Barriers to an Effective RtI Program; Suggestions for Improvement; Collaboration</td>
<td>CH-STA CH-RES CH-TIME TEACH-SUGG</td>
</tr>
<tr>
<td>What are the challenges facing the implementation of RtI in reading within your school? What difficulties do you foresee when implementing RtI in reading in the future? How do you think the current RtI model in reading can be improved upon?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Appendix J**

Focus Group Questions with Themes and Codes

<table>
<thead>
<tr>
<th><strong>FOCUS GROUP QUESTIONS</strong></th>
<th><strong>THEMES</strong></th>
<th><strong>CODES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>How is collaboration and continued momentum for RtI implementation ensured among the kindergarten instructional staff? Describe the communication process used among RtI team members.</td>
<td>Collaboration; Communication; Overall Understanding of RtI Process</td>
<td>TEACH-PER-COM TEACH-PER-COLL</td>
</tr>
<tr>
<td>How confident are you in using the RTI benchmark or progress monitoring assessments to identify the needs of kindergarten readers? How confident are you in using Tier 2 or Tier 3 programs or strategies to meet the needs of different learners?</td>
<td>Assessment Practices; Evaluation of Student Progress; Instructional Groupings; Student Placement within Tiers; Delivery of Instruction; Interventions</td>
<td>TEACH-PER-EVAL STUD – EVAL-T1 STUD – EVAL-T2 STUD – EVAL-T3</td>
</tr>
<tr>
<td>What are the benefits (assessment, decision making, and instructional components) of the current RtI model within the school? What are the challenges (assessment, decision making, and instructional components) of the current RtI model within in the school?</td>
<td>Benefits of the RTI Model; Challenges of RtI Model; Barriers to an Effective RtI Model; Assessment Practices; Instructional Delivery</td>
<td>TEACH-PER-BEN TEACH-PER-CHAL</td>
</tr>
<tr>
<td>What do the themes that emerged from an analysis of DIBELS and STAR Early Literacy student assessment data tell you about the reading achievement of kindergarten students under the current RtI framework? How can you use these findings to guide future instructional decisions in reading?</td>
<td>Effectiveness of RtI on Reading Achievement among Full Day Kindergarten Students; Assessment Practices; Evaluation of Student Progress; Instructional Practices</td>
<td>STUD-EVAL STUD-ACH TEACH-PER-INST</td>
</tr>
<tr>
<td>How can the information presented to you on the implementation of the RtI model in this school be used to improve practices?</td>
<td>Suggestions for Improvement; Instructional Practices; Instructional Delivery</td>
<td>TEACH-SUGG</td>
</tr>
<tr>
<td>What practices would you, as intervention team members, identify as most useful in the RtI process in reading to better serve the needs of kindergarten readers?</td>
<td>Assessment Practices; Instructional Strategies; Delivery of Instruction; Interventions</td>
<td>TEACH-PER-INST</td>
</tr>
<tr>
<td>Based upon the evidence presented, do you think the current RtI model in reading is working efficiently? Why, or why not?</td>
<td>Effectiveness of RtI on Reading Achievement among Full Day Kindergarten Students; Successes of Current Model;</td>
<td>TEACH-PER-EFF TEACH-PER-BEN TEACH-PER-CHAL</td>
</tr>
<tr>
<td>Challenges of Current Model; Barriers to an Effective RTI Program; Suggestions for Improvement</td>
<td>TEACH-SUGG</td>
<td></td>
</tr>
</tbody>
</table>