HOW EDUCATORS PERCEIVE THE PROCESS AND IMPLEMENTATION OF A MULTI-TIERED SYSTEM OF SUPPORTS (MTSS): A CASE STUDY

A thesis presented
by
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to
The School of Education

In partial fulfillment of the requirements for the degree of
Doctor of Education

in the field of
Education

College of Professional Studies
Northeastern University
Boston, Massachusetts
August 2017
Abstract

In this qualitative case study the researcher examined educators’ perceptions of an RTI/MTSS model of instruction and how staff perceptions relate to fidelity of implementation. The purpose of this research was to investigate educators’ understanding of the critical components necessary to support implementation of RTI/MTSS framework. The overarching research question guiding this study was: How do grade two team members, support staff and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model? Sub-questions illuminated factors that facilitated or hindered the implementation process of an RTI/MTSS model. Data was gathered from student assessments, individual interviews, self-report surveys and a focus group discussion. Participants in this study include three grade two teachers, a special educator, a psychologist, a literacy coach and the building administrator. Vygotsky’s sociocultural theory, which focuses on socially mediated activities to support learning and development, provided a lens through which to examine the circumstances of the study and inform the findings. Study findings revealed educators understood and embraced RTI/MTSS as a general education initiative that allowed educators to personalize instruction and reduce the number of special education referrals. Results indicated that multiple tiers, assessment, data informed decision making, collaboration, and shared accountability contribute to successful implementation of the RTI/MTSS model. Lack of resources, inadequate planning time, unscheduled additional tiers of instruction, and insufficient trainings challenge implementation. These findings have implications for educational practice and will inform key district stakeholders with the information and data necessary to sustain the RTI/MTSS framework.

Keywords: multi-tier system of supports (MTSS), response to intervention (RTI), assessment, data- informed decisions, multidisciplinary team, fidelity of implementation, staff perceptions
Acknowledgements

The completion of this dissertation would not have been possible without the love and support I received from family and friends. To my son Joey and his wife Jocelyn, my son Frank and wife Meghan and my grandchildren, Dana, Sophia, Frankie and Anna, many thanks for your endless love and words of encouragement, which provided me with the stamina and determination I needed to complete this huge undertaking. I am especially grateful to my parents who valued the importance of education and inspired me to follow my dreams. They were extraordinary role models in every facet of life and I will be forever indebted to them for the commitment, guidance and sacrifices they made throughout my upbringing.

I do not have words to adequately describe the heartfelt appreciation I have for my husband Joe. Although there was many a day that I questioned my work and felt reservations about whether I had the endurance to complete this monumental task, there was never a doubt in Joe’s mind that I could persist and complete this honorary degree. I would like to dedicate this dissertation in his memory. I would also like to express deep gratitude to my close friend Nancy Lally. She’s become the sister I’ve never had. We’ve enjoyed each other’s company as colleagues, completing doctoral courses, researching on campus and buying books and commemorative items at the Northeastern book store. We started and have completed this incredulous journey together and I am deeply grateful for your friendship.

Finally, I’d like to recognize and thank my dissertation chair, Dr. Margaret Dougherty. I am particularly grateful for her insightful feedback and the numerous hours she has spent guiding me through this process. I would also like to extend my appreciation to Dr. Chris Unger, the second reader, for his professional insights and constructive suggestions. I’d like to offer a special thank you to Dr. Stacey Kaminsky, my outside reader, for her many suggestions and words of encouragement. Guidance from all of you has culminated in this dissertation.
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Chapter I: Introduction

Introduction

On December 10, 2015, President Obama signed into law the Every Student Succeeds Act (ESSA) establishing yet another layer of student achievement accountability for the nation’s public schools. Under this new federal legislation (PL-114-95, 2015), individual states are given much more flexibility in selecting the measures that will determine student achievement. However, ESSA (2015) places states on a new course of accountability that will determine each state’s federal funding. As a secondary mandate to this law, states are reminded that all previously granted NCLB waivers will expire on August 1, 2016, and the full implementation of ESSA (2015) will take place beginning in the 2017–18 school years, leaving little time for states to design the effective structures to improve teaching and learning.

While the intent of ESSA (2015) preserves the spirit of NCLB with its emphasis on inclusive practices for exceptional students to the greatest extent possible, it advances options for states to reconstruct what has been widely perceived as a one size fits all approach for the design of student learning and assessment experiences (Konte, 2015). The ESSA (2015), like its predecessor NCLB (2001) and similar to IDEA (2004), stress the importance of “providing high quality scientifically-based instruction, evidence based interventions, and the importance of educators using the data from continuous progress monitoring to inform and adjust their instruction” (Fuchs, Mock, Morgan & Young, 2003 p.159). In response to the former mandates many states have adopted a structured data driven approach known as Response to Intervention (RTI) or Multi-tier System of Supports (MTSS) as the preferred evidence based framework to improve learning for all students.

Further, some states, such as Massachusetts, have integrated the use of RTI/MTSS, into the newly adopted educator evaluation system. However, adoption alone of a multi-tiered
system of support is not sufficient to provide assurance that an effective, strategically designed intervention program has been successfully implemented (Gibbs, 2011). To determine effective implementation of RTI/MTSS, school administrators will need a measurement protocol that will inform the level of implementation fidelity that allows for the continued support of student learning.

**Statement of the Problem**

The purpose of fidelity measures are to ensure that the school implementation process of RTI/MTSS and the various tiers of classroom instruction are implemented and delivered as intended. According to Mellard & Johnson (2008), “Consistent and detailed measures of fidelity of implementation support the efficacy of an RTI/MTSS model” (p.117). Failure to implement interventions with consistency and as designed has been shown to be related to students’ academic outcomes (Greenwood, Terry, Arreaga-Mayer & Finney, 1992; Grow, Carr, Gunby, Charania, Gonsalves & Ktaech, 2009; DeFazio, Fain, & Duchaine, 2011). Consequently, “Without fidelity to the process of implementation, it is impossible to determine the cause of poor performance, which jeopardizes the effectiveness of the RTI/MTSS process” (Mellard & Johnson, 2008 p.117).

The terminology RTI and MTSS are used interchangeably to define a “school wide, problem solving and data driven process in which students are frequently assessed and provided instruction along a continuum of tiered supports” (Castro-Villarreal, Rodriguez & Moore, 2014 p. 104). RTI/MTSS intervention structures commonly consist of three tiers of increasing instructional support that are designed to meet the diverse needs of all students. All tiers include evidence-based instruction delivered with high fidelity, dynamic systematic screening and
monitoring to identify students who need additional assistance (Castro-Villarreal, Rodriguez & Moore, 2014 p. 104).

The fidelity of implementation or “the degree to which schools do what they say they are doing and do it as it is intended to be done,” of all aspects of the RTI/MTSS framework, will largely impact student outcomes (Gibbs, 2011, p. 9). Treatment fidelity, the extent to which an intervention is delivered with adherence to its design feature, has been identified as a critical element of RTI/MTSS programs (Zirkel & Thomas, 2010). Throughout the literature, treatment fidelity and treatment integrity are often used interchangeably. However, for this study, fidelity treatment or fidelity of implementation was used.

**Justification**

Schools’ increased adherence to data-based decision making, changes in legal requirements, and the advent of accountability mandates have “shined a light” on practitioners’ long term failure to assess fidelity of instruction (Gibbs, 2011, p. IX). Sanetti and Kratochwill, (2009) state, “The rapid and widespread deployment of RTI/MTSS…has made urgent the need for researchers and practitioners to attend to treatment fidelity” (p. 452). Fidelity of implementation is an important predictor of student outcomes (Kratochwill, Volpiansky, Clements, & Ball, 2007) and yet minimal attention has been dedicated to treatment fidelity (Gresham, Gansle, &Noell, 1993; Gresham, MacMillan, Beebe-Frankenberger, & Bocian, 2000; McIntyre, Gresham, DiGennaro, & Reed, 2007). As a result, it is important to continue to examine the fidelity aspect of RTI/MTSS. Leaders in the field of fidelity research have warned, left unaddressed, this issue could be the “greatest challenge to successful RTI/MTSS implementation,” the factor that “could most likely lead to its downfall,” and “the Achilles heel of RTI/MTSS (Burns, 2007, p.38). This researcher has investigated procedures for developing
infrastructures that increase the likelihood that teacher instruction and interventions are delivered to students as intended and include methods for monitoring progress and measuring learning outcomes.

Since teachers have an integral role in the implementation of RTI/MTSS, “it is important to examine teachers’ attitudes, beliefs, perceptions and challenges with regard to RTI/MTSS so that districts can identify the actions and supports necessary for successful implementation and sustainability of an effective RTI/MTSS model” (Castro-Villarreal, Rodriguez & Moore, 2014, p. 105). Teachers’ perceptions, attitudes and understanding about RTI/MTSS structures and implementation are critical in order to address buy-in and fidelity of implementation. Therefore, this researcher also examined the perceptions of school based practitioners and how they relate to the fidelity of implementation of an RTI/MTSS model of instruction.

**Deficiencies in the Evidence**

Although RTI/MTSS implementation involves all district stakeholders, teachers are primarily responsible for instructing students at tier 1 and tier 2 (Stuart, Rinaldi & Higgins-Averill, 2011). Despite teachers’ vital role in the RTI/MTSS process, their perceptions and understanding have been largely neglected (Reynolds & Shaywitz, 2009; Werts et al, 2009).

According to Gonsalves (2014) it is critical to identify educators’ perceptions about the challenges of RTI/MTSS implementation and to ensure there is building level educator coherence about the purpose, goals, procedures and processes of an RTI/MTSS model. Otherwise implementation efficacy and consistency may be challenged. Fidelity data, however, is equally important in order to corroborate or understand the context influencing teachers’ beliefs (Castro-Villarreal, Rodriguez & Moore, 2014, p. 110). Teacher perceptions and concerns
in districts where there is a high measure of fidelity implementation will likely differ from staff perceptions in districts where there is a low measure of fidelity.

Castro-Villarreal, Rodriguez & Moore (2014) state, “The scarcity of qualitative research indicates the need for qualitative descriptive studies allowing for analysis of teachers’ unbounded, open-ended expressions and voices regarding RTI/MTSS” (p. 106). Therefore, this qualitative case study provides rich, descriptive details about how school based educators in one Massachusetts school district perceive the structures, processes and fidelity of implementation of an RTI/MTSS model. This information can be used to identify issues that may facilitate or challenge successful implementation of RTI/MTSS and to help inform the professional development needs of educators in this district and other districts tasked with implementing RTI.

**Relating the Discussion to Audiences**

The audiences who will benefit from the findings of this descriptive case study include, central office administrators, the curriculum director, building administrators, literacy coaches, psychologists, title I interventionists, general education teachers, special education teachers, related service providers and paraprofessionals.

This study has contributed to the existing body of knowledge about educators’ perceptions concerning the critical components, barriers and implementation with fidelity of an RTI/MTSS model. Fidelity of implementation is the delivery of instruction in the way in which it was designed to be delivered (Gresham, MacMillan, Beebe-Frankenberger, & Bocian, 2000). Teacher opinions and perceptions are a source of data that facilitate successful implementation of initiatives (Darling-Hammond, 1997; D. Fuchs, Fuchs, Compton, 2012; Jenkins, Schiller, Blackorby, Thayer & Tilly, 2013).
Analysis of the data sets collected during this qualitative case study allowed this researcher to assist district administrators with identifying both strengths and challenges among educators as they implement and sustain a RTI/MTSS model of instruction. The purpose of this study was to examine school based personnel’s knowledge and perceptions of the critical components and barriers concerning the implementation of a problem solving (PS) model of RTI/MTSS and the extent this RTI/MTSS model is implemented with fidelity.

**Significance of the Problem**

RTI/MTSS is a “schoolwide multi-tier framework that integrates instruction, intervention, and assessment” (Johnson & Smith, 2008, p.46). While researchers and practitioners believe RTI/MTSS has the potential to improve learning for a greater number of students (Burns & Gibbons, 2012; Henderson-Black, 2009; Johnson & Smith, 2008), applying the components of the model with fidelity is considered essential to its success (Gibbs, 2011; Hardcastle & Justice, 2010; Keller-Margulis, 2012).

It is extremely important to acknowledge the perceptions of educators involved in the actual implementation of an RTI/MTSS model. Schools need information and data in order to provide effective supports, resources, training or feedback on how a program is functioning. The ultimate goal of any systems-reform in schools should be to improve student outcomes but the next step to consider is how to support implementers with the practices related to RTI/MTSS (Castro-Villarreal, Rodriguez & Moore, 2014, p.111).

Fidelity within an RTI/MTSS framework is critical. Districts must create systems for measuring fidelity and to ensure instruction and interventions are provided as intended. Regular and consistent monitoring of implementation fidelity can provide the data required to improve implementation and student performance (Keller-Margulis, 2012).
Positionality Statement

This researcher is part of the district level leadership team who is a change agent in the site of study. Consequently, a limitation of this case study included the potential bias of the researcher in the collection and analysis of the data. Since researchers conducting qualitative research collect data that are subject to data interpretation that is shaped by their own individual experiences, backgrounds, and understandings, it was important to put into place those preventative measures that would eliminate or significantly limit any probability of author bias in research studies (Creswell, 2007).

To avoid bias this researcher ensured that respondents’ information was not used solely to confirm the researcher’s beliefs, experiences and understandings but rather as a validated collection of data. All data whether supportive or contrary to that of the researcher was included and analyzed. Precautions were taken to avoid anything that may have threatened data accuracy or reliability. Challenging one’s assumptions, by considering evidence that is contrary to what one already thinks, is a beneficial research approach that will help to reduce bias within a study (Yin, 2009).

This inquiry provided the examiner with a more intense description of the data as well as an opportunity for close examination of a single district’s behaviors and ideas around RTI/MTSS (Merriam, 2009). Findings and conclusions from this qualitative case study may be transferrable and applicable to similar districts that are considering or in the process of implementing RTI/MTSS.

Research Questions

The overarching research question that served to guide this study is:
1. How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?

The following sub-questions helped to illuminate any patterns in the data and provide the researcher with an expanded understanding of the data collection:

   a) What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?

   b) What barriers hinder the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?

   c) What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by the grade two team members, support staff and the building administrator?

Lev Vygotsky’s socio-cultural theory of cognitive development (1934/1978) is an appropriate lens through which the research questions were reflected upon. RTI/MTSS is a rendition of the Zone of Proximal Development (ZPD) in which the school practitioner or the More Knowledgeable Other (MKO) uses assessment to determine a student’s readiness level. The school practitioner or MKO then uses this information to inform and refine instruction. This enables the teacher to meet the learners where they are by scaffolding instruction and bringing the student through the zones of learning. As the learner becomes more independent, the scaffolding provided by the more knowledgeable other is progressively withdrawn (Tharp & Gallimore, 1988).
Theoretical Framework

The theoretical framework that guided this research is found in the concepts of Lev Semyonovich Vygotsky’s socio-cultural theory of cognitive development (1934/1978). This theory and the following Vygotskian tenets, the more knowledgeable other (MKO), the zone of proximal development (ZPD) and dynamic assessment (DA) provided an analytical lens to investigate the implementation process of an RTI/MTSS model within a school setting and the perceptions school based practitioners have about practices that facilitate or challenge the implementation of an RTI/MTSS model.

Vygotsky’s socio-cultural theory (1934/1978) has significantly impacted the field of education. Bruner, (1962) wrote, “Vygotsky’s conception of development is at the same time a theory of education” (p. v). Vygotsky’s socio-cultural theory (1934/1978) provides a framework for understanding the process of teaching and learning in school settings. According to Vygotsky (1934/1978) cognitive development is always socially mediated; it is influenced by present and past social interactions (Karpov, 2005 as cited by Bodrova & Leong 2007, p. 9). In other words, social learning tends to precede cognitive development. Educators directly influence student learning through shared activities.

Since most learning takes place with others present, educators have become aware of the importance of having their students develop and practice social skills during shared activities. Accordingly, teachers have adopted Vygotsky’s notion of the sociocultural theory by providing students with opportunities to interact with peers in small flexible groupings, cooperative learning structures and by utilizing peer tutoring in their classrooms. As Vygotsky explained, “learning awakens a variety of internal developmental processes that are able to operate only
when the child is interacting with people in his environment and in cooperation with his peers” (1934/1978, p. 90).

Vygotsky’s socio-cultural theory (1934/1978) refers to the more knowledgeable other (MKO) as anyone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept. The MKO is typically thought of as a teacher, coach, older adult, or peer whose role is to scaffold the learning of a new task (Bedrova & Leong 2007). By separating a task into small manageable parts, the MKO can build on the child’s prior knowledge and “build bridges” (Rogoff, 1990, p. 8) between the child’s present abilities and new skills. As a result, the MKO is able to move the child to a higher level of cognitive functioning.

An important aspect of scaffolded instruction is that the scaffolds are temporary and the instructional activity or task is not changed. Gradually, the level of assistance decreases “as the learner takes more responsibility for performance of the task” (Wood, Bruner, & Ross, 1976 as cited by Bedrova & Leong 2007, p. 47). According to Vygotsky, students develop higher-level thinking skills when scaffolding occurs with an adult expert or with a peer of higher capabilities (Stone, 1998). “What the child is able to do in collaboration today, he will be able to do independently tomorrow” (Vygotsky, 1934/1987, p.211). “By gradually assuming responsibility for one’s learning students become competent, independent learners” (Graves & Fitzgerald, 2003, p. 98).

In a similar manner, RTI/MTSS is based on the premise that supports are provided early by the teacher (MKO). Effective instruction often follows a progression in which the teacher “gradually does less of the work and students assume increased responsibility for their learning” (Graves & Fitzgerald, 2003, p.98). Progress monitoring is used to systematically evaluate the child’s response to the MKO’s instructional practices. The MKO then uses this data to adjust the
intensity of his or her instruction so that it is matched to each student’s level of the distance between need. As the student progresses toward mastering targeted skills, interventions and supports are gradually phased out.

Vygotsky’s socio-cultural theory (1934/1978) also suggests that “instruction should be geared to the ZPD development which is what children can do by themselves and the next learning that they can be helped to achieve with competent assistance” (Raymond, 2000, p.176). The ZPD is a way of conceptualizing the relationship between learning and development. According to Vygotsky, (1934/translated, 1987) learning occurs only in the Zone of Proximal (potential) Development. It is uniquely individual and based on one’s learning needs and potential. Vygotsky (1934/1978) chose the word zone because he conceived development as “a continuum of behaviors or degrees of maturation rather than a point on a scale” (Bedrova & Leong 2007 p. 40). This means that students learn best when students start from what is already known and are assisted with scaffolding to work to the unknown. A more competent person collaborates with a child to help him move from where he is to where he can be with help. A teacher who understands how to provide guidance within a child’s ZPD can structure responses to instruction and student feedback in a way that leads the child to new understandings.

“The ZPD is not static but shifts as the child attains a higher level of thinking and knowledge” (Bedrova & Leong 2007, p. 41). Likewise, an RTI/MTSS model offers multiple tiers of instruction with each tier increasing in frequency and intensity of instruction. Teachers or MKOs use data to anticipate their students’ high priority instructional needs. When the educator or MKO is knowledgeable about the individual learning needs of students, the MKO can provide scaffolding to support and assist students with new learning experiences.
RTI/MTSS tiers are fluid which allows students to shift from one level to another as their needs dictate.

RTI/MTSS has far reaching implications for teaching and for classroom organization. It is a framework designed to guide teachers’ problem solving. During this problem-solving process, the teacher implements evidence-based interventions tailored to the individual needs of the child. While interacting with the student the teacher continuously observes and documents how the student thinks and the strategies the student uses to solve problems and construct meaning. From this analysis, the teacher decides on the frequency, the intensity and the type of support to provide. Although effective instruction is essential to successful implementation of RTI/MTSS, assessment data should inform decision making and instructional change (Stecker, Fuchs & Fuchs, 2008).

The final tenet explored in this study, Dynamic Assessment (DA) is an assessment based on Vygotsky’s ZPD. According to Bedrova & Leong, (2007) assessments that “move away from static measures to dynamic measures reveal something about how a child learns” (p. 195). The ZPD guides DA which measures both the child’s current level of performance as well as the child’s potential to achieve higher skill levels.

The sociocultural theory defines the development of children by the skills that emerge due to the support and assistance that are given to a child by the MKO. Instruction and assessment occur simultaneously in DA in that an MKO promotes development by offering assistance to a student while concurrently assessing the student’s abilities (Lantolf & Poehner, 2004, p. 305). Interactions between the child and the assessor can also be a valuable source of information about a child’s individual performance. The MKO can make notations about the child’s reactions to certain prompts and cues and how the child responds to specific supports and
interventions. The focus of DA is to identify a type of support that works for a child during a particular time of need.

In a like manner, data collected during RTI/MTSS progress monitoring enables teachers to align instruction to meet the individual needs of all students and allows movement from their actual levels to potential levels of development. Most of RTI/MTSS assessment is conducted using progress monitoring. “Progress monitoring is a form of dynamic assessment (DA) because its metric is change in students’ level or rate of learning” (Fuchs & Fuchs 2006, p.93). Progress monitoring is also considered to be formative assessments because teachers use this data to decide whether they need to change the curriculum or materials they are using with students or change their instructional procedures.

The data can also be used diagnostically to make program decisions about moving a student from one tier to another. Data collected during RTI/MTSS may enable teachers to more effectively respond to the wide range of student abilities they encounter. Ideally, tiered learning tasks engage students slightly beyond what they find easy or comfortable in order to provide genuine challenge and to promote their continued learning (Vygotsky, 1934/ 1986).

Differentiated instruction is a means to accommodate the individual needs of students in the context of RTI/MTSS. Accordingly, the concept of the ZPD is critical to helping teachers target their instruction and ensure that all students are progressing at an appropriate pace. Prevention and more effective teaching in the context of regular education are key concepts associated with RTI/MTSS. Data collected during tiered instruction allows teachers to adjust the frequency and intensity of interventions and to differentiate instruction in order to meet the individual needs of all students in their classrooms.
Vygotsky’s sociocultural theory of cognitive development (1934/1978) was an appropriate lens to guide this study. The researcher’s inquiry into the literature was guided by Vygotsky’s concepts of the MKO, ZPD and DA as well as the critical components educators must understand about RTI/MTSS in order to successfully implement this model of instruction.
Chapter II: Literature Review

Introduction

NCLB (2001), IDEA (2004) and ESSA (2014) state that schools, when possible, should make certain that every student has the same opportunity to participate in high quality curriculum in the general education environment with appropriate supports and services. As a result, classrooms are comprised of students with disabilities, students from diverse cultural and socioeconomic backgrounds, and English Language Learners who are learning to speak English. Consequently, classroom teachers are instructing groups of students who are more diverse than ever before. RTI/MTSS is an innovative framework that enables educators to instruct students having a wide range of abilities and areas of needs by using evidence based curriculum and interventions that are systematically matched to students’ individual learning needs.

Due to federal mandates requiring the use of evidence-based programs and interventions, there’s been a significant amount of time and funding assigned to the research of identifying, developing and measuring the effectiveness of evidence based interventions. The results of these investigations suggest that RTI/MTSS school-based intervention structures are effective in remediating students’ learning gaps. However, “the science related to implementing these programs with fidelity and good outcomes for consumers lags far behind” (Fixen, Naoom, Blasé, Friedman, & Wallace, 2005 p. VI). In other words, educators expect to see improved outcomes after implementing evidence based intervention. However, educators may not get the results they anticipated if they have not properly implemented the practice or program.

The following bodies of literature have informed this study: a.) An overview of RTI/MTSS, the conceptualizations of RTI/MTSS, a guaranteed and viable curriculum, the five essential components of the RTI/MTSS process and the elements requiring fidelity measures (multi-tiered, student assessment and decision making, evidence-based interventions, fidelity of
implementation and system level capacity) and b.) The Perceptions construed by School-based practitioners regarding the practices that facilitate or challenge RTI/MTSS implementation. A review of the literature on RTI/MTSS has allowed this researcher to identify the critical components necessary for the implementation of an RTI/MTSS model. The researcher has used this information to develop a tool to measure the fidelity of implementation of an RTI/MTSS model of instruction for this case study (Reschly, 2014; Jenkins, Schiller, Blackorby, Thayer & Tilly 2013; Fixen, Blase, Metz & Van Dyke 2013; Fuchs, Fuchs & Compton 2012; Mellard, Prewett, & Deshler 2012; Donelson & Donelson 2010; Bender & Shore 2007; Glover & DiPerna 2007.

Additionally, this researcher has investigated the literature that focused on educator perceptions of practices that facilitate or hinder the implementation of RTI/MTSS. This understanding will provide the district with the knowledge necessary to identify strengths or challenges of RTI/MTSS implementation and refine the model to improve student learning and outcomes accordingly (Catro-Villarreal, Rodrequez& Moore, 2014; Regan, Berkley, Hughes & Brady, 2015; Castillo, Basche, Curtis, Stockslager, March & Minch, 2010; Reynolds & Shaywitz, 2009. To help frame this investigation, the researcher has applied the MKO, ZPD and DA tenets outlined in Vygotsky’s (1934/1978) socio-cultural theory to examine the literature and guide this research project.

**Background**

Fidelity of implementation is defined as the implementation of a practice or program as intended by the researchers or developers (IRIS, 2006; Bradshaw, Reinke, Brown, Bevans, & Leaf, 2008; Burns, Appleton, & Stehouwer, 2005; Gresham, MacMillan, Beebe-Frankenberger, & Bocian, 2000). Fidelity of implementation requires teachers to execute the strategic
interventions in a consistent manner the way the developers designed the program to be carried out. According to Levin, Catlin, & Elson (2005), “How a given reform is implemented, determines its probability of success or failure” (p.22). This finding was echoed by Berman and McLaughlin (1976) in the statement, “The bridge between a promising idea and the impact on students is implementation, but innovations are seldom implemented as intended” (p. 349).

Fidelity of implementation is also weakened when instructors deviate from the planned program. This type of teacher behavior may unknowingly exclude certain critical program components or curriculum. Fidelity implementation can also be altered by shortening the program sessions or classes, changing the mode of program delivery, or adding extraneous information or activities that do not align with the learning concepts (Ball & Christ, 2012).

In order for teachers to implement evidence-based practices or programs with fidelity they must understand how to implement it as it was designed by the developer. Training and ongoing support enables staff to become more knowledgeable about accurately implementing an evidence- based practice or program. Educators, however, can also improve their fidelity of implementation by seeking out the support of a colleague or MKO. Assistance from an MKO that has experience and understanding in a specific evidence- based practice can significantly improve fidelity of implementation (IRIS, 2006).

Since the instructional practices of teachers impact the performance outcomes of their students (Marzano, 2003), teachers must be prepared to work collaboratively and utilize evidence based teaching practices which both challenge and motivate all their students. A phrase that this researcher and her coworkers have heard repeatedly in workshops and trainings is, “What gets measured or monitored gets done” (Hardcastle & Justice, 2010, p.31). The use of fidelity
measures will serve as reminders for staff to follow protocols, to reflect on their instructional practices and to understand how these practices impact student outcomes.

**Overview of RTI/MTSS**

RTI/MTSS is a preventative framework that can be used to support the learning of students in any academic area. It appears, however, to be used most often in the content areas of reading and math. Investigations suggest that students who struggle with reading in the early grades may also eventually struggle with all academic areas (IRIS. 2006). This may occur because the curriculum in upper grades relies more heavily on independent reading skills.

Many educators view RTI and MTSS as one in the same because they share several foundational philosophies. Both RTI and MTSS are preventative models that offer tiered levels of support with increasingly aggressive interventions. Another critical component of both RTI/MTSS is continuous progress monitoring which is used to inform data driven, evidence based instruction. Finally, an integrated, collaborative approach between general and special educators is a requirement of each of these frameworks. Due to RTI/MTSS similarities in definition, theory and practice both terms have been frequently used interchangeably.

Although RTI and MTSS espouse common traits, there are some distinguishing differences. RTI is used most often in the context of SLD identification. On the other hand, MTSS tends to be a more comprehensive model which reaches beyond typical RTI implementations (On Hand Schools, 2015). In addition, RTI primarily focuses on increasing the frequency and intensity of evidence-based instruction that targets the individual needs of students at risk for academic failure while MTSS supports all students with strategic interventions in the areas of academics, behavior and social emotional concerns. Another difference is that RTI addresses student level problems, while MTSS addresses student level and system level concerns. Despite RTI and MTSS similarities and differences, Reschly (2014) suggests, “the
term *response to intervention (RTI)* appears to be evolving into the term *multitier system of supports (MTSS)*” (p.40).

**Guaranteed and Viable Curriculum**

Curriculum is a detailed set of instructional plans that have been coherently designed and sequenced by a curriculum designer. Curriculum identifies the work of educators by defining the content to be taught, the methodology teachers should use and the assessments that staff should use to measure student learning (English, 2006 as cited by TESCCC, 2008). A curriculum or program that has been observed to be effective in one setting can be ineffective in another setting if the way it is being implemented is different than its original design. The term used to describe this concept is fidelity of implementation (FOI)—“the delivery of instruction in the way in which it was designed to be delivered” (North Dakota Department of Public instruction as cited by Nancy Prothero, 2008, p.38).

“Written curriculum, implemented or taught curriculum and attained or learned curriculum are three inter-related types of curriculum that must overlap without slack, if students are to successfully demonstrate mastery of curriculum” (English, 2006, p.13). The meaning of slack is comparable to the term drift, which is terminology used to define the “unplanned, gradual altering of the implementation of an intervention” (Peterson, Homer & Wonderlich, 1982 as cited by Hardcastle & Justice, 2010, p. 15), which occurs when teachers do not follow the steps of an intervention.

School district administrators must monitor and make certain that curriculum is implemented consistently and with fidelity by all staff members and that the curriculum students learn aligns with the required standards. Marzano’s (2003) coined phrase “guaranteed and viable” suggests the importance of fidelity of curriculum implementation (p. 11). District
administrators must also provide all students with the opportunity to access the required content, knowledge and skills regardless of who their classroom teacher is or the school they attend. Processes for measuring the fidelity of curriculum implementation must be in place to make certain teachers follow the assigned content as it was originally designed. This in turn, establishes “unconditional delivery of curriculum” (Marzano, 2003, p.24). In other words there can be no omissions, alterations or additions to the way the developer created the curriculum. Viable means that teachers have enough time so that the scope and sequence of a program can be taught to mastery rather than just covered. Marzano (2003) states, “a guaranteed and viable curriculum is the most powerful school-lever factor in determining overall student achievement” (p. 22).

RTI/MTSS, when implemented with fidelity, has resulted in closing achievement gaps in schools with struggling learners (NASDSE, 2007; Burns & Gibbons, 2008). Evaluation measures are an essential part of all facets of RTI/MTSS implementation in order for districts to achieve improved student outcomes.

**Conceptualization of RTI/MTSS**

The RTI/MTSS model has been described by multiple researchers’ point of views regarding the essential features of the RTI/MTSS framework. Gresham (2002) posits, “RTI/MTSS is a change in behavior or performance as a function of an intervention” (p.479). Researchers such as Daly, Martens, Barnett, Witt & Olsen (2007) proclaim RTI/MTSS as the “ongoing evaluation of children’s responsiveness to different levels of evidence based interventions as a basis for eligibility determination” (p. 563). RTI/MTSS has also been defined as “a multi-tier framework designed for early, and if necessary, sustained intervention for students who are unsuccessful in the general education curriculum” (Jenkins, Hudson & Johnson,
2007 as cited by Henderson-Black, 2009 p.195). Additionally, Burns and Gibbons (2008) define RTI/MTSS as “the systematic use of assessment data to most efficiently allocate resources in order to improve learning for all students” (p.1) while Johnson & Smith (2008) define RTI/MTSS as “a schoolwide process that integrates instruction, intervention, and assessment” (p.46). Finally, the National Association of State Directors of Special Education (NASDSE) describes RTI/MTSS as “a type of educational reform with a focus on restructuring the way in which teachers work in schools” (Donelson & Donelson, 2010, p. 18). This is the result of NADDSE recognizing the importance of general, remedial, and special educators functioning as an integrated entity rather than as separate silos.

Although RTI/MTSS has been conceptualized in numerous ways and districts have adopted varying models of RTI/MTSS, overall the majority of researchers agree on the critical components of an RTI/MTSS framework. Distinguishing traits include high quality evidence based instructional curriculum, universal screening, continuous progress monitoring, data informed decision making and multiple tiers of progressively more intense instruction.

RTI/MTSS models align with Vygotsky’s sociocultural theory of learning development because the RTI/MTSS model promotes social interaction activities that take place among staff as they support and provide each other with corrective feedback regarding the fidelity of RTI/MTSS implementation. Educators must also continuously communicate and collaborate about the individual needs of students they instruct based on student ZPDs so that instruction will target the individual needs of their students. Finally, staff must design instructional activities that include scaffolding, differentiated instruction, cooperative learning and peer partner learning activities that allow for interaction and collaboration among their students.
Critical Components of RTI/MTSS

There are several fundamental concepts or critical components that characterize a RTI/MTSS model of instruction. Glover & DiPerna (2007) outlined the essential facets for this framework and maintain these components must be implemented with fidelity using evidence-based practices or interventions. Essential elements of a RTI/MTSS model include a “multi-tier model of instruction, student assessment and decision making, evidence-based interventions, maintenance of procedural fidelity, and development and sustainability of systems level capacity” (Glover & DiPerna 2007, p.527).

Multiple tiers of support. The majority of RTI/MTSS instructional models include multiple tiers, or levels, of instruction. “The purpose of multiple tiers of instruction is to avoid inadequate instruction from being implemented over sustained periods of time and to prevent disabilities from developing or becoming more severe” (Stecker, Fuchs, & Fuchs 2008, p. 10). Massachusetts DESE has developed a Three-Tiered System of Support (MTSS). The three flexible tiers represent a sound, responsive educational experience for students by providing students with a continuum of multiple supports that correspond with their unique needs. However, there must be fluid movement among the tiers. “A multi-tier preventative model is designed so that student needs are identified and levels of intervention are provided prior to student failure” (Chard & Linan-Thompson, 2008 p.99). In a multi-tier implementation model, all students are evaluated to measure individual levels of risk (Glover & DiPerna, 2007) and all students receive support based on their needs identified through a universal screening process.

The primary purpose of tier 1 is prevention of academic problems. “A secondary purpose is early intervention and treatment of students who appear to be falling below the benchmarks”
McCook, (2006) suggests that fidelity of tier I implementation is the most important facet of an RTI/MTSS model.

Tier 1 usually refers to “high-quality, research based instruction in the general education setting” (Bradley, Danielson, & Dolittle, 2007, p. 9) that “enables children to meet benchmark expectations” (Reschly, 2014 p. 40). Focus should be on things practitioners can control such as curriculum, instruction and environment. Therefore, all students should receive high quality core curriculum and instruction in which teachers are utilizing flexible groupings and differentiated instruction to meet each child’s unique learning needs. “If at least 80% of students are not meeting state standards through the regular education classroom structure, then the issue is not student oriented but is either a curriculum or instruction issue” (McCook, 2006 p.66). According to Gibbs (2011), the degree to which teachers are successful in using data to differentiate small group instruction will directly impact the success of the tier one instruction for all grades. Success is determined by evaluating student outcomes.

Explicit instructional content and practices, important in tier 1 reading programs, generally focus on critical practices identified by the National Reading Panel (2000) as effective (Stecker, Fuchs & Fuchs, 2008). A tier I model of reading instruction differs significantly for students in grades K-3 when compared with a tier I model of instruction for students in grades 4-12.

Gibbs (2011) suggests “The majority of districts implement a 90 minute reading block for K-3 students,” (p. 14) consisting of both whole class and small group instruction predicated upon the effective instructional elements identified in the Report of the National Reading Panel (2000). Instruction focuses on students’ needs for direct instruction in phonemic awareness, phonics, fluency, vocabulary and comprehension.
For students in grades 4-12, tier I should encompass far more than a reading or language arts block. “Extensive review of research regarding effective literacy instruction for students in grade 4-12 provided overwhelming evidence that literacy skills are best enhanced for these students when literacy skills are targeted in all content area instruction” (Gibbs, 2011, p. 14). A combination of whole group, independent student work and collaborative group work encouraging student engagement in the learning process is necessary. Research also indicates that learning strategy instruction should be incorporated into all content areas, with students being given opportunities to utilize these learning strategies throughout the day (Marzano, Pickering, & Pollock, 2001).

Mathes and Denton (2002) assert that “if empirically proven best practices were used at this first tier, only about 6% of students would require secondary intervention” (p.187). Many districts, including the district of this study, assess all elementary students in reading several times during the year. Educators utilize this data to identify students potentially at risk of failure and provide these students with an additional tier of instruction that matches the students’ identified area of need. When progress monitoring data indicates that students are performing below their peers in both level and rate of improvement, tier 2 services should be initiated (Stecker, Fuchs & Fuchs, 2008).

Tier 2 is additional supplemental supports aligned with the core curriculum for students not making effective progress in tier 1. Rather than targeting the needs of the entire class, tier 2 instruction focuses on meeting the needs of small flexible groups of students or individual students, identified as at-risk through both universal screening and tier I interventions. McCook (2006) strongly suggests that the use of strategies are more appropriate to use in tier I while programs that are scientifically researched-based are more appropriate as methodologies in tier 2.
and tier 3. “If a strategy is sufficient why isn’t it tried in tier 1 rather than tier 2 or 3?” (McCook, 2006, p. 68). Services are provided by classroom teachers, or by reading or math interventionists using a homogeneous small group format, typically no more than five students per staff. When, and if the intervention at the secondary level does not produce a significant level of progress, a tier 3 or tertiary intervention, which is more intensive is implemented (Burns, Jacob, & Wagner, 2008; Glover & DiPerna, 2007; Mathes & Denton, 2002). The difference between tier 2 and tier 3 instruction is the frequency of instruction and intensity of instruction provided to students. “Progress monitoring data that illustrates poor response in both level of scores and slope of improvement to otherwise generally effective instruction, provide evidence for determining that a student potentially has a learning disability” (Stecker, Fuchs & Fuchs, 2008, p. 13). Therefore, progress monitoring data from both tier 1 and tier 2 levels is important in order to inform educators about a student’s unresponsiveness to instruction and provides staff with the knowledge they need to rule out lack of effective instruction as the cause of the student’s learning problems.

Tier 3 interventions are individualized for students who don’t respond to tier 1 or 2 interventions. “Tier 3 has to be potent and effective” (Hall, 2008 as cited by Florida Department of Education p. 4) and delivered by an interventionist considered expert within the area of intervention. Typically, services are provided to no more than three students within a small homogeneous group or to individual students. Tier 2 and 3 do not replace access to the general core curriculum. Intervention services never supplant the core instruction students receive, it must be a service in addition to core curriculum. When tier 2 is implemented, tier 1 continues. When tier 3 is implemented, tier 1 continues, however, tier 2 is discontinued and replaced by tier 3.
Several researchers have found multi-tier programs to be effective (Ardoin, Witt, Connell, & Koenig, 2005; Fuchs & Fuchs, 2007; Glover & DiPerna, 2007). Program evaluations have been conducted to investigate student outcomes in school districts that have implemented a multitier service delivery model. Tilly (2003) investigated 121 schools in Iowa that were utilizing a multi-tiered service delivery model. Results indicated substantial student growth in early reading performance as well as a decrease in special education referrals in these schools. A similar study was also conducted in Minneapolis (Marston, Meuysts, Lau, & Canter, 2003; Reschly & Stark-Weather, 1997). Findings from this study indicated that multi-tiered instructional services reduced the number of students referred to special education placements from ethnic minority backgrounds. Finally, an investigation of a multi-tiered framework in Pennsylvania (Kovaleski, Gickling, Morrow & Swank 1999) resulted in fewer grade level retentions and a reduced number of special education referrals. Findings also demonstrated an increase in comprehension, time on task, and task completion.

Assessment and decision making. “Although sound instruction is paramount to successful implementation of RTI/MTSS, assessment data is crucial for decision making” (Stecker, Fuchs & Fuchs, 2008, p. 10) and informing teachers about instructional changes they should make to more effectively meet the unique needs of their students. Therefore, the next component that must be in place for an effective RTI/MTSS program is student assessment and decision making.

Student assessment. Assessment is an important component of a RTI/MTSS framework. Educators use assessment data to make informed decisions about the frequency and the level of instructional intensity a student may require in order to master curriculum content. As efforts to improve schools intensify, increased emphasis has been placed on the importance of measuring
student achievement (Deno. Lembke, & Reschley-Anderson, 2005). Gibbs (2011) identifies three primary purposes for conducting assessments. First, assessment identifies students who are struggling and need intervention. Assessment data also guides staff in determining the type of intervention necessary to meet students’ needs. Finally, “assessment data is used to determine the effectiveness of the evidence based intervention in moving the student toward the desired outcomes” (Gibbs, 2011, p. 18). It is important to ensure that an intervention continues until students master requisite skills. Otherwise, they may begin to fall behind their peers again. The effect an intervention has on student outcomes is only reliable if the fidelity of implementation has been evaluated (Caroll, Patterson, Wood, Booth, Rick, & Balain, 2007).

Summative and formative assessments are two types of tests commonly used in classrooms. Summative assessments are more comprehensive than formative assessments and are used at the end of chapters or units to show gains that students have made over time. Summative assessments are “assessments that happen after learning is supposed to have occurred to determine if it did” (Stiggins, Arter, Chappuis, & Chappuis, 2006, p. 31). State and district summative assessments are used to determine whether or not students have mastered explicit yearly goals. Teachers, however, receive this data too late to make immediate instructional changes to support student learning. Formative assessments, in contrast, are given frequently and provide teachers with immediate evidence of progress. Data from formative assessments can be used to “to diagnose student needs and plan next steps of instruction and to provide students with feedback so they can improve the quality of their work” (Stiggins et al., 2006, p. 31).

Mike Schmoker (1999) asserts that results are the key to student improvement since “Results tell us which of our processes are most successful and which need alterations” (p. 68). Educators must identify desired results and set obtainable goals. Progress towards reaching these goals
must be monitored throughout the learning process. Wormeli (2006) posits that “effective assessment must serve to advance learning rather than simply document it” (p. 39). The two most prevalent types of assessment in an RTI/MTSS model are universal screening and progress monitoring. Fuchs and Fuchs (2007), suggest screening and progress monitoring are the most significant assessment functions within an RTI/MTSS framework and therefore, critical to the role of the classroom teacher.

**Universal screening.** Universal screening is the administration of an assessment to all students in the classroom. The intent of universal screening is to identify students who are performing at grade level in a specific content as well as to identify students who are struggling. “Universal screening tools, are also referred to as benchmark assessments, which mean a standard by which others can be measured” (Shores & Chester, 2009, p. 42). In the RTI/MTSS process, universal screening is used to single out students in tier 1 instruction that potentially may not meet the benchmark standard. One well known benchmark assessment universal screening tool for reading in K-6 grade is Dynamic Indicators of Basic Early Literacy Skills (DIBELS). DIBELS, a set of standardized quick, instructional assessment probes that assess students in the area of phonemic awareness, phonics, fluency, vocabulary and comprehension, (Shores & Chester, 2009) is the screening tool currently being used in the site of this research study. It is recommended that this systematic screening of the entire school population take place three times a year, fall, winter, and spring (Sprague, Cook, Wright & Sandler, 2008).

Screening is not detailed enough to determine what should be taught; it can only suggest who may need additional help beyond tier 1 (Howard, 2009). Students identified through universal screening, that may potentially struggle, will continue to receive high quality evidence-base instruction in tier 1. Teachers may provide additional scaffolded instruction and re-teaching to
assist students identified as at risk. Additionally, the students identified as struggling readers during the universal screening will receive more frequent monitoring of their performance.

**Progress monitoring.** A key component of effective tiered instruction is progress monitoring, an assessment that evaluates student learning routinely in order to provide useful feedback about performance to both learners and instructors. Progress monitoring differs from universal screening in both duration and frequency of the assessment, and consistency and equivalence of what is assessed (Stecker, Fuchs & Fuchs, 2008).

Educators monitor progress of how an intervention is working and use the results to set appropriate individual goals and adjust instruction as needed. Progress monitoring, a set of evidence based assessment procedures, allows teachers to evaluate the academic performance of students over time (Gibbs, 2011; NCRTI, 2010). It also provides the data staff needs to determine student responsiveness to instruction, and to measure instructional effectiveness. Progress monitoring should be administered frequently to determine whether learners are advancing (Whitten, Esteves, & Woodrow, 2009). A consistent set of administration and scoring procedures must be followed with fidelity every time progress monitoring is used so that educators can reliably measure growth. Monitoring students’ responsiveness to interventions will provide staff with the data they need to identify students who need additional or more intensive instruction. This form of assessment answers the question: “Is learning happening?” (Whitten, Esteves & Woodrow, 2009, p. 102).

Progress monitoring, short formative assessments, should be administered at least monthly to determine students’ progress toward learning grade appropriate curriculum and achieving long term goals. “Progress monitoring scores, when plotted on a graph, provide teachers with information about both the level of student performance and his or her rate of
academic improvement” (Stecker, Fuchs & Fuchs, 2008, p. 11). This information enables educators to determine the effectiveness of the instruction they are utilizing with individual students in classrooms.

While screening and benchmark assessment should always be conducted with materials appropriate for the student’s enrolled grade, progress monitoring may need to be conducted with materials designed to be more closely related to the student’s instructional level (Shinn, 2002; Hosp, Hosp & Howell, 2007). “The process for determining the appropriate grade level for progress monitoring is referred to as survey level assessment and should be administered to all students whose literacy skills are significantly below grade level” (Gibbs, 2011, p. 22). This survey will allow teachers to determine students’ instructional level. When the instructional level is found to be kindergarten, first grade, or second grade, staff should incorporate progress monitoring at kindergarten, first grade, or second grade respectively. When the instructional level is found to be third grade or higher, staff should incorporate progress monitoring with materials that are one grade level above the instructional level (Hosp et al., 2007).

Experts suggest two different methods to use in evaluating progress monitoring data (Hosp et al., 2007, p. 10). One method is called “data point analysis in which the rule of four points” is used (Gibbs, 2011, p. 25). When using the data point analysis method, practitioners who are members of their building based student support team (SST) should examine approximately 6-8 data points. If four are above the aim line, the team may decide to increase the rigor so that the goal is more challenging. However, if four data points are below the aim line, the Team may determine the intervention is not accomplishing the desired outcome and changes to the intervention may be necessary. Inconsistent progress monitoring scores may
indicate limited student motivation. The student support team (SST) should explore this notion and increase motivational strategies accordingly.

A data analysis procedure that is more common than data point analysis because of its rigor is trend line analysis. A trend line provides a visual of a student’s actual and estimated performance. With both a goal line and trend line in a graph, “school staff can compare desired performance (the goal line) and actual and estimated performance (the trend line), and will be better prepared to make decisions about a student’s response to the instruction” (NCRTI, 2010, p. 2). Visual student graphs allow teachers to make instructional decisions about their students in less time than when they rely on a list of scores (Fuchs and Fuchs, 2008).

According to Stuart & Rinaldi (2009), student progress should be monitored at least monthly to ensure responsiveness to the intervention for tier 1 and 2 students and weekly for tier 3 students. Although there are numerous methods for monitoring a student’s progress, the most prevalent is curriculum-based measurement (CBM). This form of assessment is popular because CBMs not only indicate whether learning is happening but also indicate the rate at which students are building academic skills. In essence, an analogy is CBMs “serve as a barometer of the effectiveness of an intervention or instruction” (Whitten, Esteves & Woodrow, 2009, p. 102). Indicators assessed must be closely aligned to the content covered in curriculum.

Successful implementation of progress monitoring is the result of careful planning and thoughtful practice. Classroom assessment must be ongoing and aligned with classroom instruction. Teachers must know student’s baselines on a daily basis in order to scaffold and differentiate instruction accordingly. This suggests that teachers must continually assess student learning and then use that information to adapt instruction. Evidence from several studies suggests that when classroom assessment is ongoing, student achievement on standardized
assessments actually improves (Black & Wiliam, 1998). Overall, progress monitoring contributes to the success of students obtaining goals that have been established for them. By representing data and a goal on a graph, students have immediate feedback on their performance and how it compares to where they started and where they want to be (Reid & Lienemen, 2006).

Empirical research on teacher effectiveness has provided a basis for concluding that teachers are more successful in attaining desired student outcomes when clear and measurable outcomes are specified (McNeill, 1967). Rosenholtz (1991) found a reciprocal relationship between goals and collegiality: “Isolation undermines the development of shared instructional goals” (p. 17). Without explicit, common goals, teachers will not be able to communicate meaningfully and precisely about how to improve instruction and about how to determine if students are learning.

Many teachers are concerned that they will not cover grade level curriculum due to the emphasis on assessment. Although their concern is valid, education is about student learning. An emphasis on teaching places the focus on what the teacher is doing. An emphasis on learning, however, makes student needs the focus of instruction. This “responsiveness to learners is the hallmark of RTI/MTSS” (Whitten, Esteves & Woodrow, 2009, p. 108).

The design of a school-wide progress monitoring system should be based on the premise that useful assessment of student progress should be formative in its instructional effects (Fuchs & Fuchs, 1986) and that it needs to focus teacher attention on data representing the results of their efforts (Fuchs, Deno, & Mirkin, 1984; Stecker & Fuchs, 2000). In addition to CBMs students’ classroom work samples can be collected and evaluated to determine if progress is being made according to a hierarchy of skills. Running records can also be used to show progress over time. When school-wide implementation of progress monitoring occurs, districts
are able to make comparisons by examining the similarities and differences of growth patterns among the different subgroups of students as well. This comparison is particularly important due to the enactment of *No Child Left Behind* (2001) and the mandate that districts closely track their lowest subgroups. Documentation of assessment measures and student responsiveness to research-based strategies are important aspects of evaluation. Progress monitoring embeds intervention within the assessment procedure. The intent of using evidence-based teaching practices and curriculum is to eliminate poor instruction and weak curricula as potential sources of a student’s academic difficulties.

The fidelity with which teachers administer and score progress monitoring probes is vital to the process because incorrect administration can lead to inaccurate and misleading conclusions. In order to keep the probes reliable, teachers must deliver directions verbatim each time they administer these probes. Moreover, the assessment must be scored as its creators intended in order to maintain the validity of the measure. This protocol will allow teachers to measure students’ reading growth relative to other students (Shinn & Shinn, 2002). To summarize, fidelity measures should be administered around three times a year. This will ensure that staff is adhering to assessment procedures that reflect how the developer designed, planned and intended the assessment to be conducted.

**Problem solving decision making process.** Data-based decision making in RTI/MTSS is the process of collecting and using data to identify students who are struggling with content and to determine which tier or level of instruction would best meet these students’ academic needs. It is difficult to determine which interventions or instructional methods students will favorably respond to before these methods are actually implemented. Therefore, progress monitoring data assists educators with identifying interventions or types of instruction that work
best by supporting all students in the class (Johnson, Mellard, Fuchs, & McKnight, 2006). On the other hand, by examining an individual student’s progress monitoring data, educators gain insight about how the student is responding to instruction he or she is receiving, and are then able to make appropriate instructional decisions accordingly (Johnson et al., 2006). Therefore, it is important for educators to establish a decision-making system that will support them in selecting and developing instructional and intervention strategies that potentially have a high probability of success.

One aspect of RTI/MTSS that is consistently supported by research is the effectiveness of a problem-solving model (Burns, Appleton & Stehouwer, 2005). Fuchs, Mock, Morgan, & Young (2003) identified four states that have implemented large scale, extremely effective RTI/MTSS problem solving teams in their RTI/MTSS frameworks: Heartland Agency Model in Iowa, Ohio’s Intervention-Based Assessment, Pennsylvania’s Instructional Support Team, and Minneapolis (Minnesota) Public Schools’ Problem-Solving Model. According to Burns, Appleton, & Stehouwer, (2005), these districts have demonstrated overall improvement in student learning and a decrease in student referral and placement in special education.

Kovaleski, Gickling, Morrow and Swank (1999) conducted a statewide study in Pennsylvania to look at the academic performance of students impacted by problem solving support teams. The data clearly indicated that “students in schools where problem-solving teams were implemented consistently performed better over time than students in schools where low levels or no implementation was evident” (Koveleski, et al.1999, p. 180). Additional findings regarding attributes of schools with school-based problem-solving teams indicated these schools had “collaborative and communicative participants that met regularly, equitable multi-discipline
members, strong principal leadership, and extensive data collection to inform decision making” (Koveleski, et al. 1999, p. 182).

The problem-solving decision making team used data from student progress monitoring to select and implement an evidence-based intervention that would potentially support the student in the general education core curriculum. While continuous progress monitoring informs educators about how effectively a student responds to an intervention the data based decision making support educators with the selection and adaptation of curricula and the evaluation of the progress and enhancement of systems (Batsche et al., 2005).

RTI/MTSS is comprehensive in scope and requires school based personnel to communicate and collaborate in unprecedented ways. The overarching goal of data based decision making is to improve learning for all students which mirrors the intent of NCLB (2001), IDEA (2004) and ESSA (2014) mandates. Language in all three of these laws emphasizes the importance of scientific, evidence-based instruction and intervention.

Evidence-based interventions. A third critical component of an RTI/MTSS model is evidence-based interventions (EBI) or practices. At present, the term evidence-based practice is used to signify “practices and programs showed by high-quality research to have meaningful effects on student outcomes” (Cook & Odom, 2013, p. 136). From the standpoint of fidelity of process and practice, there should be evidence that core instructional programs and targeted interventions work. In general, an EBI is one whose effectiveness is supported by rigorous research. These practices have endured numerous tests and when replicated have demonstrated a high probability of outcome achievement for students. “When staff (MKO) select programs and interventions that are rooted in scientifically based research, they offer reliable, valid and
trustworthy evidence to show that when the practice is used as developed and designed, children make gains” (Hardcastle & Justice, 2010, p. 7).

So while many research studies may be consistent with NCLB’s definition of evidence-based interventions, the objective is to pick one for effectiveness. “The problem-solving process is the cornerstone of procedural fidelity” (Hardcastle & Justice, 2010, p. 7). Accurately identifying a student’s learning problem and examining the cause of the problem will help staff with the selection of appropriate instruction or intervention. However, Hardcastle & Justice (2010) suggest “the only way to know whether an intervention is a right fit is to put it into place, adhere to the details of implementation, and monitor student response” (p. 7).

In order to identify an appropriate EBI, educators must understand the type of practice or skill with which the student is struggling. The closer an educator can match a practice or program to the individual students’ needs, the greater the possibility it will lead to the desired outcome (IRIS, 2014). Educators can also employ evidence-based practices and strategies in classrooms to enhance instruction and increase student performance. For example, educators can support students by providing them with hints, cueing or questioning. This strategy activates student prior knowledge and promotes students to use higher thinking skills. A visual representation is a methodology to help students elaborate on their thinking. Another method for practitioners to use is to provide students with multiple exposures to materials and multiple opportunities to practice skills. When students are provided with these strategies students are more apt to master skills. Utilizing a gradual release of responsibility strategy shifts teacher led instruction to cooperative learning and ultimately to student application of learning. Finally, direct instruction helps students grasp new concepts and skills while strategy instruction teaches
students to utilize the tools and techniques efficient learners use (Whitten, Esteves, & Woodrow, 2009).

According to Hardcastle & Justice (2010), a concentration of recent studies devoted to the issue of fidelity within a problem solving/response to intervention framework suggests a renewed focus in the area of fidelity research: “The rapid and widespread deployment of RTI/MTSS has made urgent the need for researchers and practitioners to attend to treatment integrity” (Sanetti & Kratochwill, 2009, p. 452).

According to Burns (2007) “Perhaps the greatest challenge to successful RTI/MTSS implementation and the factor that could most likely lead to its downfall, is the fidelity with which we implement the model, decision rules, quality core curricula, and subsequent interventions” (p. 38).

**Procedural fidelity.** After educators identify and implement an evidence-based intervention or program to support the needs of students, staff must evaluate the implementation process. Discovering a program or practice that may potentially support a student with learning a particular concept does not necessarily equate to improved student outcomes especially if the steps or procedures of a program are not followed accurately. Fidelity of RTI/MTSS implementation is the extent to which educators adhere to RTI/MTSS procedures as they were designed, intended, and planned. If staff alter or stray from the implementation procedures that validated the research of the intervention, these changes could adversely affect the intervention’s effectiveness.

When educators initially implement an evidence-based practice, they often do so with fidelity. However, over time staff may inadvertently drift by modifying or omitting steps or activities of the practice or program. This tendency typically occurs when educators believe that
they have mastered the procedures and consequently stop referring to the implementation guidelines. In the absence of monitoring, teachers tend to alter implementation procedures. Of those teachers who implement preventative programs, 41% to 84% change components or procedures over time (i.e., they drift) or discontinue their use (Tappe, Galer-Unit & Bailey, 1995).

Therefore, it is important to monitor the fidelity of implementation for all of the main components, universal screening and high-quality instruction across all tiers, progress monitoring and data based decision making of a RTI/MTSS service delivery model. In fact, implementation fidelity of the RTI/MTSS system is arguably one of the most important aspects identified as necessary for RTI/MTSS implementation (Burns & Gibbons, 2008; Gansle & Noell, 2007; Kovaleski, 2007; Shinn, 2007); and yet procedural fidelity of an RTI/MTSS model often receives less attention than other elements (Gansle & Noell, 2007).

From a measurement perspective, treatment fidelity is calculated as the percentage of correctly completed intervention steps (Hardcastle & Justice, 2010). If procedural fidelity is not monitored, it is difficult to demonstrate a functional relationship between changes in the target behavior and the intervention (Gresham, 2004; Gresham, MacMillan, Beebe-Frankenberger & Bocian, 2000).

In order to secure a reliable measure of implementation fidelity, five elements must be closely monitored (Caroll, Patterson, Wood, Booth, Rick & Balain, 2007). The first element, adherence, is defined as “a program service or intervention being delivered as it was designed or written” (Mihalic, 2004, p. 2). Teachers must implement all steps of the intervention and avoid drifting from the lesson design.
The next element within this conceptualization of implementation fidelity is dosage or exposure. Exposure is measured by the frequency and duration of an intervention that a student receives. At the elementary level, an example of exposure for tier 1 would be that students receive ninety minutes of reading instruction five days a week. An example of exposure at tier 2 and tier 3 is that progress monitoring of academics, at a minimum, would be administered every two weeks. “Coverage may also be included under this element, i.e., whether all the people who should be participating in or receiving the benefits of an intervention actually do so” (Caroll et al., 2007, p. 3).

Additionally, quality of delivery is also an element of implementation fidelity. Quality of delivery is defined as "the manner in which a teacher, volunteer, or staff member delivers a program" (Mihalic, 2004, p. 2). A program may be explicitly followed, yet poorly delivered. As a result, positive participant outcomes may not be achieved. Elements of delivery quality may include “provider preparedness, use of relevant examples, enthusiasm, interaction style, respectfulness, confidence, and ability to respond to questions and communicate clearly” (JBA, 2009, p. 2).

The forth element of fidelity implementation is student responsiveness. Student responsiveness indicates how engaged or involved students are during an intervention or instructional activity. A participant’s level of interest in a program, his or her perceptions about the relevance and usefulness of a program and the participant’s level of enthusiasm are all facets of a student’s responsiveness. This element involves "reaction evaluation" or judgements by the participants (Kirkpatrick, 1967).

Finally, program differentiation is the final element of implementation fidelity. Program differentiation is the degree to which the critical components of a program are distinguishable
from each other and from other programs. Program differentiation can also refer to the process of identifying the critical components of a program that are essential for producing positive outcomes (Dusenbury, Brannigan, Falco & Hansen, 2003). This element measures how well teachers avoid combining steps of one intervention with steps of another intervention. Dunsberry et al. (2003) and Dane & Schneider (1998) argue that all five elements must be measured in order to gain a valid understanding of the RTI/MTSS implementation process.

Sanetti and Kraochwill (2009) suggest that the traditional definitions of treatment fidelity may not sufficiently describe the complexity of the concept. They propose instead this broader working definition: “Treatment fidelity is the extent to which essential intervention components are delivered in a comprehensive and consistent manner by an interventionist trained to deliver the intervention” (p. 448). This contemporary definition suggests treatment fidelity may be multidimensional. Baker, Fien, and Baker (2010), acknowledge the “multifaceted, comprehensive nature of a prevention and intervention service delivery model” such as RTI/MTSS (p. 2).

Accordingly, “procedural fidelity measures typically address multi-dimensions which include content, process, quality, and quantity” (Sanetti & Kratochwill, 2009, as cited by Hardcastle & Justice, 2010, p. 13). Content measures have been typically identified as the “procedural documentation such as needs assessment measures, process checklists and action planning templates that indicate the steps that have been delivered “(Erickson, Noonan & Jenson, 2012, p. 35). Process evaluation often includes “process checklists to determine how the intervention was delivered” (Hardcastle & Justice, 2010, p. 13) and “the percentage of the model core features that are in place” (Keller-Margulis, 2012, p. 35). Quality and quantity measures
consider “the extent to which the model is implemented as intended and often include interviews, observations, and self-assessments measures” (Keller-Margulis 2012, p. 35).

School districts must identify the methods and measures that they will use to monitor fidelity of implementation. A district may decide to develop their own fidelity measures or if available, a district may use an evaluation procedure included with a practice or program they have purchased. In either case, the resulting data will help them to determine whether teachers are adhering to all of a practice or program’s major components. Method refers to the manner in which data is collected to check fidelity of implementation. Data can be collected through observations, self-report questionnaires or interviews. Self-report fidelity checks may be favored because they are easier to collect; however, teachers often overestimate the degree to which they are following the correct procedures (NCRTI, 2009).

Research on implementation fidelity has demonstrated that observations are the best method for monitoring fidelity of implementation (IRIS Center, 2014). After observational data has been collected, the teacher’s fidelity of implementation can be calculated by dividing the number of steps completed correctly by the educator divided by the total number of procedural steps of the program. For example, if an intervention has 19 procedural steps to be implemented and the teacher implements 10 steps, the percentage of fidelity would be $10 \div 19 = .526$ or 53%. If specific information about the fidelity criteria for a practice or program is unavailable, a general rule of thumb is to aim for 85 percent fidelity (Sanetti & Kratochwill, 2009). Observations can be completed by an administrator or coach or by videotaping the teacher’s lesson.

An effective tool educators can use to assess the quality and quantity of implementation related to literacy components is the “Planning and Evaluation Tool for Effective Reading
Supports – Revised (PET-R)” (Kame’enui & Simmons, 2003). This assessment tool focuses on goals, materials, time allocation for instruction, and other factors to rate overall implementation of a school’s K-3 reading program (Kame’enui & Simmons, 2003).

Another method to measure fidelity of implementation is an implementation rubric. In general, the purpose of an implementation rubric is to” outline operational definitions for implementation and to guide practitioners as they reflect on instructional practices they use in classrooms to improve student learning” (Keller-Margulis, 2012, p. 36).

When interventions are implemented accurately and as designed, effectiveness of the intervention can be linked to the use of the intervention. This in turn promotes valid and accurate decision making. When evaluating student response to intervention, staff must demonstrate that changes in student performance are directly related to adherence of the intervention plan (Hardcastle & Justice, 2010). “Fidelity, is also critical to determine if an intervention can generalize across settings, situations and intervention implementers” (Hardcastle & Justice, 2010, p. 13).

A review of research suggests that treatment fidelity is directly related to treatment outcomes and that the greater degree of correct implementation, the greater the degree of behavior change (Gresham, Gansle, & Noell, 1993; Gresham, Gansle, Noell, Cohen, & Rosenblum, 1993). Additional reviews also demonstrated that student outcomes increased when teachers implemented interventions as they were designed (Witt et al 1997; Mortenson & Witt, 1998).

Fidelity is the degree of intervention implementation that is required to meaningfully assess fidelity implementation (Noell et al., 1997; Witt et al., 1997; Mortenson & Witt, 1998). When educators implement interventions in the classroom, there are several factors that may
contribute to the accuracy and consistency of treatment implementation. The complexity of the intervention and the teacher’s understanding of the intervention directly impacts whether staff will implement the intervention with fidelity. In addition, the time it takes for staff to implement the intervention, staff perceptions about the effectiveness of the intervention and the availability of support and feedback for staff also definitely impact integrity (Klingner, Ahwee, Pilonieta, & Menendez, 2003). In general, it appears that, “as treatment fidelity decreases, so do positive student outcomes” (Mautone, DuPaul, Jitendra, Tresco, Junod & Volpe, 2009 p. 920).

In terms of intervention implementation fidelity at the classroom level, Elliot and DiPerna (2001) reported “three primary factors associated with teachers’ implementation of interventions: acceptability, training, and support” (p. 533). Treatment acceptability is, “the extent to which people perceive an intervention as “appropriate, fair, and reasonable” (Kazdin, 1981, p. 483). The level of treatment acceptability is tied to the effectiveness of an intervention. Witt and Elliott (1985) suggest that educators’ acceptability of an intervention has a significant impact on whether staff uses the intervention, the fidelity with which the intervention is implemented, and eventually how effective the intervention meets student needs. In other words, if staff does not believe an intervention will work, they will not implement it with fidelity.

Training is the second component that impacts procedural fidelity. According to Elliot & DiPerna, (2001) training for staff has the most significant impact on intervention fidelity. Initial trainings for educators must be sustained by “providing staff with opportunities for guided practice by expert teachers and/or consultants as well as opportunities for staff to discuss issues with implementation” (Kovaleski, 2007, p.641). Sterling-Turner, Watson, Wildmon, Watkins and Little (2001) conducted a study to determine which type of training is most effective to establish intervention integrity. Sixty-four undergraduates participated in the study and were
randomly assigned to one of three training situations: “didactic (lecture); modeling (demonstration), and; rehearsal/feedback training” (p. 56). The results indicated that training does enhance procedural fidelity and that rehearsal/feedback training produced the highest level of treatment fidelity.

Finally, support is essential in order to ensure procedural fidelity. According to Noell, Witt, Slider, Connell, Gatti and Williams (2005) many classrooms are not set up to accommodate the routines needed for interventions to be implemented adequately. Noell, et al. (2005) investigated three levels of support: weekly interviews between the teacher and the consultant; interviews that focused on accurate step by step implementation of the intervention, and, performance feedback. They found that performance feedback produced higher treatment fidelity than the other two support conditions. According to Kovaleski (2007), “teacher trainings should be frequent and sustained with follow up opportunities for guided practice so teachers will gain the knowledge and understanding they need to implement interventions with integrity”(p. 641).

In practice, acceptability, training and support are pillars of procedural fidelity which are essential to successful implementation of RTI/MTSS. Although there have been some notable improvements due to evidence-based practices in education, achievement gaps remain in many schools. These realities have renewed interest in linking science to practice through best practices in systems change (Donelson & Donelson, 2010).

**Systems level capacity.** The fifth component of RTI/MTSS is systems level capacity, which even though it is mentioned last, in the literature (Glover & DiPerna, 2007), it must be in place before an RTI/MTSS program can be successful. Sustaining continued improvement requires building capacity at all levels of the system so that the organization facilitates individual
and collective learning and feedback to maintain innovation (Kozleski & Huber, 2010, p. 258). Vygotsky (1934/1978) stresses the importance of the role that socializing plays in the learning process. School is a social system in which the people within give it life. Each school is an entity that reflects the human beliefs, reactions and interactions within (Donelson & Donelson, 2011). Beliefs are often formed and limited from an individual’s life experiences or an individual’s passionate feelings about issues that affect them significantly. The behavior of individuals must change in order for schoolwide goals to be accomplished and for the needs of individual students to be met (Lezotte, 1997). Similarly, schools are members of a larger system, the school district (Curtis, Castillo & Cohen, 2008). School districts must understand the critical elements of systems change in order to be successful. “System level change must be planned and pursued in a systematic manner over time; organizational change is not an event or activity, but an on-going process” (Curtis & Stollar, 1996, p. 411).

RTI/MTSS is considered an innovation because of the growing research base and strong support in both policy and law. According to Donelson and Donelson (2010), "the challenge lies in carrying out these efforts and integrating the findings of science and the quality of performance into the daily practice of numerous staff members within a school” (p. 37). Fixen, Naoom, Blasé and Wallace (2007) researched the critical elements needed to move science to practice so that an extensive body of evidence-based approaches might become more common in human services settings and ultimately benefit students. Their work indicates that effective implementation is needed in order for any innovation to become common practice. Consequently, successfully linking RTI/MTSS evidence-based practices to the day to day practices within a school requires both the art and the science of systems change.
Much of the work in systems change in schools involves shifts in people’s beliefs, values and attitudes. The significance of these beliefs, attitudes and values cannot be overlooked in moving a group of people toward a common goal (Kendrick, Jones, Bezanson & Petty, 2006). According to Curtis, Costello and Cohen (2008), there are various stages of concern people may experience: “the direct effect change may have on them; concerns about how to implement the new initiative; the impact the new practice may have on the school as a whole” (as cited by Donelson & Donelson, 2010, p. 35).

Collaboration is another principle of systems change that’s a result of people working together to achieve a common goal. This effort is most effective when team processes are based on mutual respect, trust, and balanced power status among members (Curtis & Stollar, 1996). “Successful system change also requires a long-term commitment to high quality professional development that explicitly builds knowledge and skills needed for accurately implementing innovations that have been shown to be effective in similar situations” (Stollar, Schaeffer, Skelton, Stine, Lateer-Huhn & Poth, 2008, p. 876). Training methodology and content should be evidence-based, including best practices in adult learning that incorporate systematic practice, modeling and coaching (Donelson & Donelson, 2010, p. 36).

Senge (1990) recognizes the importance of visionary leadership and clear communication of the benefits of change to all stakeholders. School leadership also works toward developing a shared vision that captures all stakeholders’ input. Mellard, Prewett and Deshler (2012) note that effective leaders set the stage in their districts for successful implementation of a RTI/MTSS by creating awareness and understanding of the benefits of this framework. Likewise, Feuerborn, Sarin and Tyre (2011) found that building staff members’ awareness of, knowledge of, and interest in RTI/MTSS facilitated staff buy-in. Finally, Kendrick, Jones, Bezanson and Petty,
(2006) note that “while leadership is central in mobilizing and influencing people, effective systems change requires experienced, realistic, and skillful leaders who can cooperate effectively to spark progress and vision” (p. 6).

Development of effective leadership teams and sufficient infrastructure is critical to RTI/MTSS implementation. In education and social services literature, researchers have identified various stages of system change: readiness/exploration, infrastructure and implementation (Adleman & Taylor, 1997; Fixon, Naoom, Blasé & Wallace, 2007; McGlinchey & Goodman, 2008).

Although there are subtle differences in researchers’ stages of change, the initial stages are very similar. “Systems change is not linear as these stages are reciprocal in nature, and one stage overlaps and informs the other” (Donelson & Donelson, 2010, p. 39). The conceptual framework that is applied in the implementation stages is the Model-Lead-Test Format: “Modeling is central to exploration and consensus building; leading is central to infrastructure development; and the testing of new practices is central to implementation “(Donelson & Donelson, 2010, p. 52).

Educator understandings, beliefs, and perceptions about reform are key factors in generating the capacity and commitment needed to enact desired changes of educational reform (Sergiovanni, 2005; Fullan, 2007).

**School-based personnel perceptions**

School culture is the context for systems change. Schmoker (1999) claimed that cultural transformation should be at the core of any school reform effort. “A school’s performance will never improve until the school culture is one where people feel valued, safe, and share the goal of self-improvement” (Delisio, 2005, p. 1). Positive school culture contributes to the success of
schools and is a strong indicator of academic student success (Van Horn, 2003). The prevailing culture within the school serves a purpose in providing structure and rationale for how curriculum is chosen, how teachers teach, what resources are allocated, and how decisions are made (Donelson & Donelson, 2010). The move to RTI/MTSS implementation is sometimes a challenge to a school’s existing culture—the common assumptions, beliefs, and behaviors within a school (Murphy & Lick, 2005).

“Assumptions in a school are relatively invisible but may control the view of what is a priority and how problems should be approached” (Donelson & Donelson, 2010, p. 57). For example, sometimes assumptions are made about the potential of students with lower intellectual reading ability. This in turn may lead to low student expectations as well as poor choices in curriculum and instruction; and yet evidence indicates that the majority of students can be taught to read when more explicit and systematic instruction is utilized.

Perceptions often guide thoughts about what individuals should believe and how to behave. Beliefs are the accepted truths or ideas a group of people hold regarding what is right or wrong or good or bad. A substantial body of research suggests “educators’ beliefs about student learning and teaching affect their instructional strategies and their willingness to implement new practices” (Fang, 1996, as cited by Castro-Villarreal, Rodriguez & Moore, 2014, p. 105).

The passionate beliefs of educators are based on numerous assumptions about how students learn, what instructional methods are best, and when intervention is needed (Donelson & Donelson, 2010). Castillo et al. (2010) argued that implementation of new practices are most successful when “educators understand the need for the practice and perceive that they either have the skills to implement the practice or will receive support to develop the required skills” (p. 84).
According to Greenfield, Rinaldi, Proctor and Cardarelli (2010), teachers’ perceptions are an important aspect of any school reform effort. Moreover, research on the change process concluded that “successful adoption and implementation of reform begins at the individual (teacher) level” (Hall & Hord, 2006, p. 304).

Educators’ beliefs and perceptions may enhance or challenge the implementation, fidelity and sustainability of RTI/MTSS. Therefore, it is important to bring educators’ perceptions to the forefront so that district administrators can identify strengths and challenges that staff encounter as they implement a RTI/MTSS model of instruction. This information will allow administrators to adjust and improve the RTI/MTSS process in order to benefit students and staff.

Summary

Two main bodies of literature were investigated for this literature review. A comprehensive review of RTI/MTSS provided this researcher with a sound understanding of the goals of a RTI/MTSS framework, a conceptualization of RTI/MTSS, the critical components of an effective RTI/MTSS model of service delivery and the significance of fidelity measures for successful RTI/MTSS implementation.

The second body of literature that was examined was educator’s perceptions about adopting new innovations and how educator perceptions about new programming can enhance or hinder fidelity of implementation. This information was instrumental because it allowed the district of this research to understand how to support the educators involved in the RTI/MTSS implementation. As with any change or initiative, problems occur in many areas including, but not limited to, fidelity of implementation, acceptance of the policy or legislature, and teacher buy in (Werts, Carpenter & Fewell, 2014). Change initiatives such as the development of identification and early intervention require the understanding of the perceived needs of
educators who must implement the process (Fixen, Blasé, Metz & Van Dyke, 2013). Failure to address teachers’ concerns may result in problems related to implementation, including resistance to the initiative (Werts, Wolery, Snyder & Caldwell, 1996). Teacher opinions and perceptions are a source of data that facilitate successful implementation of initiative (Darling-Hammond, 1997; Fuchs, Fuchs & Compton, 2012; Jenkins, Schiller, Blackorby, Thayer & Tilly, 2013).

Vygotsky’s (1934/1978) socio-cultural theory supports the research questions of this qualitative research study and the utilization of a tiered framework of instruction as a means to decrease the number of students with debilitating gaps in their learning and to increase student achievement. It is critical for teachers (MKO) to develop an understanding of their students and establish a baseline of each student’s strengths and areas of need. Once they determine each student’s ZPD, educators can tailor their instructional practices to meet the unique needs of each student.
Chapter III: Research Design

Methodology

A qualitative case study is a methodology used in research to examine an everyday, real world event, person or group. Stake (1995) suggests that descriptive case study is used to develop a document that illuminates the intricacies of an experience. Since it is the intent of this researcher to develop a rich, thick, description about the experiences of elementary educators as they implement an RTI/MTSS framework, a descriptive case study methodology was chosen for this investigation. This qualitative research approach has provided the researcher with a means to examine and gain insight about a real-life event (Yin, 2009) from the viewpoint of the participants in this study. The real-life event that this study has illuminated is the fidelity of implementation and sustainability of an RTI/MTSS service delivery model.

The goal of this qualitative study was to investigate how and to what extent school based practitioners in one suburban Massachusetts school district perceive the process, structures, fidelity of implementation and the impact of an RTI/MTSS model in the teaching and learning of students. Today’s practitioners are functioning in an era of heightened teacher accountability and with an increased focus on student outcomes. Consequently, school district administrators must be able to ensure that all students have equitable access to quality instruction. An RTI/MTSS framework provides a structure for delivering instruction at different levels of intensity in order to meet the individual needs of all students.

Another hallmark of case study is the use of multiple data sources for evidence. Sources of data in this study include student assessment data, interviews, documents and artifacts related to the school’s implementation of their RTI/MTSS program, and administrators’ and teachers’ observations and perspectives on the implementation of RTI/MTSS in their school and its impact.
on student learning. Qualitative case study constitutes a specific way of collecting, organizing and analyzing data (Patton, 2002). The purpose of this process is to ensure that researchers gather in-depth information about the case being examined. These thick rich descriptions will enable readers to appreciate and ultimately to derive a deep understanding of the phenomenon being studied (Geertz, 1973). Descriptive case study methodology allows researchers to collect rich, “thick” description and gain deep insight into the research problem being explored (Merriam, 2009, p. 43).

According to Maxwell (2005), the research questions are the heart, or hub, of the model; the questions connect all the other components of the design, and should inform, and be sensitive to, this component (p. 65). This researcher has identified the following overarching question as the focus of this qualitative case study investigation of a suburban Massachusetts district: How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?

By focusing on Vygotsky’s sociocultural concept of zone of proximal development (ZPD), this researcher framed the investigation to incorporate both social, collaborative learning activities, and students’ cognitive learning to answer the research questions of this study (Ellis & Barkhuizen, 2005, as cited by Allahyar & Nazari, 2012, p. 82). Therefore, zone of proximal development (ZPD), more knowledgeable other (MKO) and dynamic assessment (DA) concepts support an RTI/MTSS model. Students are interacting with staff and each other. In addition, students are provided with extended time on learning, and with scaffolded instruction, which is matched to their individual needs using a tiered model of service delivery. Student data gathered from progress monitoring activities support the MKO to understand each student’s ZPD (actual
and potential learning ability). This data also provided staff with the necessary information needed to differentiate instruction and to make informed decisions about placing students in additional tiers of instruction in order to enhance student learning.

The following sub-questions served to elicit the information that informed the researcher of the factors that either facilitated or hindered the implementation of an RTI/MTSS model based on the perceptions of school based educators.

a) What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?

b) What barriers hinder the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?

c) What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by the grade two team members, support staff and the building administrator?

This researcher is confident that the data collected and analyzed from this investigation will identify educator perceptions that facilitate or challenge effective fidelity of implementation and sustainability of a multi-tiered system of supports within the school.

**Research Design**

In a qualitative study, “research design should be a reflexive process operating through every stage of a project” (Hammerseley & Atkinson, 1995, p. 24 as cited by Maxwell, 2005). Qualitative research allows researchers to build upon their prior knowledge around a topic using a “systematic process” of investigation (Merriam, 2009, p. 4). Therefore, a qualitative descriptive case study was used to address this study.
One of the goals of this investigation was to inform the current status and effectiveness of the fidelity of implementation of an RTI/MTSS process in one Massachusetts school district. The research design links the research questions, the data collection, and the strategies for analyzing the data to ensure that a study’s findings will address the intended research questions (Yin, 2011). Merriam (2009) describes qualitative research as a process in which the researcher seeks to understand “how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (p. 5). A descriptive case study describes an intervention or phenomenon and the real-life context in which it occurs (Yin, 2003). Constructivists claim that truth is relative and that it is dependent on one’s perspective (Baxter & Jack, 2008, p. 545). As such, teachers’ perceptions were used to inform and answer the research questions posed in this study. One of the advantages of this paradigm is the close collaboration between the researcher and the participant, while enabling participants to tell their stories (Crabtree & Miller, 1999 as cited by Baxter & Jack, 2008, p. 545). Through these stories, the participants were able to describe their views of reality and enable the researcher to understand the participants’ actions (Lather, 1992).

This study was approached through an interpretive perspective that assumed that there is not a single reality, but multiple realities based on individual experiences and that a researcher’s role is to construct the meaning that the participants ascribe to the phenomenon being studied (Merriam, 2009). This researcher, along with the participants, was involved in a process in which meaning was co-constructed through mutual engagement (Hatch, 2002, p. 148). This researcher sought to interpret the complexity of reality through participants’ understandings of their experiences. Qualitative strategies are appropriate when seeking to understand the perspective of study participants because these strategies assist researchers who are interested
“not only in the physical events and behavior that is taking place but also in how the participants in the study make sense of this and how their understandings influence their behavior” (Maxwell, 1996, p. 17).

The research methods that were used to cross-validate findings, patterns and conclusions were student assessment data, qualitative interviews, documents, and a focus group interview. This researcher also maintained a fieldwork journal. Note taking was used to highlight the actions in the field and to capture the participant’s words verbatim (Yin, 2011). Field notes were also used to inform the analysis of preliminary themes, key events and strategies by “facilitating analytic thinking” (Maxwell, 2005, p. 96).

Table 1

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<tr>
<th>Overarching Research Question</th>
<th>Data Sources</th>
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<td>How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?</td>
<td>Student assessment data</td>
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<td>Interview questions</td>
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<td>Focus Group Interview</td>
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<th>Sub Questions</th>
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<td><strong>a). What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators?</strong></td>
<td>Interview questions</td>
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<td>Educator’s Survey</td>
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<td>Focus Group Interview</td>
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<td><strong>b.) What barriers impact the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?</strong></td>
<td>Interview questions</td>
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<td><strong>c.) What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by the grade two team members, support staff and the building administrator?</strong></td>
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Research Tradition

A qualitative descriptive case study was used to conduct this study. As Merriam (1998) notes, “Research is after all, producing knowledge about the world—this case, the world of educational practice” (p. 3). Qualitative case study allows the researcher to explore individuals or organizations, simple through complex interventions, relationships, communities or programs (Yin, 2003). Consequently, “case study is valuable to researchers developing theory, evaluating programs, and developing interventions due to the rigor and flexibility of this approach” (Baxter & Jacks, 2008, p. 454).

This study met the criteria set forth by Yin (2009). Case studies are the preferred method when “contemporary phenomenon or rich events are queried using “how” or “why” questions and the investigator has little control over events” (p. 2). Within a case study methodology the phenomenon or issue is explored through a case that exists within a bounded system (Creswell, 2007). Merriam (2009) uses a more standard definition to convey understanding of a qualitative research case study by stating that a “case study is an intensive description and analysis of a bounded phenomenon or social unit such as an individual, a program, a group, an institution, or community” (p. 8). This case study was bounded by focusing on the principal, literacy coach, psychologist, special educator and three second grade general education teachers in one Massachusetts school district and their perceptions concerning the implementation of an RTI/MTSS model.

Participants and Site

During fiscal year, 2015-2016, elementary staff, administrators and this researcher were exploring the implementation of RTI/MTSS as a service delivery model in the teaching and learning of elementary students. The goal was to meet the individual needs of all students by
determining each student’s ZPD and having staff (MKO) design instruction that aligned with the individual needs of all students based on data driven decision making.

The site for this study, School A, is one of three elementary schools (Schools A, B & C) participating in the implementation of an RTI/MTSS model of instructional service delivery for all students. Purposeful selection allows the researcher to choose research sites for a particular purpose (Leedy & Ormond, 2005). Given that time and site access was critical to the success of this case study, School A was chosen as the site of this research investigation. In addition, educators from School A expressed interest in probing into why student assessment data identified a significant number of students who were not meeting tier 1 benchmarks.

School A houses 220 students in grades 1-4. According to the Massachusetts Department of Elementary and Secondary (MADESE) Accountability Report, the ethnic breakdown of students is: 77.9% are white; 5.4% African Americans; 1.4% Asian; 10.6% Hispanic and 4.6% Multi-Race. Selected populations include 8.6% Limited English Proficient students, 13.8% special education students and 51.2% low income students (MADESE, 2016). All Massachusetts schools and districts with sufficient data are classified into one of five accountability and assistance levels, with those meeting their gap-narrowing goals in Level 1 and the lowest performing in Level 5. In order for a school to be classified into level 1, the cumulative progress and performance index (PPI) must be 75 or higher, otherwise the school is classified as level 2 (MA Accountability Report, 2016). School A is a level 2 school.

Qualitative inquiry typically focuses on relatively small samples selected purposefully (Patton, 2002, p. 230). The participants in this study were chosen through purposeful sampling. This is a strategy in which particular settings, persons, or activities are selected deliberately in order to provide information that can’t be derived as well from other choices (Maxwell. 2005, p.
Purposeful sampling also focuses on selecting information rich cases whose study will illuminate the questions guiding the study (Patton, 2002). Since the purpose of this study was to gain in-depth understanding and insight into the perspectives of personnel directly involved in the implementation of a tiered model of evidence based instruction, the use of purposeful sampling provided ample data related to the research questions.

The participants this researcher solicited, due to their direct involvement in the implementation of an RTI/MTSS model of instruction, were the building principal, the building psychologist, a literacy coach, a special education teacher and three second grade teachers. Each participant was recruited to take part in individual interviews, a self-report survey document, and a focus group interview to provide this researcher with her perceptions about the effectiveness of a tiered model of instruction on student learning. The special educator and the three second grade classroom teachers also completed a self-report fidelity measure for guided reading.

Principals play a critical role as facilitators and supporters in the implementation of RTI/MTSS (Hamilton, 2010) because RTI/MTSS requires a significant cultural shift (Elliott, 2008; Putnam, 2008; Tilly, Harken, Robinson & Kurns, 2008). Educators must look at curriculum and/or the quality of instruction as a potential cause of student learning challenges prior to attributing the problem to something inherently wrong with the student. Principals are instrumental in developing schoolwide shared visions and securing building consensus or staff buy-in. For this reason, this researcher sought participation from the building administrator of the study site to garner her perspective with regard to the implementation of an RTI/MTSS model of instruction.
The school psychologist was purposefully selected also for this study due to her expertise in administering assessments, interpreting assessment findings and for making data informed decisions about student performance. By focusing more of her time on early intervention and preventive measures, the psychologist should be able to support students prior to a special education referral by assisting staff with progress monitoring, recommending evidence-based strategies/programs and identifying students in need of additional tiers of instruction. School psychologists are among the best-trained professionals in the school district to help develop, implement, and evaluate new models of service delivery (Canter, 2005). This building based psychologist is new to the district this year but has come to the district with several years of experience from previously working within a district in which RTI/MtSS was fully implemented.

In addition, this researcher included a literacy coach as part of the purposeful sample. The literacy coach has worked in the district for eighteen years, and supports all elementary staff by facilitating professional development, reviewing student data with staff and recommending and modeling evidence-based strategies and interventions for educators. Successful RTI/MtSS requires the willingness of literacy coaches to adapt a more systemic approach to serving schools, including a workload that reflects less traditional service delivery and more consultation and collaboration in general education classrooms (IRA, 2006).

A special education teacher was also purposefully solicited to participate in this researcher’s study. The special education teacher services students using multiple service delivery models which include co-teaching, a push in model and a pull-out model. As a result, the special educator is very supportive and collaborative with all colleagues by modeling evidence-based strategies/programs for general educators and consistently sharing the
responsibility for improving outcomes for all students she instructs. According to Stein (2010), special educators can play key roles in RTI/MTSS implementation by providing needed interventions and by collaborating with and supporting general education teachers.

Finally, three second grade general educators were selected to participate in this study. Second grade teachers expand student skills and knowledge and agree, “If the most teachable moments or stages of greatest readiness are not taken advantage of, a child may have difficulty learning a particular skill at a later time” (Smith, 1988, p. 2). Hernandez (2011, as cited by Sparks 2011) notes that, "Third grade is a kind of pivot point and if students haven’t succeeded by 3rd grade it's more difficult to [remediate] than it would have been if you started before then" (p. 5). Grade 2 staff members are working in classrooms that have a wide range of student needs. They are willing to develop small flexible student groupings, use differentiated instruction and implement RTI/MTSS as a service delivery model to strengthen their core instruction.

The unit of analysis, or the major entity this researcher has analyzed in this case study, is the group of educators that were interviewed. Data obtained from these individuals will be used to answer the research question of how and to what extent teachers perceive the process, structure, fidelity of implementation and impact of an RTI/MTSS model of instruction.

**Recruitment and Access**

In order to conduct the study at this site, the researcher had to gain permission and support from the superintendent of schools and the elementary building principal in this Massachusetts school district. A letter granting permission to conduct this research at the study site was requested from district administration (Appendix A). In addition, the researcher
completed an application for Approval for Use of Human Participants in Research and sought permission from the Institutional Review Board (IRB) at Northeastern University.

Through conversations and collaboration this researcher developed a positive working relationship with the building administrator. Negotiating this relationship allowed the researcher to gain the principal’s support to conduct the study in her building and to gain the information needed to answer the research questions guiding this investigation (Maxwell, 2005, p. 83). A recruitment letter was given to the administrator and each staff member (Appendix B) asking them to volunteer for the study. Next, this researcher emailed individuals solicited to participate in this study to provide them with a written explanation of the research and to ask if they would be willing to participate in this study. Finally, a follow up email with a consent form attached, was sent to individuals who agreed to participate in this study.

This informed consent included the ways in which participants would benefit, their right to withdraw at any time, and steps that were taken to ensure confidentiality (Creswell, 2009). Pseudonyms were used for both the participants as well as the study site in order that both the participants and the site of this study remained anonymous. Research with human participants carries ethical obligations “to respect their autonomy, minimize their risks of harm, maximize their benefits and treat them fairly” (Yin, 2011, p. 44). This researcher was transparent, truthful and conducted this investigation with accuracy and integrity.

Data Collection

Yin (2003) states “A hallmark of case study research is the use of multiple data sources, a strategy which enhances data credibility” (as cited by Baxter & Jack, 2008, p. 554). In addition, qualitative studies generally rely on the integration of data from a variety of methods and sources of information, a general principle known as triangulation (Denzin, 1970). This method of data
collection has resulted in a broader understanding of the issue being examined and has helped to reduce bias that could have resulted from a single source of evidence (Maxwell, 2005). In most cases, the use of multiple sources of data enhances the findings of a study and is beneficial in establishing rich, thick description. Therefore, the following in-depth data collection processes was used to examine the implementation fidelity of a RTI/MTSS model: student assessment data, seven individual face to face interviews, a document review and a focus group interview.

**Figure 1.** Data collection flow chart

This researcher has reviewed and made sense of the data and organized it into categories and themes (Creswell, 2009, p. 175) which was used to create detailed, descriptive outcome reports. The particular theoretical framework that a researcher selects will “generate the problem of the study, specific research questions, data collection and analysis techniques, and how you will interpret your findings” (Merriam, 2009, p. 67). Vygotsky’s socio-cultural theory (1934/1978) has been applied to shape this study's analysis by focusing on Vygotskian tenets MKO, ZPD, and DA. Vygotsky (1934/1978) suggests that student learning is facilitated when
students are supported by an educator or more knowledgeable other (MKO). In order for educators to advance student learning, the MKO must understand the developmental level (ZPD) of the child and establish a baseline for the student. This allows a MKO to build on the competencies the student has and to engage the student in activities slightly beyond where the child is functioning. DA or progress monitoring allows the teacher to understand the intensity of instructional tiers a student may need to increase learning outcomes.

**Student assessment data.** The first method of data collection that was utilized during this study was an in-depth analysis of the 2015-2016 fall, winter and spring Dynamic Indicators of Early Literacy Skills (DIBELS) results. This process enabled the researcher to gain insight into the components that facilitate or act as barriers to the implementation and fidelity of a RTI/MTSS model of curriculum, instruction and student learning.

DIBELS measures are designed to monitor the long-term development of early literacy and reading skills. DIBELS measures can also be used to indicate the effectiveness of instruction (Kaminsky, Cummings, Powell-Smith & Good, 2008). According to Guskey (1997) “assessments must be followed by high-quality, corrective instruction designed to remedy whatever learning errors the assessment identified” (p. 8). Examining classroom assessment results and developing alternative strategies can be highly effective for increasing student performance. Analysis of the student assessment data focused on identifying trends concerning student performance and was shared with the participants prior to the individual semi-structured interviews.

The data sets that were collected and analyzed by this researcher included Nonsense Word Fluency-Correct Letter Sounds (NWF-CLS), Nonsense Word Fluency-Whole Words Read, (NWF-WWR), Oral Reading Fluency-Words Read Correct, (ORF-WRC) and Oral
Reading Fluency- Words Read Accurately, (ORF-A). A group of educators were trained in administering the DIBELS Assessments. This assessment team administered the DIBELS to all elementary students to ensure assessment fidelity. These DIBELS subtests were examined to identify the percentage of grade two students at benchmark (tier 1) to identify students somewhat below benchmark and needing support (tier 2) and to identify students well below benchmark, needing intensive support (tier 3). NN will represent the number of students in each tier.

Table 2

*DIBELS Nonsense Word Fluency (NWF) Correct Letter Sound (CLS) This sub test is only administered in the fall.*

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2- Class 1 2015-2016</th>
<th>Grade 2- Class 2 2015-2016</th>
<th>Grade 2- Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Low Risk/ (yellow)</td>
<td>NN=</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

The Nonsense Word Fluency (NWF) Correct Letter Sound (CLS) is a standardized test, administered to individual students in the fall only, to measure letter sound correspondence. Students must read vowel-consonant (VC) and consonant- vowel-consonant (CVC) nonsense words randomly. The student is allowed one minute to produce as many letter-sounds as she/he can. The final score is the number of letter sounds produced correctly in one minute. Since this measure is fluency based, students receive a higher score if they are phonologically recoding words rather than providing letter sounds in isolation. McCook, 2006 suggests that if less than
80% of students are meeting grade level benchmarks through the general education classroom, the issue is usually with curriculum or instruction rather than student oriented.

Table 3

DIBELS Nonsense Word Fluency (NWF) Whole Words Read (WWR) This sub test is only administered in the fall.

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2- Class 1 2015-2016</th>
<th>Grade 2- Class 2 2015-2016</th>
<th>Grade 2- Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

The intent of the Nonsense Word Fluency (NWF) Whole Words Read (WWR), which was administered in the fall 2015 only, is to measure a student’s ability to read unfamiliar words as whole words rather than just name letter sounds. Students must be able to blend letter sounds together and to understand systematic relationships between letters and phonemes in order to read and decode words.
Table 4

**DIBELS Oral Reading Fluency (ORF) Words Read Correct (WRC)**

<table>
<thead>
<tr>
<th>Oral Reading Fluency</th>
<th>Grade 2- Class 1 2015-2016</th>
<th>Grade 2- Class 2 2015-2016</th>
<th>Grade 2- Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
<td>%=</td>
<td>%=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
<td>%=</td>
<td>%=</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
<td>%=</td>
<td>%=</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
<td>%=</td>
<td>%=</td>
</tr>
</tbody>
</table>

Oral Reading Fluency (ORF) Words Read Correct (WRC) is a standardized set of passages and administration procedures designed to monitor student progress towards instructional goals and to identify students who need additional instructional support. The ORF-WRC is administered three times a year, fall, winter and spring. Student performance was measured by having students read a passage aloud for one minute. Words omitted, substituted and hesitations of more than three seconds were scored as errors. These errors often signal a decoding or word attack issue for students.
Table 5

*Oral Reading Fluency (ORF) Words Read Accurately (A)*

<table>
<thead>
<tr>
<th>Oral Reading Fluency</th>
<th>Grade 2- Class 1 2015-2016</th>
<th>Grade 2- Class 2 2015-2016</th>
<th>Grade 2- Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=</td>
<td>NN=</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

Oral Reading Fluency is one of the better predictors of students becoming competent readers for students in grade one through six. It is administered in the fall, winter and spring. Words self-corrected in three seconds are scored as accurate. The number of words read correct in one minute from the passage is the oral reading fluency rate. If a student is accurate but reads slow, it may be an indication that the child lacks automaticity and needs practice in reading text. Analysis of the student assessment data allowed this researcher to look for trends in the data concerning student performance. Student data was shared and discussed with study participants to inform the semi-structured individual interviews.

This process provided the participants with a context to reflect upon whether they, as the educators working with their students, had a sound understanding of the evidence-based curriculum they were using to instruct their students or whether they perceived a need for additional training. Discourse about student assessment data also provided participants with a forum to discuss their instructional practices and how to enhance or change these practices to support increased student performance and provide teachers with an opportunity to express their
opinions about program/intervention fidelity and how fidelity or lack of fidelity may have a bearing on student outcomes. Finally, teachers had an opportunity to comment on how they perceived the impact a tiered model of instruction had on student achievement. Discussion included teacher perceptions about necessary resources, teacher understanding of supporting students by providing them with additional tiers to meet their individual needs and the fidelity of implementation of a RTI/MTSS model in their school.

**Qualitative interviews.** Interviews are an important source of evidence in case study research. The information garnered from interviews is beneficial because it reveals information based on the participant’s perspective which in turn enables the researcher to understand the research topic (Yin, 2009, p. 107). It is for this reason that this researcher chose to use open-ended semi structured interview questions and probes as the second data source (See interview protocols in Appendix D). Qualitative interviews are conversational in nature and lead to a social relationship of sorts, with the quality of the relationship individualized to every participant (Yin, 2009).

Seven participants in this study have participated in individual, face-to-face, recorded interviews lasting approximately from forty-five to sixty minutes long. Participants included the principal, the literacy coach, a psychologist, a special education teacher and three second grade teachers. The interviews focused on eliciting responses from individuals to uncover their beliefs, practices, and perceptions concerning the fidelity of implementation of an RTI/MTSS model of instruction

Each participant was asked to grant permission to this researcher to record the interviews in order to ensure accuracy. The actual dates and times for the interviews, were scheduled at the convenience of each participant outside of normal school hours. The interview protocol
followed standard research guidelines that allowed participants to skip questions or end the interview at any time. All interviews were transcribed verbatim and coded for further data analysis. Transcripts were then sent to interview participants for member checking, a process that allowed the participants to review their statements for accuracy. Member checking is primarily used in qualitative inquiry methodology and is defined as a quality control process by which a researcher seeks to improve the accuracy, credibility and validity of what has been recorded during a research interview (Coffey & Atkinson, 1996; Doyle, 2007; Lincoln & Guba, 1985, as cited by Harper & Cole, 2012, p. 510).

The interview questions have been framed within Vygotsky’s (1938/1978) theoretical framework. The educators or MKOs model, scaffold and differentiate instruction using a gradual release of responsibility model. The student’s ZPD informs educators as to the amount of assistance or the levels or tiers each student will require to learn a concept or perform a task. This researcher seeks to answer questions about teachers’ perceptions about the impact, structures, processes and fidelity of implementation of an RTI/MTSS model of instruction.
<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Research Questions</th>
<th>Vygotsky’s Theoretical Framework (1934/1978)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you define RTI/MTSS to someone who is unfamiliar with this concept?</td>
<td>How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?</td>
<td>Tiered learning/extended time on learning; More knowledgeable other (MKO); Identify student baseline/zone of proximal development (ZPD); Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment (DA) or progress monitoring</td>
</tr>
<tr>
<td>2. RTI/MTSS has been described as an approach that provides a continuum of supports for all learners and a model in which responsibility for individual student progress is shared by all educators. Do you agree with these principles? Please explain.</td>
<td>How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?</td>
<td>Tiered learning/extended time on learning; the role that socialization has in acquiring and providing knowledge among staff and students; MKO; ZPD; DA</td>
</tr>
</tbody>
</table>

What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators?

What barriers impact the implementation of an RTI/MTSS model as perceived by elementary educators?
3. Please describe how an RTI/MTSS meeting proceeds once a student is identified as struggling and has been referred to the building based support team.

How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?

What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators?

What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by elementary educators?

Tiered learning/ extended time on learning; the role that socialization has in acquiring and providing knowledge among staff and students; MKO; ZPD; DA

Data-based decision making

4. Please describe progress monitoring: How do you use and analyze assessments (formal, informal, student work samples) to inform instructional practices for small flexible groups of students and/or individual students?

How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?

What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators?

MKO; ZPD; DA

Data-based decision making tiered learning/ extended time on learning; Differentiated instruction;
5. How are evidence-based instructional methods and interventions selected? Describe how you scaffold learning activities and differentiate instruction to meet the needs of individual students.

How do educators in one Massachusetts school district perceive the impact, process, structures and fidelity of implementation of RTI/MTSS?

- What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by elementary educators?

6. How do you use data to determine if a student requires tier 2 interventions? How do you use data to determine if a student requires tier 3 interventions?

How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?

MKO; ZPD; DA
Data-based decision making;
Scaffolded learning tasks;
Differentiated instruction;
gradual release of responsibility;

7. Describe how a student’s responsiveness to interventions is monitored. What assessment tools are used for progress monitoring? How is fidelity of implementation measured?

What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by elementary educators?

MKO; ZPD; DA
Progress monitoring;
Data based decision making;
gradoptal release of responsibility (student centered rather than teacher centered)

How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?
8. Describe the components of RTI that you believe are most critical for successful implementation of RTI/MTSS.

| How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model? |
| MKO; ZPD; DA; tiered learning/extended time on learning; More knowledgeable other (MKO); Identify student baseline/zone of proximal development (ZPD); Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment (DA) or progress monitoring |

9. Please comment on your school's tier 1, core literacy curriculum. Are curriculum, instruction, and assessment aligned between grades and across classrooms at the same grade levels?

| How do educators in one Massachusetts school district perceive the impact, process, structures and fidelity of implementation of RTI/MTSS? |
| What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by elementary educators? |
| MKO; ZPD; DA; Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment (DA) or progress monitoring; the role that socialization has in acquiring and providing knowledge among staff and students; |

10. Please discuss types of professional development/trainings that were provided for staff? How did PD training prepare/support staff for RTI/MTSS implementation in your school?

<p>| How do educators in one Massachusetts school district perceive the impact, process, structures and fidelity of implementation of RTI/MTSS? |
| What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators? |
| MKO; ZPD; DA; Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment (DA) or progress monitoring; the role that socialization has in acquiring and providing knowledge among staff and students; |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. In your opinion, how effective is the RTI/MTSS model of instruction in meeting the individual needs of students?</td>
<td>How do educators in one Massachusetts school district perceive the impact, process, structures and fidelity of implementation of RTI/MTSS? What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators? MKO; ZPD; DA; tiered learning/extended time on learning; Differentiated instruction</td>
</tr>
<tr>
<td>12. Please describe any changes in staff practices, roles and/or responsibilities as a result of RTI/MTSS implementation?</td>
<td>How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model? MKO; ZPD; DA; Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment(DA) or progress monitoring; the role that socialization has in acquiring and providing knowledge among staff and students;</td>
</tr>
<tr>
<td>13. Proponents of a multi-tiered, RTI/MTSS approach believe that it provides a framework for school improvement on two fronts: Early detection of “at risk students” and early intervention. In your opinion, has the implementation of RTI/MTSS affected the process of referring students for special education? If so, please give examples.</td>
<td>How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model? MKO; ZPD; DA; Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment(DA) or progress monitoring; the role that socialization has in acquiring and providing knowledge among staff and students; Data-based decision making</td>
</tr>
<tr>
<td>14. Is there anything that I have not asked that you believe is relevant to RTI/MTSS fidelity of implementation?</td>
<td>How do educators in one Massachusetts school district perceive the impact, process, structures and fidelity of implementation of RTI/MTSS? MKO; ZPD; DA; Scaffolded learning tasks; Differentiated instruction; the role that socialization has in acquiring and providing knowledge among staff and students;</td>
</tr>
</tbody>
</table>
**Documents.** Collection of evidence through documents is useful within case study research to corroborate and augment evidence collected through other sources (Yin, 2009). A systematic procedure for finding relevant documents evolves from the topic of inquiry. Documentary data are good sources for qualitative case studies because these ground an investigation in the context of the problem being investigated (Merriam, 1998). The problem that was examined in this case study was the significance of fidelity measures to ensure that the implementation process and components of RTI/MTSS are implemented with adherence to this framework’s design features. Documents that were analyzed include a self-report fidelity measure for guided reading and a self-report survey.

Fidelity measures impact every facet of a RTI/MTSS model. For this reason, a linear logic model has been used to depict the importance of fidelity in all facets of an RTI/MTSS model for successful implementation. A program logic model links outcomes (both short- and long-term) with program activities/processes and the theoretical assumptions/principles, following the chain of reasoning or “If...then...” statements which connect a program’s parts (Kelloggs Foundation, 2004, p. 2).

*Figure 2.* Linear Logic Model (adapted from Mellard, 2009, p. 6)
This logic model visually displays the critical components of an RTI/MTSS model of instruction and suggests, if the critical components of an RTI/MTSS model are implemented with fidelity, then student outcomes should improve.

The impact which evidence-based interventions have on student achievement is related to the extent to which the intervention is delivered with fidelity. Goodwin (2011) highlighted five gold-standard literacy research studies, funded by the U.S. Department of Education, which yielded disappointing findings. Although these evidence-based programs were thoughtfully designed and were recognized for improving student outcomes, little to no effects of the intervention on the targeted child outcomes in the gold-standard literacy research studies occurred. A closer examination of these research studies revealed that the intervention was not implemented as designed. Inconsistent adoption of program procedural steps, lack of required frequency that students were seen and an inadequate length of time students were seen had a negative impact on student outcomes.

Measuring and understanding fidelity of RTI/MTSS implementation allows educators to determine why an intervention didn’t work or did not achieve the expected outcome. A self-report document fidelity checklist measure (Appendix F) will be utilized to monitor educator’s fidelity of curriculum instruction, of Guided Reading. This researcher was granted permission from the City School District of Albany to adapt and use this document in this proposed study (Appendix F).
### Table 7

*Self-Report Fidelity Measure for Guided Reading*

**Self-Report Fidelity Checklist: Guided Reading**  
Adapted from the City School District of Albany (2013-2014)

<table>
<thead>
<tr>
<th>School:</th>
<th>Grade level:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher:</td>
<td>Observer</td>
</tr>
<tr>
<td>Date:</td>
<td>Time:</td>
</tr>
<tr>
<td>Comments/Notes:</td>
<td>_____________</td>
</tr>
</tbody>
</table>

#### Guided Reading

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
</thead>
</table>

#### Materials

- Teacher and students are prepared, organized and text is at the student’s instructional level.
- Teacher can see all students, students can see the teacher.

#### Duration & Frequency

- Session length is at least 15-20 minute sessions.
- Student takes part in guided reading daily.

#### Before the Reading

- Teacher briefly introduces the story, keeping in mind language, interest level, meaning and attention to words.
- Invite students to make predictions, raise questions, and anticipate the text.
- Point out unusual language structures- Have students hear them and say them.

#### During the Reading

- Teacher listens in as students read silently or aloud.
- Teacher confirms students’ problem-solving attempts and successes.
- Teacher interacts with students to assist with problem solving.
- Teacher makes notes about the strategy use of individual students.

#### After Reading

- Teacher talks about the story with the students.
- Teacher returns to the text for one or two teaching opportunities.
- Teacher assesses the students’ understanding of what he/she read.
- Teacher uses appropriate question stems based on Bloom’s Taxonomy and discusses the story with students.
- Teacher reteaches as needed.
- Teacher may provide instruction in word work when needed.

#### Effective Instructional Strategies

- Instruction is well paced.
- Teacher employs immediate corrective feedback.
- Teacher transitions smoothly from one exercise to the next.
- Expectations are clear (posted/stated and or referred to).
- Teacher provides positive reinforcement/specific praise.
- Students are on-task and/ off task behavior is addressed.
In addition, a self-report educator’s perception survey was included as part of the document review. Case study research is unique in that the collection and integration of survey data assists researchers in obtaining a holistic understanding of the phenomenon being studied (Baxter & Jacks, 2008). The Perceptions of RTI/MTSS Practices Survey (Castillo, Batsche, Curtis, Stockslager, March & Minch, 2010) is a self-report measure developed by the Florida Department of Education and the University of South Florida (Appendix F). This researcher was granted permission by Dr. Castillo to use this survey (Appendix F). Findings of this survey have assisted district administrators in evaluating which factors contribute to and/or hinder the implementation of a RTI/MTSS model of instruction.

Research suggests that educators implement new practices when they understand the need, feel supported and perceive they have the skills necessary for successful implementation (Castillo, Batsche, Curtis, Stockslager, March & Minch, 2010). Educators’ reasons for implementing new practices are based on student assessment data that is below expected outcomes, confidence that a new practice will improve student outcomes or acknowledgement that a practice is not being implemented with fidelity.

The Perceptions of Practices Survey contains 38 items that assess educators’ perceptions regarding the extent to which RTI/MTSS practices are being implemented at their school and their perceptions about the skills they possess to successfully implement RTI/MTSS practices. Discrepancies found between what educators report believing about educational practices and what they report happening in their schools can provide an impetus for change (Castillo, Batsche, Curtis, Stockslager, March & Minch, 2010). Themes and patterns that emerged from the document review were used to substantiate findings derived from the student assessment data and the individual semi-structured interviews.
Table 8
The Perceptions of Practice Survey items 1-20 (Castillo, Batsche, Curtis, Stockslager, March & Minch, 2010)

**Educator’s Perception of RTI/MTSS Practices Survey**
(Adapted from Florida’s Technical Assistance Manual)

**Directions:** For each item on this survey, please indicate how frequently or infrequently the given practice occurred in your school for both academics (i.e., reading and math) during the 2015-2016 school years. Please use the following response scale:

Never Occurred (NO), Often Occurred (OO), Rarely Occurred (RO), Always Occurred (AO), Sometimes Occurred (SO)

<table>
<thead>
<tr>
<th>In My School…</th>
<th>(NO)</th>
<th>(RO)</th>
<th>(SO)</th>
<th>(OO)</th>
<th>(AO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Data (e.g., Curriculum-Based Measurement, DIBELS, PARCC) were used to determine the percent of students receiving core instruction (general education classroom only) who achieved benchmarks (district grade-level standards) in ELA/Math</td>
<td></td>
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<tr>
<td>2. Data were used to make decisions about necessary changes to the core curriculum to increase the percent of students who achieved benchmarks (district grade-level standards) in Math and ELA</td>
<td></td>
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</tr>
<tr>
<td>3. Data were used (e.g., Curriculum-Based Measurement, DIBELS) to identify at-risk students in need of supplemental and/or intensive interventions for ELA and Math:</td>
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<tr>
<td>4. The students identified as at-risk routinely received additional (i.e., supplemental) intervention(s) for ELA and Math:</td>
<td></td>
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</tr>
<tr>
<td>5. Progress monitoring occurred for all students receiving supplemental and/or intensive interventions for ELA and Math:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>In My School….</strong></td>
<td>(NO)</td>
<td>(RO)</td>
<td>(SO)</td>
<td>(OO)</td>
<td>(AO)</td>
</tr>
<tr>
<td>6. A standard protocol intervention (i.e., the same type of intervention used for similar problems) was used initially for all students who required supplemental instruction for ELA and Math:</td>
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</tbody>
</table>
Directions: Items 9-18 refer to the typical Problem-Solving Team (i.e., Student Support Team, Intervention Assistance Team, School-Based Intervention Team, Child Study Team) meeting in your school (2015-2016) that included a student who had been referred for problem-solving or a special education evaluation. While addressing each item for academics (math and reading), think of a typical case in which a student was referred for an academic concern. Then, please indicate how frequently each of the given practices occurred in your school using the same scale.

<table>
<thead>
<tr>
<th>In My School……</th>
<th>(NO)</th>
<th>(RO)</th>
<th>(SO)</th>
<th>(OO)</th>
<th>(AO)</th>
<th>(DK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. The target behavior was routinely defined in terms of the desired behavior (e.g. Susie will read 90 correct words per minute) instead of the problem behavior (e.g., Susie reads below grade-level) for academics:</td>
<td></td>
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</tr>
<tr>
<td>8. Quantifiable data (e.g., reading fluency score, percent compliance, percent on-task behavior) were used to identify the target student’s current performance in the area of concern for academics:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9. Quantifiable data (e.g., reading fluency score, percent compliance, percent on-task behavior) were used to identify the desired level of performance (i.e., the benchmark) in the area of concern for academics:</td>
<td></td>
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</tr>
<tr>
<td>10. Quantifiable data (e.g., reading fluency score, percent compliance, percent on-task behavior) were used to identify the current performance of same-age peers using the same data as the target student for academics:</td>
<td></td>
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<tr>
<td>11. The Problem-Solving Team routinely developed hypotheses (i.e., proposed reasons) explaining why the target student was not demonstrating the desired behavior for academics</td>
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<tr>
<td>12. Data were collected to confirm the reasons that the student was not achieving the desired level of performance for academics:</td>
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<tr>
<td>13. Intervention plans were routinely developed based on the confirmed reasons that the student was not achieving the desired level of performance for academics:</td>
<td></td>
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</tbody>
</table>
14. The teacher of a student referred for problem-solving routinely received staff support to implement the intervention plan developed by the Problem-Solving Team for academics:

15. Data were collected routinely to determine the degree to which the intervention plans were being implemented as intended for academics:

16. Data were graphed routinely to simplify interpretation of student performance for academics

17. Progress monitoring data were used to determine the degree to which the target student’s rate of progress had improved for academics:

<table>
<thead>
<tr>
<th>In My School….</th>
</tr>
</thead>
<tbody>
<tr>
<td>(NO)</td>
</tr>
</tbody>
</table>

18. Progress monitoring data were used to determine whether the gap had decreased between the target student’s current performance and the performance of same-age peers for academics:

19. Progress monitoring data were used to determine whether the gap had decreased between the target student’s current performance and the performance of same-age peers for academics:

20. A student’s response-to-intervention data (e.g., rate of improvement) were used routinely to determine whether a student was simply behind and could learn new skills or whether the student’s performance was due to a disability for academics:
**Directions:** Please read each statement about a skill related to assessment, instruction, and/or intervention below, and then evaluate **YOUR skill** level within the context of working at a school/building level. Where indicated, rate your skill separately for academics (i.e., reading and math). Please use the following response scale:

I do not have this skill at all (NS)
I have minimal skills in this area; need substantial support to use it (MnS)
I have this skill, but still need some support to use it (SS)
I can use this skill with little support (HS)
I am highly skilled in this area and could teach others this skill (VHS)

<table>
<thead>
<tr>
<th></th>
<th>In My School…….</th>
<th>(NS)</th>
<th>(MnS)</th>
<th>(SS)</th>
<th>(HS)</th>
<th>(VHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>I am able to access the data necessary to determine the percent of students in core instruction who are achieving benchmarks (district grade-level standards) in academics</td>
<td></td>
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<tr>
<td>22.</td>
<td>Overall, I can use data to make decisions about individuals and groups of students for the core academic curriculum</td>
<td></td>
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<tr>
<td>23.</td>
<td>In general, I can define the referral concern in terms of a replacement behavior (i.e., what the student should be able to do) instead of a referral problem for academics</td>
<td></td>
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<tr>
<td>24.</td>
<td>Use data to define the current level of performance of the target student for academics</td>
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<tr>
<td>25.</td>
<td>Calculate the gap between student current performance and the benchmark (district grade level standard) for academics</td>
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<tr>
<td>26.</td>
<td>Use gap data to determine whether core instruction should be adjusted or whether supplemental instruction should be directed to the target student for:</td>
<td></td>
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<tr>
<td>27.</td>
<td>Identify the most appropriate type(s) of data to use for determining reasons (hypotheses) that are likely to be contributing to the problem for academics</td>
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<tr>
<td>28.</td>
<td>Identify the appropriate supplemental intervention available in my building for a student identified as at-risk for academics</td>
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<td></td>
</tr>
</tbody>
</table>
29. Access resources (e.g., internet sources, professional literature) to develop evidence-based interventions for:
   a) Academic core curricula
   b) Academic supplemental curricula
   c) Academic individualized intervention plan

30. Ensure that the proposed intervention plan is supported by the data that were collected for academics

31. Provide the support necessary to ensure that the intervention is implemented appropriately

32. Determine if an intervention was implemented with fidelity or as it was intended

33. Construct graphs for large group, small group, and individual students
   a) Graph target student data
   b) Graph benchmark data
   c) Graph peer data
   d) Draw an aimline
   e) Draw a trend line

34. Interpret graphed progress monitoring data to make decisions about the degree to which a student is responding to intervention (e.g., positive, questionable or poor response).

<table>
<thead>
<tr>
<th>In My School…….</th>
<th>(NS)</th>
<th>(MnS)</th>
<th>(SS)</th>
<th>(HS)</th>
<th>(VHS)</th>
</tr>
</thead>
</table>

35. Use appropriate data to differentiate between students who have not learned skills (e.g., did not have adequate exposure to effective instruction, not ready, got too far behind) from those who have barriers to learning due to a disability

36. Collect Curriculum-Based Measurement

37. Collect DIBELS

37. Access data from appropriate district- or school-wide assessments
Fidelity measure/survey documents were viewed through the lens of Vygotsky’s (1934/1978) ZPDs. According to Vygotsky, in order for curriculum to be developmentally appropriate, the teacher or MKO must plan activities that encompass not only what children are capable of doing on their own but what they can learn with the help of others (Karpov & Haywood, 1998). Educators must have a good understanding of their students ZPD so that they match evidence-based interventions to the individual needs of students. In order to achieve expected outcomes, however, curriculum instruction and evidence-based interventions must be implemented with fidelity.

**Focus group interview.** A focus group interview is a qualitative technique for data collection that provides “a rich and detailed set of data about perceptions, thoughts, feelings and impressions of people in their own words” (Stewart & Shamdasani, 1990, p. 140) and brings a group of participants together to discuss a topic of mutual interest. The researcher moderates the flow of conversation to ensure that all participants have an opportunity to participate. This researcher’s intent for conducting a focus group interview was to gain additional, in depth information to add to what was gathered during the student assessment data, semi-structured individual interviews and the document analysis.

This qualitative focus group interview (Appendix E) was the final data set this researcher collected as well as the primary data set for this study. All seven participants engaged in the focus group interview. This focus group interview allowed the researcher the opportunity to corroborate and substantiate certain findings that were established through student assessment data, individual semi-structured interviews and through the document analysis. Findings from analyses of student assessment data, the semi-structured interviews and the document review was used to inform the focus group. Participants were provided with the themes that emerged from
the student assessment data, interviews and document review related to the overarching research question, how educators perceive the impact, process, structures and fidelity of a RTI/MTSS model. Information collected from the focus group is the primary source of data because the questions were generated based on the results and themes that emerged from the student assessment data, qualitative interviews and from the document review.

The purpose of a focus group interview is to collect high-quality data in a social context (Patton, 2002), during which time “the participants are influencing and are influenced by others—just as they are in real life” (Cassey and Krueger, 2000, p. 11). Participants may be more apt to express their thoughts and opinions during a group format than during individual qualitative interviews (Yin, 2011). The following set of questions was used to guide the focus group interview (Appendix E). The focus group interview questions were developed within the framework of Vygotsky’s sociocultural theory (1987). Vygotsky's sociocultural theory (1978) stresses the fundamental role of social interaction in the development of cognition. Vygotsky believed everything is learned on two levels. First, through interaction with others, and then integrated into the individual’s mental structure. A focus group provides participants with an opportunity to interact with others who share similar beliefs, perceptions and experiences. This researcher is confident that the data collected from this focus group has provided additional evidence to corroborate the finding of the student assessment data, qualitative interviews, and fidelity/survey documents.
### Focus Group Interview Questions Aligned with Research Questions and Vygotsky's Theoretical Framework (1934/1978)

<table>
<thead>
<tr>
<th>Focus Group Interview Questions</th>
<th>Research Questions</th>
<th>Vygotsky’s Theoretical Framework (1934/1978)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How confident are you in using DIBELS screening benchmarks and formative assessments (progress monitoring) to identify students at risk? How can you use these findings to enhance instructional decision making and improve student performance?</td>
<td>How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?</td>
<td>MKO; ZPD; DA; Data driven decision making; tiered learning/extended time on learning; RTI/MTSS is a rendition of the zone of proximal development (ZPD) in which the school practitioner or the more knowledgeable other (MKO) uses assessment to determine a student’s readiness level.</td>
</tr>
<tr>
<td>2. RTI/MTSS offers a continuum of supports based on student needs. How have the levels of instruction impacted student achievement? In your opinion, is the RTI/MTSS framework an effective instructional model? How has RTI/MTSS impacted instruction in your classroom? Please elaborate.</td>
<td>How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?</td>
<td>Tiered learning/extended time on learning; More knowledgeable other (MKO); Identify student baseline/zone of proximal development (ZPD); Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment (DA) or progress monitoring.</td>
</tr>
</tbody>
</table>
3. There is no way to determine whether unsuccessful student outcomes reflect a failure of the student responding to a particular curriculum/intervention or due to failure to implement the curriculum/intervention as intended. How have fidelity measures impacted student performances? Please give examples.

What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by elementary educators?

MKO; ZPD; DA; data driven decision making.

4. What benefits if any have you experienced since implementing an RTI/MTSS model of instruction? What barriers, if any have you experienced since implementing an RTI/MTSS model of instruction?

- What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators?

What barriers impact the implementation of an RTI/MTSS model as perceived by elementary educators?

- Tiered learning/extended time on learning; More knowledgeable other (MKO); Identify student baseline/zone of proximal development (ZPD); Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment (DA) or progress monitoring

5. Describe how the RTI/MTSS process has necessitated collaboration and communication among all staff. How does staff communicate and collaborate about student achievement for students requiring additional tiers of instruction from multiple instructors? How will staff ensure continued sustainability and fidelity of the RTI/MTSS implementation?

How do school based personnel’s perceptions of critical components impact RTI/MTSS implementation?

Tiered learning/ extended time on learning; the role that socialization has in acquiring and providing knowledge among staff and students; MKO; ZPD; DA

6. Based on your experiences, has tiered instruction helped you become more effective at meeting the unique and diverse needs of individual

How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process,

Tiered learning/extended time on learning; More knowledgeable other (MKO); Identify student baseline/zone of proximal development
What practices in particular have you identified as most effective for meeting the diverse needs of students you work with and as a result, have increased student performance?

What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by elementary educators?

(ZPD); Scaffolded learning tasks; Differentiated instruction; gradual release of responsibility; Dynamic Assessment (DA) or progress monitoring; the role that socialization has in acquiring and providing knowledge among staff and students;

Data Storage

Yin (2009) suggests researchers should compile an orderly set of records by creating a password secure case study database. A case study database will ensure the confidentiality and anonymity of the participants and the site of the proposed study. In addition, a database will provide easy access to the data by the researcher, as well as to furnish evidence for anyone that may question the findings. “Orderly data will lead to stronger analyses, and ultimately to more rigorous qualitative research” (Yin, 2009, p. 186). Transcriptions from the interviews and focus group are stored on the hard drive of the researcher’s computer and on a password protected flash drive.

Hand written case study notes, fidelity measure documents, audio recordings, hard copies of transcripts, and the backup flash drive were stored in a locked file cabinet. This researcher is the only person who has had access to the collected data. All database and hand-written transcripts, 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 purpose of this study is to identify educator’s perceptions about how and to what extent educators perceive the impact, process, structures and fidelity of implementation of a RTI/MTSS model of instruction. Multiple sources of data were collected and were analyzed using Vygotsky’s sociocultural theory (1934/1978). Vygotskian tenets, the more knowledgeable other (MKO), the zone of proximal development (ZPD) and dynamic assessment (DA) provided an analytical lens to investigate the implementation process an RTI/MTSS model within a school setting in order to answer the research questions.

Data collected in a case study, in and of itself does not describe what is happening related to a research problem; the data must be carefully and strategically analyzed in order to make it meaningful (Yin, 2009). Therefore, it was necessary to establish a clear and strategic procedure for how the analysis would be conducted. Saldaña (2009) recommends using a two-cycle coding procedure. The process of coding is used to create categories or themes that help the researcher make sense of qualitative data in relation to the research questions being asked (Merriam, 2009). Saldaña’s two-cycle coding process (2009) was utilized to analyze the qualitative data sets used in this study. The data analysis/coding process is displayed in figure 3.
Sources of data that were used within this study include student data assessments, qualitative interviews, document and a focus group interview. “The most important advantage of using multiple sources of evidence is the development of converging lines of inquiry, a process of triangulation and corroboration which make conclusions more convincing and accurate” (Yin, 2009, p. 115). This convergence adds strength to the findings as the various strands of data are braided together to promote a greater understanding of the case (Yin, 2003). Individually, each data source will provide a different perspective concerning the phenomenon being studied.

**Student data assessment.** The first data set this researcher examined is the student assessment data. Data collected from the Dynamic Indicators of Early Literacy Skills (DIBELS) was used to monitor student achievement and to analyze educators’ instructional practices. Tables 1-4 previously displayed will indicate the percentage of students in each of the three grade two classes that are at benchmark (tier 1), somewhat below benchmark and needing support (tier 2) and students well below benchmark, needing intensive support (tier 3).
The following Tables, 10-13 indicate the combined results of all three grade two classes for the Nonsense Word Fluency-Correct Letter Sound (NWF-CLS).

Table 10
*DIBELS Nonsense Word Fluency (NWF) Correct Letter Sound (CLS) Grade 2 class one, class two and class three combined class percentage*

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2-Combined Classes 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
</tr>
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<td></td>
<td>%=</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=</td>
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<td></td>
<td>%=</td>
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<tr>
<td>High Risk (red)</td>
<td>NN=</td>
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</tbody>
</table>

Table 11
*DIBELS Nonsense Word Fluency (NWF) Whole Words Read (WWR) Grade 2 Class one, class two and class three combined class percentages*

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2-Combined Classes 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
</tr>
</tbody>
</table>
Table 12
DIBELS Oral Reading Fluency (ORF) Words Read Correct (WRC) Grade 2 class one, class two and class three combined class percentages

<table>
<thead>
<tr>
<th>Oral Reading Fluency</th>
<th>Grade 2- Combined Classes 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
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<td></td>
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<tr>
<td>Low Risk (yellow)</td>
<td>NN=</td>
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<td></td>
<td>%=</td>
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<tr>
<td>High Risk (red)</td>
<td>NN=</td>
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</tbody>
</table>

Table 13
Oral Reading Fluency (ORF) Words Read Accurately (A) Grade 2 class one, class two and class three combined class percentages

<table>
<thead>
<tr>
<th>Oral Reading Fluency</th>
<th>Grade 2- Combined Classes 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=</td>
</tr>
<tr>
<td></td>
<td>%=</td>
</tr>
</tbody>
</table>

Sharing the analysis of student data with the participants informed the semi-structured interviews, and provided participants will a deeper understanding of students’ strengths and areas of need and will guide their instructional decision making to increase student performance.

**Semi-structured interview data.** Initially, this researcher reviewed audiotapes and read each of the seven individual, semi-structured interviews multiple times upon completion. Upon
completion of all interviews, a preliminary exploratory analysis was used to provide a general sense of the data, facilitate the structure of organization, and to help decide whether more data are necessary or needed (Creswell, 2012, p. 243). This researcher “pre-coded data by circling, highlighting, bolding and underlining” information that appears significant (Saldaña, 2009, p. 16) in the transcript narratives. These initial codes provided a starting point for the management of the data and also assisted the researcher in “the process of constructing provisional conclusions regarding categories and relationships prior to conducting formal analysis” (Maxwell, 2005, p. 96). Notes will be taken in the form of memos on important details or additional ideas about coding that may occur throughout the data collection.

Descriptive coding also referred to as “topic coding” will be used to summarize the basic topics using a word or a short phrase (Saldaña, 2011, p. 70) during the first cycle of coding. Additionally, In Vivo Coding which captures the verbatim responses of participants will be used to support this researcher’s understanding of the participants’ realities (Saldaña, 2009).

After this First Cycle coding was completed the data was further analyzed by using second cycle coding, described by Saldaña (2013) as pattern coding. First cycle coding followed by second cycle coding is a useful strategy in qualitative research.

First Cycle coding and Second Cycle coding differ in that Second Cycle coding methods allow researchers to re-examine and rearrange data coded during first cycle methods. Similar codes may be merged together during Second Cycle coding while other initial codes may be eliminated. Saldaña (2013) states, “a primary goal of Second Cycle coding is to develop a smaller, more select list of broader categories, themes, concepts and/or assertions” (p. 207).

Data analysis is a complex process involving consideration of language and deep thinking about the patterns emerging in participants’ experiences and it is usually necessary to refine the
thinking that occurred through the first coding attempt (Saldaña, 2009). The categories that emerge from pattern coding represent the themes within the data. Second cycle analysis also provided the researcher with the opportunity to identify contrary evidence or evidence that does not support or confirm established themes (Miles & Huberman, 1994). A second cycle of coding also inspired the researcher to reflect on the theoretical framework, Vygotsky’s sociocultural theory, and the knowledge garnered from the literature review. As a result, the researcher will be afforded a more in-depth understanding and a lens through which to interpret the data.

Table 14 provides a sample of the descriptive codes that will be used for the interview response.

Table 14
*Interview Questions with Themes and Codes*

<table>
<thead>
<tr>
<th>INTERVIEW QUESTIONS</th>
<th>THEMES</th>
<th>CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you define RTI/MTSS to someone who is unfamiliar with this concept?</td>
<td>Understanding of RTI/MTSS</td>
<td>STAFF-UND</td>
</tr>
<tr>
<td>2. RTI/MTSS has been described as an approach that provides a continuum of supports for all learners and a model in which responsibility for individual student progress is shared by all educators. Do you agree with these principles? Please explain.</td>
<td>Staff understanding of RTI/MTSS, Staff perceptions of RTI/MTSS, Student support, Staff communication, Staff collaboration</td>
<td>STAFF-UND, STAFF-PERC, STUD-SUP, STUD-T1, T2, T3, STAFF-COLL</td>
</tr>
<tr>
<td>3. Please describe how an RTI/MTSS meeting proceeds once a student is identified as struggling and has been referred to the building based support team.</td>
<td>Staff understanding of RTI/MTSS building based support team and data based decisions, Staff perceptions of RTI/MTSS building based support team and data based decisions</td>
<td>STAFF-UND-BBST, STAFF-UND-DBD, STAFF-PERC-BBST, STAFF-PERC-DBD</td>
</tr>
</tbody>
</table>
4. Please describe progress monitoring: How do you use and analyze assessments (formal, informal, student work samples) to inform instructional practices for small flexible groups of students and/or individual students?

5. How are evidence-based instructional methods and interventions selected? Describe how you scaffold learning activities and differentiate instruction to meet the needs of individual students.

6. How do you use data to determine if a student requires tier 2 interventions? How do you use data to determine if a student requires tier 3 interventions?

7. Describe how a student’s responsiveness to interventions is monitored. What assessment tools are used for progress monitoring? How is fidelity of implementation measured?

8. Describe the components of RTI that you believe are most critical for successful implementation of RTI/MTSS.

9. Please comment on your school’s tier 1, core literacy curriculum. Are curriculum, instruction, and assessment aligned between grades and across classrooms at the same grade levels?
10. Please discuss types of professional development/trainings that were provided for staff? How did PD training prepare/support staff for RTI/MTSS implementation in your school?

11. In your opinion, how effective is the RTI/MTSS model of instruction in meeting the individual needs of students?

12. Please describe any changes in staff practices, roles and/or responsibilities as a result of RTI/MTSS implementation?

13. Proponents of a multi-tiered, RTI/MTSS approach believe that it provides a framework for school improvement on two fronts: Early detection of “at risk students” and early intervention. In your opinion, has the implementation of RTI/MTSS affected the process of referring students for special education? If so, please give examples.

14. Is there anything that I have not asked that you believe is relevant to RTI/MTSS fidelity of implementation?
Table 15
Coding key

<table>
<thead>
<tr>
<th>Themes</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff understanding of RTI/MTSS</td>
<td>STAFF-UND</td>
</tr>
<tr>
<td>Staff perceptions of RTI/MTSS</td>
<td>STAFF-PERC</td>
</tr>
<tr>
<td>Student support</td>
<td>STUD-SUP</td>
</tr>
<tr>
<td>Tiers/levels of support</td>
<td>STUD-T1, T2, T3</td>
</tr>
<tr>
<td>Staff communication</td>
<td>STAFF-COMM</td>
</tr>
<tr>
<td>Staff collaboration</td>
<td>STAFF-COLL</td>
</tr>
<tr>
<td>Staff understanding of building based support team</td>
<td>STAFF-UND-BBST</td>
</tr>
<tr>
<td>Staff perceptions of building based support team</td>
<td>STAFF-PERC-BBST</td>
</tr>
<tr>
<td>Staff understanding of data based decisions</td>
<td>STAFF-UND-DBD</td>
</tr>
<tr>
<td>Staff perceptions of data based decisions</td>
<td>STAFF-PERC-DBD</td>
</tr>
<tr>
<td>Student learning baseline</td>
<td>STUD-ZPD</td>
</tr>
<tr>
<td>Assessment practices</td>
<td>STAFF-DA</td>
</tr>
<tr>
<td>Instructional groups</td>
<td>STAFF-INSTR-GR</td>
</tr>
<tr>
<td>Modeling</td>
<td>STAFF-MOD</td>
</tr>
<tr>
<td>Differentiated instruction</td>
<td>STAFF-DI</td>
</tr>
<tr>
<td>Scaffold</td>
<td>STAFF-SCAF</td>
</tr>
<tr>
<td>Intervention</td>
<td>EVID-B-INTERV</td>
</tr>
<tr>
<td>Fidelity</td>
<td>FID</td>
</tr>
<tr>
<td>Curriculum Fidelity</td>
<td>CURR-FID</td>
</tr>
<tr>
<td>Benefits of RTI/MTSS</td>
<td>BEN-RTI/MTSS</td>
</tr>
<tr>
<td>Barriers of RTI/MTSS</td>
<td>BAR-RTI/MTSS</td>
</tr>
<tr>
<td>Professional development</td>
<td>STAFF-SUP</td>
</tr>
</tbody>
</table>

The provisional themes that will likely emerge from the qualitative interview data analysis include staff understanding of the impact, structures, process and fidelity of an RTI/MTSS model of instruction. It will also illuminate the tiers or levels of instruction, assessment practices, use of data to inform staff decisions about the evidence based intervention that best meets the needs of individual students, the frequency and intensity of necessary intervention, and a process to measure the fidelity of implementation of a RTI/MTSS framework. Additionally, themes about professional development opportunities, resources, adherence to curriculum and staff beliefs about the benefits, barriers and effectiveness of a RTI/MTSS model
of instruction will emerge. Projected categories that will likely emerge include collaboration, differentiated learning activities, modeling, scaffolding, flexible groupings, socially engaging activities such as cooperative learning, peer partners, and measures of student progress.

**Analysis of documents.** After analyzing the individual interview data, this researcher conducted an analysis of the self-report fidelity measure document and the self-report RTI/MTSS educator perception survey document.

The fidelity measure that was utilized in this study provided information on the degree to which evidence-based curriculum is delivered as intended. Fidelity tools are necessary to determine the internal validity of an intervention and to draw conclusions about the relationship between exposure to the intervention and improvement in student outcomes.

Lack of implementation fidelity accounts for the majority of poor student outcomes (Mills & Ragan, 2000). Therefore, an important reason for assessing fidelity is the ability to identify the cause of negative or ambiguous findings (Hohmann & Shear, 2002). Without a fidelity measurement tool, there is no way to determine whether unsuccessful student outcomes reflect failure of the model or failure to implement the model as intended (Chen, 1990).

A fidelity measures (see Appendix E) will be used to monitor adherence during guided reading instruction. The checklist will be utilized as self-reports by the staff and as a reminder for staff to follow the guided reading components with fidelity. Fidelity of guided reading implementation can be measured by dividing the number of steps an educator completes correctly by the number of procedural steps of the program. Educators should aim for 85% fidelity (Sanetti & Krotochwill, 2009).

The Educators’ Perceptions of RTI/MTSS Survey assessed educators’ perceptions regarding the extent to which RTI/MTSS was implemented with fidelity in their school.
Respondents use the following scale when completing items from the survey: Never Occurs (NO); Rarely Occurs (RO); Sometimes Occurs (SO); Often Occurs (OO); Always Occurs (AO). The survey results will be displayed by showing the percentage of educators who chose a response for each of the survey items. This information was shared with staff to show strengths and weaknesses of RTI/MTSS implementation and student outcomes, to discuss professional development needs and to develop policies and procedures to enhance fidelity of RTI/MTSS implementation.

Table 16
*Themes and codes likely to emerge from analysis of the self-report fidelity checklist and the self-report survey*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fidelity, curriculum fidelity, implementation fidelity, intervention fidelity</td>
<td>FID, CURR-FID, IMPLEM-FID, INTERV-FID</td>
</tr>
<tr>
<td>Staff understanding of RTI/MTSS</td>
<td>STAFF-UND</td>
</tr>
<tr>
<td>Staff perceptions of RTI/MTSS</td>
<td>STAFF-PERC</td>
</tr>
<tr>
<td>Assessment practices, student learning baseline</td>
<td>STUD-DA, STUD-ZPD,</td>
</tr>
<tr>
<td>Tiers/Levels of support</td>
<td>STUD-SUP, STUD-T1, T2, T3</td>
</tr>
<tr>
<td>Staff instructional practices: differentiated instruction, modeling, scaffold, evidence based intervention</td>
<td>STAFF-DI, STAFF-MOD, STAFF-SCAF, EVID-B-INTERV</td>
</tr>
<tr>
<td>Instructional groups</td>
<td>STAFF-INSTR-GR</td>
</tr>
<tr>
<td>Professional development Resources</td>
<td>STAFF-SUP</td>
</tr>
<tr>
<td>Staff collaboration</td>
<td>STAFF-COLL</td>
</tr>
<tr>
<td>Staff communication</td>
<td>STAFF-COMM</td>
</tr>
</tbody>
</table>
Findings of the document analysis were shared with participants to inform the focus group interview. Results of the document analysis allowed the participants to identify the strengths and weaknesses of the fidelity of RTI/MTSS implementation, interpret the percentages of curriculum fidelity and how student performance is impacted.

**Focus group interview data analysis.** The final data set, a focus group interview, was conducted in February 2017. The purpose of the focus group interview was to allow the researcher to collect high-quality, rich and detailed data in a social context. The focus group interview was the primary data set and provided this researcher with an opportunity to corroborate and validate findings generated from the student assessment data, the semi-structured interviews and the document analysis. The use of multiple data collection methods allowed this researcher to gain a deeper understanding of the phenomenon. Participants also had an opportunity to substantiate, dispute or add additional perspectives and experiences they had while implementing assessment practices, multitier instruction, curriculum adherence, data driven decision making and the fidelity of RTI/MTSS implementation.

This information was utilized by the district to improve and sustain a multitier model of instruction. Triangulation of the data sets allowed the researcher to analyze the research questions guiding this study from multiple viewpoints and angles in order to gain a deeper understanding of this phenomenon and to cross validate the findings of this study. Figure 4 shows triangulation of the data sets.
Data obtained from the focus group was analyzed and coded using Saldaña’s (2013) two-cycle coding process. The focus group questions reflect Vygotsky’s sociocultural theory (1934/1978) which maintains that people learn in social contexts by interacting and communicating with each other. Table 14 provides a sample of themes and descriptive codes that will most likely emerge during the focus group stage.

Table 17
*Focus Group Interview Questions with Themes and Codes*

<table>
<thead>
<tr>
<th>FOCUS GROUP INTERVIEW QUESTIONS</th>
<th>THEMES</th>
<th>CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How confident are you in using DIBELS screening benchmarks and formative assessments (progress monitoring) to identify students at risk? How has the student assessment data informed your instructional practices? How can you use these findings to enhance instructional decision making and improve student performance?</td>
<td>Assessment practices, Student learning baseline Tiers or levels of support Staff perceptions</td>
<td>STAFF-DA STUD-ZPD STUD-T1, T2, T3 STAFF-PERC</td>
</tr>
</tbody>
</table>
2. RTI/MTSS offers a continuum of supports based on student needs. How have the levels of instruction impacted student achievement? In your opinion, is the RTI/MTSS framework an effective instructional model? How has RTI/MTSS impacted instruction in your classroom? Please elaborate.

<table>
<thead>
<tr>
<th>Tiers or levels of supports</th>
<th>STUD-T1, T2, T3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff perceptions of RTI/MTSS</td>
<td>STAFF-PERC</td>
</tr>
<tr>
<td>Student learning baseline</td>
<td>STUD-ZPD</td>
</tr>
<tr>
<td>Staff instructional practices: differentiated instruction, modeling, scaffolding, intervention</td>
<td>STAFF-DI, STAFF-SCAF, STAFF-MOD, EVID-B-INTERV</td>
</tr>
<tr>
<td>Staff instructional groups</td>
<td></td>
</tr>
</tbody>
</table>

3. It's difficult to determine whether unsuccessful student outcomes reflect a failure of the student responding to a particular curriculum/intervention or due to failure to implement the curriculum/intervention as intended. How have fidelity measures impacted student performance. Please give examples.

<table>
<thead>
<tr>
<th>Fidelity, implementation fidelity, curriculum fidelity, intervention fidelity</th>
<th>FID, IMPLEMENT-FID, CURR-FID, INTERV-FID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff perceptions of an RTI/MTSS model</td>
<td>STAFF-PERC</td>
</tr>
<tr>
<td>Barriers of RTI/MTSS</td>
<td>STAFF-PERC-BAR</td>
</tr>
</tbody>
</table>

4. What benefits if any have you experienced since implementing an RTI/MTSS model of instruction? What barriers if any have you experienced since implementing an RTI/MTSS model of instruction?

<table>
<thead>
<tr>
<th>Benefits of RTI/MTSS model</th>
<th>STAFF-PERC-BEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers of RTI/MTSS</td>
<td>STAFF-PERC-BAR</td>
</tr>
</tbody>
</table>

5. Describe how the RTI/MTSS process has necessitated collaboration and communication among all staff. How does staff communicate and collaborate about student achievement for students requiring additional tiers of instruction from multiple instructors? How will staff ensure continued sustainability and fidelity of the RTI/MTSS implementation?

<table>
<thead>
<tr>
<th>Staff perceptions of an RTI/MTSS model</th>
<th>STAFF-PERC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff collaboration</td>
<td>STAFF-COLL</td>
</tr>
<tr>
<td>Staff communication</td>
<td>STAFF-COMM</td>
</tr>
</tbody>
</table>
The confirmations and clarifications that may result due to corroborating findings and evidence from student data assessments, interviews, documents and survey during the focus group interview provided this researcher with insight into the practices that facilitate or challenge the implementation of a RTI/MTSS model with fidelity. They will also be examined together to determine whether or not these data sets or information will be used to refine the existing model of RTI/MTSS. Although each data source will be analyzed independently “sources converge and lead to the same findings” (Yin, 2011, p. 153).

Trustworthiness

Lincoln and Guba (1985) state that trustworthiness is essentially achieved through the ability to convince readers that, “the findings of an inquiry are worth paying attention to” (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. Since qualitative research involves the interpretation of reality and this reality has to be constructed, validity is assessed in terms of the credibility of the findings (Merriam, 2009). There are several techniques for establishing credibility. Lincoln and Guba (1985) argue that ensuring credibility is one of most important factors in establishing
trustworthiness and recommend a “prolonged engagement” between the investigator and the participants so that a relationship of trust can be established. Credibility was established between the researcher and the participants of this study. This researcher met with each one of the participants individually and verbally assured them of confidentiality. In addition, a follow up letter with a written description of the research project and a review of the confidentiality for human subjects was given to each participant. Participant and site identity will be protected through the use of pseudonyms.

Persistent observation is a strategy that not only substantiates credibility but also compliments prolonged engagement. “The purpose of persistent observation is to identify those characteristics and elements in the situation that are most relevant to the problem or issue being pursued and focus on them in detail” (Lincoln & Guba, 1985, p. 304).

Persistent observation enables the researcher to acquire sufficient depth of understanding to assess the quality of data. Additionally, persistent observation allows the researcher to ask questions and probe in depth about issues that may seem inappropriate to non-participants in a study (Prus, 1985). Maxwell (2005) describes the influence a researcher may have on participants as reactivity. Since this researcher is an employee at the site of the study, observations could result in participants behaving in ways that they believe are desired. Although this issue can’t be eliminated, the triangulation of data will help to ensure that the findings are an accurate portrayal of what is happening related to the fidelity of implementation of a RTI/MTSS which will be examined.

A third technique, member checking, was conducted to ensure the credibility of this case study. Member checking is defined as a qualitative control process by which a researcher seeks to improve the accuracy, credibility, and validity of what has been recorded during a research
interview (Coffey & Atkinson, 1996). Checks relating to the accuracy of the data took place both during and at the end of the data collection dialogues. Informants were asked to read any transcripts of dialogues in which they had participated in order to confirm their accuracy.

Peer debriefing, was also used to ensure credibility (Lincoln & Guba, 1985). Peer debriefing “is a process of exposing oneself to a disinterested peer in a manner paralleling an analytical session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind” (Lincoln & Guba, 1985, p. 308). This researcher sought support from a non-participant of this study, to engage in debriefing sessions following individual interviews and the focus group interview in order to decrease the threat of researcher bias on the credibility of the proposed study. Although researcher bias cannot be fully eliminated, identifying and reflecting upon a researcher’s preconceived ideas, can minimize researcher bias (Maxwell, 2005).

An additional component of credibility, triangulation, involves using multiple data sources in an investigation to produce understanding (Lincoln & Guba, 1985) and improve validity of research or evaluation findings. In this case study, triangulation of the data gathered through student assessment data, individual qualitative interviews, documents and a focus group interview allowed the researcher to determine the consistency of findings (Creswell, 2009).

Miles & Huberman (1984) suggest, "Triangulation is supposed to support a finding by showing that independent measures of it agree with it or, at least, don't contradict it" (p. 235).

Triangulation allowed this researcher to see or hear multiple accounts of the same themes from a variety of sources. Themes identified from student assessment data, were compared and contrasted to the themes identified through the second data set, the semi structured interview questions. Similarities and differences in the patterns and trends that emerge from the interviews
and the documents were probed more in depth during the focus group interview which provided additional evidence to corroborate the findings of the student assessment data, qualitative interviews and documents.

**Transferability.** Transferability is the extent to which the findings of a particular inquiry have applicability in other contexts or with other respondents (Lincoln & Guba, 1985 p.290). In order to enhance the potential of transferability Guba (1981) asserts the need for thick, comprehensive details and descriptions of all the contextual components impinging on a specific inquiry. If practitioners in other settings believe their situations to be similar to that described in a particular study, they may relate the findings to their own positions and environments (Bassey, 1981). It is the intent of this researcher to provide explicit details and information gained by investigating how educators perceive the impact, structures, processes and fidelity of implementation of an RTI/MTSS model of instruction so that other districts interested in implementing an RTI/MTSS framework may benefit from the findings of this proposed study.

**Dependability.** Dependability in qualitative research, also referenced to as external audits, involves having a researcher outside of the study process evaluating both the procedures and the outcomes of an investigation. The purpose of the audit is to provide evidence that if the work was replicated in the same context, with the same methods and with the same participants, similar results would be obtained. According to Yin (2003), if a researcher thoroughly records the steps and processes of case studies and manages a detailed database, dependability is enhanced since this will allow other investigators to review the evidence directly rather than to review the case study report alone. Throughout this study, a database was maintained to systematically organize all data. Transcripts were read repeatedly to avoid misrepresentation of interviewees. In addition, transcripts were provided to the informants for their confirmation that
the data is accurate. Lincoln and Guba (1985) emphasize the close ties between credibility and dependability and affirm that the greater the credibility of a study, the stronger the dependability. The overlapping process of qualitative interviews and a focus group interview were utilized in this study to strengthen the dependability of this investigation (Shenton, 2004, p. 71).

**Confirmability.** The final qualitative technique researchers use to enhance credibility is confirmability. Procedures must be followed to guarantee that the findings of the investigation are due to the experiences and ideas of the informants rather than those of the researcher. Critical to this confirmability process is the “audit trail”, which allows any third party observer to trace the course of the research step-by-step via the decisions made and procedures described (Shenton, 2004, p. 77). This researcher implemented an Audit Trail, by maintaining a database which will document the process of collecting the multiple data sets, similar to Yin’s (2009) “chain of evidence” (p. 3). A journal was also used to record this researcher’s reflections, assumptions, and reactions to the phenomenon being studied (Guba, 1981). Finally, this researcher investigated “rival explanations” which assisted in assuring that the data and its analysis will be accurate (Yin, 2009, p. 3).
Summary

RTI/MTSS is a framework that consists of formative assessments aligned with a continuum of high quality evidence-based programs and interventions. This model of instruction allows educators to use data to determine a student’s individual level of need, personalize each student’s instruction, and add increasing levels and frequency of instruction to improve learning outcomes for all students. For this reason, many districts are engaged in the implementation of an RTI/MTSS service delivery model.

There are, however, practices that may negatively impact the success and sustainability of RTI/MTSS. Review of the literature indicates that fidelity of implementation is a critical factor that impacts all facets of an RTI/MTSS model. Success and sustainability are related to how accurately educators adhere to the protocol developed by the program designer. District
administrators must develop capacity and cohesiveness among staff by providing them with training, resources and continual supportive feedback. In addition, the literature suggests that educator’s thoughts, beliefs and perceptions impact educator’s buy-in and commitment when adopting and implementing instructional programs and/or interventions with fidelity.

The purpose of this descriptive case study was to examine and describe educator’s perceptions as they relate to the process, structure, fidelity and impact of implementation of an RTI/MTSS model of instruction. The sub questions were intended to reveal aspects which educators perceive as supportive or challenging to effective implementation and sustainability of RTI/MTSS within the school.

Multiple data sets which include student data assessments, interview data, data from document analysis and a focus group interview were collected and analyzed. Vygotsky’s socio-cultural theory of cognitive development (1934/1978) provided an analytical lens to investigate the implementation process of an RTI/MTSS model within a school setting and the perceptions school based practitioners had about practices that facilitated or were perceived as barriers to the implementation of an RTI/MTSS model. Findings provided district administrators with the information they needed to refine and improve the implementation process and to support educators if indicated, with corrective feedback, resources and training necessary to ultimately improve student outcomes. It is the hope of this researcher that results of this study will also add to the body of research literature and help inform the needs of educators in other districts tasked with implementing RTI/MTSS.
Chapter IV: Report of the Research Findings

Introduction

The researcher of this qualitative case study, conducted in the winter of 2017, sought to describe how school based practitioners in one Massachusetts elementary school perceived the process, structure, fidelity of implementation and the impact of an RTI/MTSS model on teaching and student learning. An additional goal of this study was to gain insight into the components that facilitate or challenge the implementation of this framework. Administrators at the site of the study will utilize these findings to improve curriculum fidelity and evidence-based practices used at all tiered levels to enhance student outcomes.

Key findings that emerged during this investigation are organized into several segments to facilitate the coherent presentation of the data collected throughout this study. The first segment of this chapter provides an explanation of the study’s context to situate the reader in the participants’ experiences as they explored and implemented an RTI/MTSS model. It also provides an overview of their roles and qualifications. Next, the researcher reviews the problem of practice and the research questions that have driven this project. The chapter concludes with a review of the multiple methods of data collection used, an analysis of each data source and a summary of the significant findings.

Context

This detailed narrative reflects the perceptions and experiences of the educators in one Massachusetts elementary school as they explored and implemented an RTI/MTSS framework. Their journey began during the 2015-2016 school year when this elementary school was accepted into the Department of Elementary and Secondary Education (DESE) RTI/MTSS Literacy cohort, and agreed to make a three to five-year commitment.
Prior to participating in this cohort, educators at the site of the study presumed that a student had an internal deficit of some kind if the child was not progressing. During fiscal year 2015-2016, thirty students were referred for special education evaluations at the study site. Evaluation results were concerning because out of 30 student referrals, 12 students or 40% of the students did not meet the eligibility criteria for special education services. An RTI/MTSS model offers districts a means to circumvent similar dilemmas by allowing educators to provide struggling students with evidence-based interventions to close gaps in learning before the gaps become debilitating. When implemented with understanding and integrity, RTI/MTSS is a service delivery model of instruction that “reduces the inappropriate identification of students who might appear to have a disability because of inappropriate or insufficient instruction” (NCRI, 2010, p. 7).

Participants

Participants solicited for this study included three grade two teachers, a special educator, a literacy coach, a psychologist and the building administrator. A purposeful sample of staff were chosen to participate in individual semi-structured interviews, a guided reading fidelity checklist (grade two team members only), an educator’s perception survey and a focus group interview. These participants were chosen because of their direct involvement in the implementation process of an RTI/MTSS model to elicit their experiences and impressions about the process. Creswell (2009) states a purposeful sample “helps the researcher understand the problem and the research question” (p. 178). All participants voluntarily agreed to participate in this study. Profile information for each participant was obtained and is presented in table 18.
Table 18  
*Participant Profile Information*

<table>
<thead>
<tr>
<th>Educator (pseudonyms)</th>
<th>Position</th>
<th>Experience</th>
<th>Level of Education and Licensure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addie</td>
<td>Building Administrator</td>
<td>20 years</td>
<td>Principal/Assistant Principal Elementary, Superintendent/Assistant Superintendent Masters in Education</td>
</tr>
<tr>
<td></td>
<td>Building Principal k-4, Curriculum Coordinator, Professional Development Prek-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kara</td>
<td>Literacy Coach</td>
<td>19 years</td>
<td>Title I Coordinator, Reading Teacher Masters in Education</td>
</tr>
<tr>
<td>Sadie</td>
<td>School Psychologist</td>
<td>9 years</td>
<td>School Psychologist, All Levels, Initial Masters +30</td>
</tr>
<tr>
<td>Sasha</td>
<td>Special Education Teacher</td>
<td>8 years</td>
<td>Teacher of Students With Moderate Disabilities, PreK-8; Elementary 1-6; Masters in Special Education</td>
</tr>
<tr>
<td>Mary</td>
<td>Grade Two Teacher</td>
<td>7 Years</td>
<td>Elementary 1-6; Reading Specialist; Masters in Education</td>
</tr>
<tr>
<td>Missy</td>
<td>Grade Two Teacher</td>
<td>29 Years</td>
<td>Early Childhood PreK-3; Elementary 1-6; Masters in Education</td>
</tr>
<tr>
<td>Janet</td>
<td>Grade Two Teacher</td>
<td>8 Years</td>
<td>Elementary 1-6; Masters in Education</td>
</tr>
</tbody>
</table>
Review of the Research Problem

Fidelity of RTI/MTSS implementation is the extent to which educators adhere to RTI/MTSS procedures as these were designed, intended, and planned. Although researchers (Sanetti & Kraochwill, 2009; Hardcastle & Justice, 2010; Keller-Margulis, 2012) demonstrate that evidence based programs have a favorable impact on student learning, positive results may not be replicated in similar settings unless the program’s essential elements are put into practice the way the developer intended. Fidelity to intentional practices in delivering an intervention is itself an important element of RTI service delivery. Consequently, it is difficult to conclude that a student is not responding to an intervention if it has not been implemented as intended. With this in mind, fidelity of implementation is a vital but often under researched component, even though it is critical to the RTI/MTSS process and necessary to determine intervention effectiveness (Glover & DiPerna, 2007).

Research Questions

The purpose of this qualitative descriptive case study was to document a detailed portrayal of the participants’ perceptions and experiences as they implement and sustain an RTI/MTSS model with fidelity. The researcher investigated the true meaning of the phenomenon through the experiences of those living it on a daily basis (Merriam, 1998). Utilizing a qualitative methodology was the best approach for this study because qualitative methods, "tell the program's story by capturing and communicating the participants' stories" (Patton, 2002, p. 10).

This methodology also allowed the researcher to employ multiple sources of evidence. The multiple data sources that were used during this investigation were student assessment data, individual face to face interviews, a document review and a focus group interview. Yin (2009)
The most important advantage of using multiple sources of evidence is the development of converging lines of inquiry, a process of triangulation and corroboration which make conclusions more convincing and accurate” (p. 115). An additional goal of this study was to gain an understanding of the contingencies within the school that may facilitate or hinder effective implementation of an RTI/MTSS framework. In order for this researcher to gain insight into the perceptions of the participants and their experiences at the study site and to determine how they make sense of their lives, (Merriam, 1988) the following overarching research question was developed:

1. How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?

The following sub-questions were developed to illuminate patterns in the data and to provide the researcher with an expanded understanding of the data collection:

a.) What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?

b.) What barriers hinder the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?

c.) What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by the grade two team members, support staff and the building administrator?
This case study was guided by Lev Vygotsky’s (1934/1978) theoretical framework of sociocultural theory. The Vygotskian tenets of the more knowledgeable other (MKO), the zone of proximal development (ZPD) and dynamic assessment (DA) have made an impact on instructional practices used by classroom teachers. Vygotsky’s sociocultural theory suggests that instruction and assessment should work in tandem. The focus of student achievement should be on what students can achieve with the help of the teacher (MKO) or peers during the class activities. According to Vygotsky (1934-1978), what is achieved with the help of others suggests what the student will be able to do independently in the future since the child has started to internalize the process. Dynamic assessments help teachers understand individual student’s learning needs (ZPD) and the implications for instruction.

**Data Collection**

This researcher employed the use of multiple data sources during this investigation in order to provide a holistic description of the phenomenon. Data was collected early on during 2017. The data collection process is described in depth so that transferability of the procedures may be applied to districts with similar settings (Lincoln & Guba, 1985). Figure 7 demonstrates the order of the data collection.
Data collection

The first step in the data collection process was the collection of historic student assessment data from DIBELS during the 2015-2016 school year. The second step in the data collection process was collecting information from seven semi-structured face to face interviews which were conducted early on in 2017. Prior to conducting the individual interviews, analysis of student data was shared with participants so that they would have a deeper understanding of students’ strengths and areas of need. Following the completion of each individual interview, participants were thanked for voluntarily agreeing to participate in this study. This researcher addressed trustworthiness by assuring participants that their identity and the site of the study would remain anonymous. In addition, each participant was provided with a copy of the interview transcription to review for accuracy. Once the interview responses were transcribed, the researcher used descriptive coding to summarize and chunk significant ideas and then organized these chunks of texts into clusters to begin drawing conclusions (Miles & Huberman, 1994).
Next, this researcher collected the self-report fidelity measure document and the self-report RTI/MTSS educator perception survey document. These documents provided the researcher with participants’ perceptions towards the implementation of the RTI/MTSS model of instruction. Information gathered from the individual interviews and the self-report documents were analyzed and used to inform and guide the focus group interview which was the final step of the data collection process. These data sets were triangulated to examine a single phenomenon, in this case an RTI/MTSS model of instruction, from more than one perspective and to corroborate the findings. According to Patton (2002), triangulation of multiple data sets allows the researcher to, “capture and report multiple perspectives rather than seek a singular truth” (P. 546).

**Data Analysis**

Creswell (2009) states qualitative data analysis is conducted concurrently with gathering data, making interpretations, and writing reports (p. 184). The following data sets were gathered and analyzed during the early months of 2017 in order to gain insight into the perceptions of the participants’ experiences at the study site (Merriam, 1998) as they implemented an RTI/MTSS model of instruction: student assessment data, seven individual face to face interviews, a document review and a focus group interview. Merriam (1998) defines data analysis as a process of making sense out of data by consolidating, reducing, and interpreting what people have said and what the researcher has read. Researchers must have the ability to “sift trivia from significance, identify significant patterns and construct a framework for communicating the essence of what the data reveals” (Patton, 2002, p. 432). Figure 8 demonstrates the procedure that was utilized to analyze the data in this study.
First, this researcher organized and prepared the raw data by transcribing the individual interviews. Rev Transcription, a confidential web-based transcription service, was utilized to transcribe verbatim, the digitally recorded interviews. This researcher read through each transcription multiple times to get familiar with the overall information and to identify the salient features of the data and how these related to the research questions.

Next, the researcher analyzed the self-report fidelity checklists and the self-report educators’ perception of RTI/MTSS practices survey. The self-report checklist measures fidelity of curriculum implementation. The self-report survey assesses educators’ perceptions regarding the extent to which RTI/MTSS practices are implemented effectively at the study site and their perceptions of the skills they possess to implement the RTI/MTSS framework. The data collected from the individual interviews and the self-report checklist and survey drove the questions which were asked of the participants during the focus group interview, which was the
primary data set in this study. Rev transcription service was also utilized to organize and prepare the raw data collected during the focus group interview.

Saldaña’s (2009) two cycle coding process was the coding scheme used to conduct this case study analysis and manage and analyze the raw data from the seven individual interviews, the self-report documents and the focus group interview. The process of coding is a method used to create categories and themes that help the researcher make sense of qualitative data in relation to the research questions being asked (Merriam, 2009).

During first cycle coding, the data collected from each participant was read through in order to make note of first thoughts and impressions. Analytical memos, tentative codes and ideas or claims emerging from the data were written in the margins by the researcher. Descriptive coding was used to summarize and synthesize what was happening in the data. Saldaña (2009) describes descriptive data as summarizing “in a word or short phrase- most often as a noun- the basic topic of a passage of qualitative data” (p. 70). Interview transcripts were color coded by highlighting, bolding and underlining text to identify similar codes, concepts, claims and ideas. In Vivo coding was also utilized during first cycle coding in order to capture the actual language of the participants. In Vivo Codes "can provide a crucial check on whether you have grasped what is significant" to the participant, and “helps us preserve participants’ meaning of their views and actions” (Charmaz, 2006 as cited by Saldaña, 2009, p. 75).

After this First Cycle coding was completed, the data was further analyzed through Second Cycle coding described by Saldaña (2009) as Pattern Coding. The primary goal of second cycle coding was to reorganize, reanalyze and refine data coded through first cycle methods (Saldaña, 2009) and to find trends, patterns and relationships among the codes. Codes that were similar were combined and labeled with a pattern code, while repetitive codes were
eliminated. Interview narratives were reread in order to find patterns and identify codes that could be organized into categories. The categories that emerged from Pattern Coding represented the themes within the data. These were compared to preliminary themes this researcher predicted would likely emerge based on knowledge gained from the literature review and from the theoretical framework guiding this study.

Data sources were analyzed and grounded in Vygotsky’s sociocultural theory (1934/1978). Vygotsky (1934/1978) states cognitive development results from social interactions and guided learning from a more knowledgeable other (MKO) within the zone of proximal development (ZPD) or the child’s developmental level. Dynamic Assessment (DA) integrates assessment and instruction and predicts what the child may be able to do in the future due to assistance from an MKO.

**Student assessment data.** The first historic data set collected throughout the 2015-2016 school year was the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). The DIBELS assessment is a set of measures that assess early literacy and reading skills for students in kindergarten through grade six (Good & Kaminski, 2011) and are predictive of students’ later reading success (National Reading Panel, 2000). An RTI/MTSS framework is a model in which educators provide early intervention to students who are identified as being at risk for developing learning challenges. Teachers (MKOs) use the DIBEL assessment results to make data informed decisions about their students and personalize instruction to meet each child’s individual needs. Student results are categorized according to their DIBELS performance: meeting the benchmark, a low risk or a high risk. DIBELS scores are used by MKOs to schedule students for additional tiers of evidence-based interventions with a classroom teacher or an interventionist, due to their identified zone of proximal development (ZPD) (Vygotsky, 1934-1978).
A three-tier triangle/pyramid is often used to visually represent the types of services students may need based on assessment results. The percentages depicted in figure 8, signify the optimal goal at each tier when the grade level core instruction is implemented with fidelity.

![Tiered Model Diagram](image)

**Figure 8.** A visual representation of a multi-tiered model of instruction

The base of the triangle represents tier 1 instruction in which all students receive grade level instruction through systematic teaching, differentiated instruction and re-teaching. Optimally, 80% of students in the general education classroom should make effective progress when exposed to evidence-based instruction implemented with fidelity. Tier 2 represents short term strategic services that approximately 15% of students may require to successfully make effective progress with grade level curriculum. The final tier used in Massachusetts school districts, tier 3, depicts intensive services that approximately 5% of students, who are significantly below grade level, may need to increase their skill set in order to complete grade level material. Tiers should be fluid and represent target goals. Data based decision making is the basis for determining the services each student needs to make effective progress.

DIBELS scores are displayed according to students’ progress towards benchmark goals. The three tiers are benchmark, low risk and high risk. Students who are identified as tier 1 or meeting the benchmark are making effective progress in the core instruction due to teachers...
MKOs use of evidence-based interventions, differentiated instruction and re-teaching. Low risk students are students who will likely require tier 2 strategic supports while high risk students will likely require intensive supports.

The data sets that were analyzed by this researcher during 2017 included Nonsense Word Fluency-Correct Letter Sounds (NWF-CLS), Nonsense Word Fluency-Whole Words Read, (NWF-WWR), Oral Reading Fluency-Word Read Correct, (ORF-WRC) and Oral Reading Fluency-Word Read Accurately (ORF-A). These DIBELS subtests were examined to identify the percentage of grade two students at each tier; benchmark (tier 1), students somewhat below benchmark and needing strategic support (tier 2) and students well below benchmark, needing intensive support (tier 3). NN represents the number of students in each class that scored at each tier. The DIBELS assessments were used by the researcher to identify strengths and weaknesses in reading instruction and student achievement.

Table 19
*DIBELS Nonsense Word Fluency (NWF) Correct Letter Sound (CLS) This sub test is only administered in the fall.*

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2 Class 1 2015-2016</th>
<th>Grade 2 Class 2 2015-2016</th>
<th>Grade 2 Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark (green)</td>
<td>Fall NN=15 % 61</td>
<td>Fall NN=8 % 42</td>
<td>Fall NN=10 % 48</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=5 % 22</td>
<td>NN=2 % 11</td>
<td>NN=3 % 14</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=4 % 17</td>
<td>NN=9 % 47</td>
<td>NN=8 % 38</td>
</tr>
</tbody>
</table>
Nonsense Word Fluency (NWF) Correct Letter Sound (CLS), measures the alphabetic principle of letter-sound correspondence in which letters represent the most common sounds. The student is allowed 1 minute to produce as many letter-sounds as possible. According to Rathvon (2004), nonsense word measures are considered to be a good indicator of the alphabetic principle. “Pseudo-words have no lexical entry, so pseudo-word reading provides a relatively pure assessment of students’ ability to apply grapheme phoneme knowledge in decoding” (p. 138).

Table 20
*DIBELS Nonsense Word Fluency (NWF) Whole Words Read (WWR)* This sub test is only administered in the fall.

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2 Class 1 2015-2016</th>
<th>Grade 2 Class 2 2015-2016</th>
<th>Grade 2 Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Fall</td>
<td>Fall</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=16</td>
<td>NN=8</td>
<td>NN=11</td>
</tr>
<tr>
<td></td>
<td>%= 66</td>
<td>%= 42</td>
<td>%= 52</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=4</td>
<td>NN=5</td>
<td>NN=5</td>
</tr>
<tr>
<td></td>
<td>%= 17</td>
<td>%=26</td>
<td>%=24</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=4</td>
<td>NN=6</td>
<td>NN=5</td>
</tr>
<tr>
<td></td>
<td>%=17</td>
<td>%=32</td>
<td>%=24</td>
</tr>
</tbody>
</table>

Table 20 indicates the number of students who are able to blend letter sounds together and to understand systematic relationships between letters and phonemes in order to read and decode words they have never seen before.
**Table 21**

*DIBELS Oral Reading Fluency (ORF) Words Read Correct (WRC)*

<table>
<thead>
<tr>
<th>Oral Reading Fluency</th>
<th>Grade 2 Class 1 2015-2016</th>
<th>Grade 2 Class 2 2015-2016</th>
<th>Grade 2 Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN-5</td>
<td>% -22</td>
<td>NN-9</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN-11</td>
<td>% -43</td>
<td>NN-8</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN-8</td>
<td>% -35</td>
<td>NN-7</td>
</tr>
</tbody>
</table>

Oral Reading Fluency (ORF) Words Read Correct (WRC) measures fluency.

**Table 22**

*DIBELS Oral Reading Fluency (ORF) Words Read Accurate (A)*

<table>
<thead>
<tr>
<th>Oral Reading Fluency</th>
<th>Grade 2 Class 1 2015-2016</th>
<th>Grade 2 Class 2 2015-2016</th>
<th>Grade 2 Class 3 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
</tr>
<tr>
<td>Benchmark (green)</td>
<td>NN-1</td>
<td>% -67</td>
<td>NN-14</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN-16</td>
<td>% -67</td>
<td>NN-2</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN-7</td>
<td>% -29</td>
<td>NN-8</td>
</tr>
</tbody>
</table>

Oral Reading Fluency (ORF) Words Read Accurately (A) provides one of the best measures of phonics, word attack and reading competence, including comprehension, for children in grades one through six (Kaminski, Cummings & Powell-Smith, 2008).

Tables 23-26 indicate the combined results of all three grade two classes for the Nonsense Word Fluency (NWF) Correct Letter Sound (CLS), Nonsense Word Fluency (NWF)
Whole Words Read (WWR), Oral Reading Fluency (ORF) Words Read Correct (WRC), and the Oral Reading Fluency (ORF) Words Read Accurately (A).

Table 23
*DIBELS Nonsense Word Fluency (NWF) Correct Letter Sound (CLS) Grade 2 Class one, class two and class three combined class percentages*

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2- Combined Classes 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>At Benchmark (green)</td>
<td>NN=33</td>
</tr>
<tr>
<td></td>
<td>% =</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=11</td>
</tr>
<tr>
<td></td>
<td>% =</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=21</td>
</tr>
<tr>
<td></td>
<td>% =</td>
</tr>
</tbody>
</table>

Figure 9 visually depicts the mean results of the three grade two classes for Nonsense Word Fluency Correct Letter Sound Assessment.

*Figure 9. Mean results of the combined grade two classes*
Table 24  
*DIBELS Nonsense Word Fluency (NWF) Whole Words Read (WWR) Grade 2 Class one, class two and class three combined class percentages*

<table>
<thead>
<tr>
<th>Nonsense Word Fluency</th>
<th>Grade 2- Combined Classes 2015-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td><strong>At Benchmark (green)</strong></td>
<td>NN=35</td>
</tr>
<tr>
<td></td>
<td>%=55</td>
</tr>
<tr>
<td><strong>Low Risk (yellow)</strong></td>
<td>NN=15</td>
</tr>
<tr>
<td></td>
<td>%=22</td>
</tr>
<tr>
<td><strong>High Risk (red)</strong></td>
<td>NN=15</td>
</tr>
<tr>
<td></td>
<td>%=23</td>
</tr>
</tbody>
</table>

*Figure 10.* Mean results of the combined grade two classes for Nonsense Word Fluency, Whole Words Read
Table 25

**DIBELS Oral Reading Fluency (ORF) Words Read Correct (WRC) Grade 2 Class one, class two and class three combined class percentages**

<table>
<thead>
<tr>
<th>Oral Reading Fluency 2015=2016</th>
<th>Grade 2 Combined classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>Benchmark (green)</td>
<td>NN=15</td>
</tr>
<tr>
<td></td>
<td>%23</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=23</td>
</tr>
<tr>
<td></td>
<td>%35</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=27</td>
</tr>
<tr>
<td></td>
<td>%42</td>
</tr>
</tbody>
</table>

Figure 10 visually depicts the mean results of the three grade two classes for Oral Reading Fluency Words Read Correct.

![Graph](image)

*Figure 11.* The mean results of the three grade two classes for Oral Reading Fluency Words Read Correct.
Table 26
Oral Reading Fluency (ORF) Words Read Accurately (A) Grade 2 Class one, class two and class three combined class percentages

<table>
<thead>
<tr>
<th>Oral Reading Fluency 2015=2016</th>
<th>Grade 2 Combined classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall</td>
</tr>
<tr>
<td>Benchmark (green)</td>
<td>NN=5</td>
</tr>
<tr>
<td></td>
<td>%=8</td>
</tr>
<tr>
<td>Low Risk (yellow)</td>
<td>NN=34</td>
</tr>
<tr>
<td></td>
<td>%=52</td>
</tr>
<tr>
<td>High Risk (red)</td>
<td>NN=26</td>
</tr>
<tr>
<td></td>
<td>%=40</td>
</tr>
</tbody>
</table>

Figure 12 visually depicts the mean results of the three grade two classes for Oral Reading Fluency Words Read Accurately.

Since the DIBELS is indicative of future reading skills, it was important to analyze the student scores to determine the effectiveness of curriculum instruction at the study site and to identify areas in need of improvement. The DIBELS Assessment supports an RTI/MTSS model because teachers use the assessment data to make decisions about the frequency, intensity and type of instructional supports each child needs to improve his/her performance.
Semi-structured interviews. The second data source utilized by this researcher during this descriptive case study was seven semi-structured individual interviews conducted during early 2017. Participation in these face to face interviews was voluntary and each interview was scheduled at a time, date and location chosen by the participants outside of school hours. Prior to interviewing participants, this researcher sought permission to digitally record each interview. Interviews lasted approximately 35-45 minutes.

The interviews were conducted as “guided conversations rather than structured inquiries” (Yin, 2009, p. 106). Interview questions (Appendix D) were designed to generate participants’ perspectives about their ideas, opinions, and experiences. By capturing the beliefs and everyday experiences of the interviewees (a team of three grade two teachers, a special educator, a literacy coach, a psychologist and the building administrator), this researcher was able to gain insight into how these educators (MKOs) perceived the process, structures, fidelity and impact of an RTI/MTSS framework on student learning. In addition, the researcher was able to illuminate the factors that facilitated or challenged the implementation of an RTI/MTSS model of instruction.

This researcher manually utilized Saldaña’s (2009) two-cycle coding process while analyzing the raw data collected during the semi-structured interviews. During first-cycle coding, descriptive coding was used to summarize and synthesize basic topics from interview data by using words and short phrases. In addition, In Vivo coding was used to replicate the actual language of specific participants. Categories and themes that emerged from descriptive coding and In Vivo coding were very similar to those predicted by the researcher. These include the following: Staff understanding/perceptions of RTI/MTSS, student assessments and supports, fidelity of implementation, benefits and barriers of RTI/MTSS, the importance of staff collaboration and communication and professional development. Second-cycle coding enabled
this researcher to refine the number of codes, themes and categories identified during cycle one coding to a few major themes, categories and concepts based on the frequency and relationships between codes without losing the meaning of the data. According to Miles and Huberman (1994), “qualitative data can be reduced and transformed in many ways: through selection, through summary or paraphrase, through being subsumed in a larger pattern” (p. 11). Major themes identified through second-cycle coding were compared with themes identified in first cycle coding and were found to be very similar to the codes the researcher predicted would emerge based on the literature review and the theoretical framework guiding this study. Themes established include staff perceptions of the process, structures and impact of an RTI/MTSS model of instruction, assessment practices and student supports, fidelity of curriculum implementation, benefits and barriers of an RTI/MTSS model, the significance of staff collaboration and communication and professional development.

Table 27 demonstrates the progression from first-cycle coding to second-cycle coding for the interview data.
Table 27
*First-cycle expected codes/themes and second-cycle refined codes/themes from semi-structured interview data*

<table>
<thead>
<tr>
<th>First-Cycle Coding – Expected Emergent Themes from Interviews</th>
<th>Related Interview Questions</th>
<th>Second-Cycle Coding – Refined Themes from Interviews</th>
<th>Related Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff understanding of RTI/MTSS</td>
<td>Questions: 1, 2, 3, 4, 8, 9, 11, 12, 13, 14</td>
<td>STAFF-PERC</td>
<td>Questions: 1, 2, 3, 4, 8, 9, 11, 12, 13, 14</td>
</tr>
<tr>
<td>STAFF-UND/PERC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment Practices</td>
<td>Questions: 1, 2, 3, 4, 5, 6, 7, 8</td>
<td>Assessment Practices</td>
<td>Questions: 1, 2, 3, 4, 5, 6, 7, 8</td>
</tr>
<tr>
<td>STAFF-DA</td>
<td></td>
<td>STAFF-DA</td>
<td></td>
</tr>
<tr>
<td>Student Support</td>
<td></td>
<td>STAFF-PERC</td>
<td></td>
</tr>
<tr>
<td>STUD-SUP, T-1, T2, T3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Instructional Practices</td>
<td>Questions: 1, 2, 5</td>
<td>Assessment Practices</td>
<td>Questions: 1, 4, 5, 9, 13</td>
</tr>
<tr>
<td>STAFF-DI, STAFF SCAF</td>
<td></td>
<td>STAFF-DA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STAFF-PERC</td>
<td></td>
</tr>
<tr>
<td>Changes in staff practices</td>
<td>Questions: 1, 2, 3, 12</td>
<td>Staff Perceptions of RTI/MTSS</td>
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<td>STAFF-UND/PERC</td>
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<td>RTI/MTSS</td>
<td>Questions: 1, 4, 5, 6, 7, 8, 9</td>
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<td>Fidelity of implementation</td>
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<td>Questions: 1, 3, 4, 6, 11, 13</td>
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<td>Barriers of RTI/MTSS</td>
<td>Questions: 1, 2, 3, 5, 8, 10, 11</td>
<td>Barriers of RTI/MTSS</td>
<td>Questions: 1, 2, 3, 5, 8, 10, 11</td>
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<tr>
<td>Staff collaboration and communication</td>
<td>Questions: 1, 2, 3, 4, 7, 9, 12, 13</td>
<td>Staff collaboration and communication</td>
<td>Questions: 1, 2, 3, 4, 7, 9, 12, 13</td>
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<td>Professional Development</td>
<td>Questions: 4, 8, 10</td>
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<td>Questions: 4, 8, 10</td>
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<td>STAFF-SUP</td>
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Review, reorganization, and reanalysis of the interview data culminated in identifying several major themes. This provided this researcher with the insight necessary to understand how a team of grade two teachers, support staff and the building administrator at the study site perceived the process, structures, fidelity of implementation and the impact of an RTI/MTSS model of instruction. Table 28 displays these major themes.

Table 28. *Major themes identified during second-cycle coding of semi-structured interview data*

<table>
<thead>
<tr>
<th>Major Themes Identified from Semi-Structured Interviews</th>
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<tbody>
<tr>
<td>1. Teachers’ Perceptions of RTI/MTSS</td>
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<tr>
<td>2. Assessment Practices</td>
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<tr>
<td>3. Fidelity of Implementation</td>
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<td>4. Collaboration and Communication</td>
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<tr>
<td>5. Benefits of RTI/MTSS</td>
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<tr>
<td>6. Barriers of RTI/MTSS</td>
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<tr>
<td>7. Professional Development</td>
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**Teachers’ perceptions of RTI/MTSS.** Participants’ responses conveyed an overall understanding of an RTI/MTSS model of instruction. While sharing their perception of RTI/MTSS, each interviewee made reference to multiple layers of supports, with increasing levels of intensity, provided to students who are at risk or having difficulty with reading content.

They all agreed that an effective RTI/MTSS framework consists of the following components: high quality instruction, progress monitoring, data based decision making, and evidence based interventions at all tiers. They also believed that an effective tiered model of
instruction required a strong evidence-based tier 1 core curriculum in which all students participate.

The literacy coach stated, “it’s like differentiating instruction times ten”. She elaborated by stating that a reason for implementing this model is for the majority of students to meet tier 1 benchmarks or grade level reading expectations. All staff acknowledged that students’ progress at different rates, with one general educator stating, “We want to support students experiencing difficulty so they don’t slip through the cracks”. Therefore, a model such as RTI/MTSS that offers a continuum of supports to students as soon as they are identified as struggling or at risk is advantageous.

All educators believed that additional layering of instructional tiers should be scheduled so that students do not miss tier 1 general education classroom instruction. The special educator felt strongly that “missing tier 1 curriculum was non-negotiable. That’s where the bulk of instruction takes place and where students learn from each other”. During tier 2 or tier 3 instruction, instructional intensity increases when staff either creates a small flexible homogeneous group or delivers one on one instruction.

The school psychologist described RTI/MTSS as “a way to bridge resources between general education and special education in order to get some more specialized supports into the general education as soon as a student is identified as struggling”. The literacy coach stated, “Let’s see how they do with a flood of supports before we label any child”. Similarly, a grade two staff member agreed that “RTI/MTSS enables kids rather than labels kids”. She felt that the RTI/MTSS model was child centered and gave staff an opportunity to “look at students in a different light and to provide them with differentiated instruction based on where they are at the moment and where they need to be”. She valued the fact that there is fluidity between the tiers.
Another second-grade staff member stated that educators are starting to think about “how we can be more preventative before actually making a referral to special education right away”.

Assessment practices. Each participant expressed the belief that assessment practices are one of the most integral components of the RTI/MTSS process. Educators cited the importance of both formal and informal assessment data for informing and guiding their pedagogy. Data analysis provides teachers with the information they need to determine each child’s baseline or zone of proximal development (ZPD).

Participants confirmed the significance of using data from DIBELS and progress monitoring to group students based on student strengths and weaknesses, to recommend additional tiers for at risk students and to determine the evidence-based intervention that would match the student’s area of need. They also felt that accurately identifying a student’s learning problem and examining the cause of the problem would help them with the selection of appropriate instruction or intervention. One educator summed up the importance of data-based decision making by stating, “If we intervene using something that’s really not matched to the deficit, we’re not going to improve the student’s performance”.

Consensus among the participants demonstrated that they embraced having the opportunity to personalize instruction for students by scaffolding concepts, differentiating instruction, and developing small flexible groupings that allowed students to move from one group to another based on skill set. The school psychologist described the procedure staff followed when students did not respond favorably to the evidence-based strategies implemented by the classroom teacher. Struggling students were referred to the building-based student support team (SST). This problem-solving team would then schedule a meeting with the referring teacher so that the teacher could describe the challenges the student was experiencing.
Based on the student’s ZPD, the SST would develop a goal and action plan aligned to the selected intervention. The special educator noted the importance of understanding a student’s ZPD by stating “if you don’t know where they are, how you will know where to bring them”? The classroom teacher or interventionist is responsible for progress monitoring and collecting data on student work for six to eight weeks and then bringing the data back for the SST to analyze. The special educator cited the importance of documenting the date, time, frequency and fidelity of the intervention implementation. This would enable the team to determine whether the child did not respond to the intervention or whether staff did not follow the action plan explicitly. Once student progress or lack of progress was determined, SST established next steps.

Unlike the traditional “wait to fail” discrepancy model used to identify students with potential disabilities, the problem-solving SST analyzes data and intervenes by providing students with supports immediately. As a result, the majority of interviewees agreed it was a necessary pillar of an RTI/MTSS model. The building administrator expanded upon this sentiment by stating “a focus on progress monitoring and tracking data helps educators see growth patterns over time and supports classroom teachers by informing their instruction as they develop their weekly lesson plans”. One educator felt, however, that “the SST delayed the special education referral process”.

**Fidelity of implementation.** While participants unanimously agreed that fidelity significantly impacts RTI/MTSS implementation, the majority of interviewees agreed fidelity is a component which needs to be strengthened. The literacy coach stated, “I encourage teachers to keep a tally list of how many times they actually work with a child to make sure it reflects the frequency and intensity recommended by the SST meeting”. The special educator noted,
“There’s definitely staggered abilities with fidelity as staff are still launching the RTI/MTSS model and adopting the concept”. However, she credited educators who implemented content with fidelity as having “mastery of curriculum”. The building administrator expanded upon this by stating, “Interventions utilized by tier 2 interventionists are scripted which allows staff to maintain program fidelity”.

The psychologist stated, “it seems like grade level staff has the same curriculum, however, delivery of curriculum can be different and the time devoted to unit concepts varies”. The literacy coach felt implementation fidelity may be lacking because “we have a lot of different people delivering interventions yet not everyone completes fidelity checklists”. The psychologist asserted, “We tend to give educators the benefit of the doubt when it comes to fidelity, knowing staff wants all students to do well”. One of the classroom teachers felt fidelity was compromised at times due to changes in the daily schedule and stated, “maybe we didn’t meet with the student as many times as we said we would”.

The special educator believes, “self-report checklists and video taping of lessons would enhance fidelity by providing staff with opportunities for self-reflection and allow for feedback from colleagues”. While Classroom teachers agreed that fidelity checklists supported program adherence and guided them through program steps, they agreed the tendency to drift from protocol did happen due to time constraints, students being pulled for additional tiers during core instruction or insufficient program training or resources.

One educator stated, “I think being trained in the curriculum that we are teaching is very important and key to supporting staff with fidelity”. Another educator felt that approximately 20 years ago, the district had evidence-based interventions, all teachers were trained and they had sufficient resources. “People panicked, the district adopted a basal and it went downhill from
The building administrator concluded by saying, “although there are curriculum guidelines and online modules available for staff to follow, implementation fidelity is impacted by variations in staff interpretations of them and the skill set of individual teachers”.

**Collaboration and communication.** Consensus was noted among all participants that RTI/MTSS is a model in which educators share accountability for all students they instruct. For this reason communication and collaboration are critical to the process. Classroom teachers attributed the RTI/MTSS framework as promoting dialogue at staff meetings, the lunch room or at the copier. They agreed “the reason they started an intervention group was because they heard the fourth-grade teachers designed an intervention block”.

One teacher summed it up by stating, “We have to work as a cohesive unit to support students”. The literacy coach was cited as saying, “I think the phrase it takes a village is applicable. It absolutely requires shared accountability to meet the diverse needs of students staff work with”. The special education teacher elaborated on this by stating, “I think the problem solving RTI/MTSS model has blown up the areas of communication, collaboration and shared accountability”. Classroom teachers believed the RTI/MTSS framework has forced staff to collaboratively determine a student’s ZPD, identify an area of concern and to match the student’s need with a targeted intervention”. One teacher stated, “Staff is coming together and collaborating which is noticeably different from last year”.

The psychologist confirmed this belief by stating, “Teachers are open to owning student problems and working through them rather than focusing on how to have struggling students removed from their class”. In addition, the special educator expressed the need to “collaborate with related service providers (speech pathologist, occupational therapist) and enlist their support as necessary prior to developing an action plan”. The psychologist complemented the special
One educator expressed the need to collaborate with interventionists stating, “I feel like sometimes teachers don’t even know what our kids are doing when they leave our classrooms”.

The building principal noted, “Communication among the staff has tightened. They understand the role of SST, and the procedures that need to be put into place to support at risk students”. Participants agreed unanimously that the building administrator allows time for RTI/MTSS updates and discussion at weekly faculty meetings. She works diligently sharing information with staff, supporting them with implementation, empowering staff and accepting their input.

**Benefits of RTI/MTSS.** All Participants credited the RTI/MTSS framework as being the catalyst that compelled them to improve and strengthen the tier 1 core instruction. The special educator stated, “This year we have teachers using data to discuss what’s going on in tier 1 and why progress isn’t being made”. The psychologist noted, as training continues, staff are beginning to have a shift in philosophical beliefs and have had some AHA moments saying, “oh this can work, this really can be effective”.

The special educator believed the greatest benefit of RTI/MTSS is that “all students are learning together, everyone feels included and staff is provided with the opportunity to meet children where they are both academically and social emotionally”. In addition, the special educator stated, “students have an opportunity to get that extra dose of what they need”.

Interviewees agreed that progress monitoring of students has improved since adopting the RTI/MTSS framework. The Student Support Team (SST) meets weekly, collects and analyzes
data, develops action plans and schedules follow up meetings consistently. Classroom teachers feel they are becoming adept at strengthening their tier 1 core curriculum and closing student gaps by differentiating and scaffolding classroom instruction.

The special educator agreed that RTI/MTSS has prompted a mind shift on how classroom teachers view at risk students. She credited teachers as “addressing a student challenge by intervening as soon as they identify the problem”. The literacy coach felt that “multi-tiered instruction provided staff with an opportunity to give kids optimal instruction so that we can get as many kids as close to the benchmark as possible”. “Let’s give the kids all the supports they need without labeling them”. The school psychologist agreed saying, “when staff provide a larger continuum of supports for students, their needs can be met without inappropriately labeling them with a disability”. This sentiment was shared by the building administrator as she stated, “the RTI/MTSS framework provides students with an opportunity to reach mastery through multiple exposures of content they struggle with”.

**Barriers of RTI/MTSS.** The building administrator noted a significant barrier of RTI/MTSS implementation has been the lack of resources and a lack of staff training in evidence-based interventions. The psychologist agreed by stating, “as far as interventions, we are limited to LLI and ECRI. Beyond these, it’s simply modifying and accommodating a student’s day”. One teacher’s perception was that “staff pulls from many resources to meet student needs, but, I think half of them aren’t research-based”. This sentiment of limited interventions was shared by the literacy coach. “It’s kind of a teacher’s bag of tricks, and some teachers’ bags are fuller and more current than others”. The literacy coach also believes that “fidelity is one of the biggest challenges which coincide with not having something to implement with fidelity.”
All participants agreed staff collaboration is imperative to the implementation and sustainability of a successful RTI/MTSS model. Consensus among interviewees, however, was that educators lacked adequate time for communication and common planning time in order to optimize instruction for students they shared. The literacy coach confirmed this by saying, “Many conversations among staff take place on the fly as opposed to being able to sit down and make sure we’re on the same page supporting these kids”. Classroom teachers stated, “Creating professional learning communities (PLCs) in their building would foster opportunities to collaborate as a group.”

An additional concern pointed out by both the literacy coach and the special educator had to do with shared accountability. The literacy coach noted that since the new educators’ evaluation was adopted, “staff frowns at having a colleague instruct their students especially if they are not confident in their colleagues’ instructional abilities”. The special educator expanded upon this by stating, “If my student is receiving instruction from Betty-Sue, then where is the data to back up what she is doing?”

Educators’ perception of a multi-tiered model of instruction is that it is a framework that allows staff to effectively meet the individual needs of students. Participants felt however, their school needed additional interventionists, reading teachers, and a building literacy coach in order to provide the frequency and intensity of supports required by students. Although paraprofessionals were available to support students, the literacy coach noted, “Research says you should have your strongest teachers working with your most struggling students”. This sentiment was echoed by a classroom teacher who stated, “One thing that does not sit well with me is having paraprofessionals, with little or no training working with our most struggling students”. The psychologist expanded upon this concern by stating, “We get the most consistent
data when classroom teachers deliver intervention and collect the data”. However, when paraprofessionals deliver interventions, “data collection falls by the wayside.”

Interviewees agreed that multi-tiered instruction positively impacted student outcomes. However, consensus among educators was that tier 2 and tier 3 should be scheduled by the building administrator to ensure students are not taken out of tier 1 core instruction to receive additional tiers. The literacy coach expressed similar concerns stating, “There needs to be time written into the schedule where intervention can happen. I think it needs to be a top down schedule”. Another hardship was that professional development was previously provided to staff on a few evidence-based programs. Yet, participants agreed the training was not repeated for staff new to the district or to sustain effective implementation.

Respondents concluded by agreeing that the major challenges of RTI/MTSS fidelity of implementation were lack of resources, time constraints, the need for more training and scheduled time for additional tiers. While participants agreed these areas posed difficulty, consensus among them was this information identified areas they could refine or improve.

**Professional development.** Interviewees unequivocally agreed that professional development opportunities were integral to successful implementation and fidelity of an RTI/MTSS model. Training in evidence-based interventions, balanced literacy and guided reading protocols was cited by participants as necessary to ensure that these programs are used accurately and consistently as the authors of these programs intended.

While classroom teachers agreed that attending the DESE RTI/MTSS trainings have provided them with a common language and strategies to determine a student’s area of need, they felt program implementation lacked consistency among educators. The special educator expressed similar concerns noting that there is “inconsistency in the timeframe of phonics,
phonemic awareness and vocabulary instruction depending on the teacher”. In addition, she confirmed “balanced literacy requires a significant amount of on-going support for staff”. All study participants agreed that in order to teach content expertly, you must know and understand the topic thoroughly”. One classroom teacher expressed her opinion suggesting that annual refresher training for all staff on the best practices and strategies to implement RTI/MTSS with fidelity would support and sustain this framework. “It’s important to just rev you up again and get you thinking about new ideas”.

The school psychologist stated, “I think I’ve seen a shift in some of the philosophical beliefs of staff since we have been participating in the DESE RTI/MTSS training”. However, she went on to explain this shift doesn’t mean “changing a few things and doing business as usual”. It means “we’re changing the face of how instruction is delivered which takes time.” This participant summed up by stating, “In my previous district, I conducted around forty evaluations during my first year of RTI/MTSS implementation. Seven years later, I conducted four initials.”

One classroom teacher noted professional development was provided approximately two decades ago. All educators, including the paraprofessionals were trained. “There was commonality and we were moving towards where we are right now”. The classroom teacher explained that staff and administrator turn over brought professional development to a halt. She stated, “There’s no specific or consistent intervention. Staff has tried a lot of things rather than sticking with one thing”. The literacy coach agreed by stating, “We should have a few strong evidence-based interventions to hone in on and support students rather than jumping from one thing to the next”. The literacy coach expanded on this theme by stating, “Balanced literacy is
harder for some teachers than others. Additional professional development on this topic would be fantastic”.

The building principal credited successful and sustainable implementation of an RTI/MTSS model to professional development for staff. She noted, “It’s not just people, it’s skilled people”. Educators will continue attending RTI/MTSS trainings provided by DESE. In addition, self-report fidelity checklists and trainings on evidence-based interventions will be provided to staff. The administrator stated, “We are implementing RTI/MTSS in our school for the second time because the first time we did not approach it this way and the model did not sustain itself”. All participants agreed that professional development will guide the implementation and fidelity of an RTI/MTSS model in their school.

Data gathered from these conversational, individual, face-to-face interviews provided this researcher with deep, rich insight into the problem of practice. Participants voluntarily articulated their feelings and perspectives about the process, structure, fidelity of implementation and the impact of an RTI/MTSS model on teaching and student learning. Analysis of the semi-structured interview data supported the predicted themes. Emergent themes identified from second-cycle coding of these face to face interviews were presented to the study participants in written form prior to the focus group discussion (Appendix G).

**Analysis of documents.** Following the analysis of the individual interview data, this researcher conducted an analysis of the self-report documents. This analysis provided the researcher with an opportunity to compare themes from the analysis of the face to face interviews with those that emerged from the self-report documents and to identify similarities and differences. The themes from the interviews and the self-report documents were presented to the focus group participants for their review prior to the focus group interview. This data was
used to inform the focus group discussion of common themes which identified strengths and weaknesses in the fidelity of implementation of an RTI/MTSS model of instruction.

The Educators’ Perceptions of RTI/MTSS Survey is a self-report measure developed by Castillo, Batsche, Curtis, Stockslager, March and Minch (2010). This survey was distributed to the seven study participants during January 2017. The first twenty items of the survey assess educators’ perceptions of the extent to which their school implements RTI/MTSS practices. The remaining items, 21-38 measure educators’ perception of the skills they possess to implement RTI/MTSS practices in the content area of reading.

Respondents used the following scale when completing the first twenty items regarding the extent to which their schools implement RTI/MTSS practices on the survey: 1 = Never Occurs (NO); 2 = Rarely Occurs (RO); 3 = Sometimes Occurs (SO); 4 = Often Occurs (OO); 5 = Always Occurs (AO). Exhibit 13 visually depicts the mean average survey results of educators’ perceptions regarding the implementation of critical RTI/MTSS practices at the study site.

Calculating the mean rating for each item determines the average level of RTI/MTSS practices reported by educators who completed the survey. Mean ratings provide an overall impression of the level of perceived implementation within a school. If a large proportion of educators identify a practice or set of practices as occurring infrequently, then those practices should be targeted by professional development and coaching activities to address implementation issues.
Figure 13. The mean average results of educators’ perceptions of the extent RTI/MTSS practices are implemented at the study site.

Items 1-20 of this self-report survey measured the study participants’ perceptions of the extent to which their school is implementing the critical practices of a problem-solving RTI/MTSS framework. The mean average response to many of the questions elicited responses like respondents’ perceptions discussed during the semi-structured interviews.

The self-report survey results indicated that educators perceived both strengths and weaknesses within the study site as staff implements the critical practices of an RTI/MTSS
framework. Perceived strengths of practices included the ability of educators to use data to determine the percent of students meeting the tier 1 benchmark, the ability to make data informed decisions about changes necessary to the tier 1 curriculum and the use of data to identify at risk students. The student support team (SST) collected data to routinely identify the cause of students’ academic challenges. Staff felt the SST promoted shared accountability among staff for all students, enhanced communication and collaboration and provided support for faculty at the site of this study. In addition, educators perceived that a standard protocol intervention was used initially for all students identified as requiring supplemental, tier 2, instruction for reading. Participants also felt strongly about the need for the district to adopt more evidence-based interventions (EBI) and provide staff with training and resources. Educators believed that as the district adopts more evidence-based interventions (EBIs) and provides staff with professional development on implementation of these EBIs this practice will be implemented more consistently.

Areas in which educators perceived they would require supports to enhance fidelity of implementation was in their ability to use quantifiable data to identify a student’s level of performance, identify a desired level of student performance and to identify the current performance of same-aged peers. Educators also perceived the need for professional development in the following areas: Using data to develop EBIs, monitoring student progress, graphing student data, determining whether student challenges are a result of ineffective instruction or a disability and with implementing curriculum and interventions with fidelity.

The remaining survey items 21-38 are comprised of self-report measures of educators’ perception of the skills they feel they possess to implement RTI/MTSS practices in the content area of reading. According to Costillo et al. (2010), educators embrace new practices when they
understand the need for the new practice or when they believe they have the skills, and/or know they will receive support in order to implement new practices.

Respondents used the following scale when completing items 21-38 to identify their skill level with implementing RTI/MTSS practices and to identify areas in which educators require professional development or resources to enhance skill development: 1= I do not have the skill at all (NS); 2= I have minimal skills in this area and need substantial support to use it (MnS); 3= I have the skills but still need some support to use it (SS); 4= I can use this skill with little support; (5)=I am highly skilled in this area and could teach others this skill (VHS).

Exhibit 14 visually depicts the mean average survey results of educators’ perceptions about the skills they possess to successfully implement RTI/MTSS practices.
Figure 14. The mean results of educators’ perceptions of the RTI/MTSS skills they possess.

Overall, respondents perceived they have the necessary skills to successfully implement an RTI/MTSS model of instruction. However, areas in which respondents perceive needing professional development to support their skill development include using student data to identify reasons for academic problems, making decisions related to academic instruction and interventions, implementing curriculum with fidelity and constructing and interpreting graphs to monitor student progress.

Study participants completed this survey to determine their perceptions regarding the extent that critical practices of an RTI/MTSS framework were implemented at the site of the study and to determine the skill set of the respondents. Respondents’ perceptions of the practices
implemented at the site of the study and the skills they possess align with Vygotsky’s (1934/1978) tenets of the zone of proximal development (ZPD), the student’s actual developmental level and the ability of the more knowledgeable other (MKO) to use instructional practices that meet the unique needs of students and increase their learning potential.

The researcher conducted first-cycle coding of the self-report survey to identify emergent themes which had previously been determined as likely to occur. During first-cycle coding, descriptive coding was used to summarize and synthesize basic topics from the survey data by using words and short phrases. Categories and themes that emerged from descriptive coding were very similar to those predicted by the researcher. These include the following: Fidelity of curriculum/interventions, staff understanding/perceptions of RTI/MTSS, tiers/Levels of support, student assessments practices, staff instructional practices, the importance of staff collaboration and communication and professional development. Second-cycle coding enabled this researcher to refine the number of codes, themes and categories identified during cycle one coding to a few major themes, categories and concepts based on the frequency and relationships between codes without losing the meaning of the data.

Table 29 demonstrates the progression from first-cycle coding to second-cycle coding for the survey data.
Table 29  

*First-cycle expected codes/themes and second-cycle refined codes/themes from self-report survey data*

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<td>Items: 15, 32</td>
<td><strong>Fidelity, Curriculum/Intervention Implementation Fidelity</strong> FID, CURR FID, INTERV FID</td>
<td>Items: 15, 32</td>
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<td><strong>STAFF-UND</strong> RTI/MTSS</td>
<td>Items: 1-38</td>
<td><strong>STAFF-PERC</strong> RTI/MTSS</td>
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<td><strong>Assessment Practices</strong> STUD-DA</td>
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<td>Items: 11, 14, 28, 29a, 29b, 29c, 30, 31</td>
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<td>Items: 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 27, 28, 29c, 32, 33d, 33e</td>
<td><strong>Professional Development Resources</strong> STAFF-SUP</td>
<td>Items: 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 27, 28, 29c, 32, 33d, 33e</td>
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<td><strong>Staff collaboration and communication</strong> STAFF-COLL, STAFF-COMM</td>
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<td><strong>Staff collaboration and communication</strong> STAFF-COLL, STAFF-COMM</td>
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Review and reanalysis of the survey data concluded in identifying several major themes. Table 30 displays these major themes.

Table 30. Major themes identified during second-cycle coding of self-report survey data

<table>
<thead>
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<th>Major Themes Identified from self-report survey data</th>
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<tbody>
<tr>
<td>1. Staff Perceptions of RTI/MTSS</td>
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<td>2. Fidelity of implementation</td>
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<td>3. Assessment Practices</td>
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<td>4. Collaboration and Communication</td>
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<tr>
<td>5. Professional Development</td>
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</table>

**Focus Group Interview.** The final step of the data analysis procedure, performed by this researcher, was analyzing data gathered during a focus group interview. All seven educators participated in this discussion forum. The focus group interview was used as the primary source of data since the questions used to frame this collaborative conversation were developed based on the themes that would most likely emerge from the literature researched and the theoretical framework guiding this study.

Focus group discussions are interactive settings that foster collaboration and communication. Participants answer questions posed to the group, by discussing their thoughts, beliefs and experiences with each other. Collaboration is rooted in Vygotsky’s (1934/1978) concept, zone of proximal development (ZPD), which illuminates the importance of learning through communication and interaction. Ellis (2000) suggests that Vygotsky’s sociocultural theory assumes that learning arises not through interaction but in interaction.
Prior to conducting the focus group interview, this researcher shared data collected from the semi-structured interviews and the self-report survey with the participants. This provided them with an opportunity to member check the data from the previous data sets they participated in and to affirm whether the summaries reflected their views, feelings, and experiences. Next, participants were reminded that the focus group discussion would be audio recorded to allow this researcher repeated access to the data. Finally, participants were re-assured that the data would be destroyed at the end of the study and that their identities and the identity of the study site would remain anonymous. Raw data from the focus group was submitted to Rev Services for transcription.

The focus group transcript was manually coded by the researcher. The researcher’s intent was to identify participants’ perceptions of the process, benefits, structures, challenges, fidelity of implementation and impact of an RTI/MTSS model on student learning. First cycle coding was used to identify themes most likely to emerge. The sociocultural theory and RTI/MTSS research informed coding selections.

Descriptive and In Vivo coding was used during this first round of data analysis. Initial coding was then followed by a second round of coding which allowed the researcher to reorganize, reanalyze and refine the focus group discussion data. Similar to the coding process used for coding the interview data, this researcher combined and labeled comparable codes selected for focus group data with a pattern code, and eliminated repetitive codes. As a result, second- cycle coding enabled this researcher to refine the number of codes, themes and categories identified during cycle one coding to a few major themes, categories and concepts. These themes were very similar to those predicted as likely to emerge by the researcher.
Table 31 demonstrates the progression from first-cycle coding to second-cycle coding for the focus group data.

Table 31

First-cycle expected codes/themes and second-cycle refined codes/themes from the focus group discussion data

<table>
<thead>
<tr>
<th>First-Cycle Coding – Expected Emergent Themes from Focus Group Interview</th>
<th>Related Focus Group Questions</th>
<th>Second-Cycle Coding – Refined Themes from Focus Group Interview</th>
<th>Related Focus Group Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educators’ perception regarding Assessment practices</td>
<td>Questions: 1, 2, 3, 5, 6 STAFF-DA, STUD-ZPD STUD T1, T2, T3</td>
<td>Assessment and Data Informed Decisions</td>
<td>Questions: 1, 2, 3, 5, 6 STAFF-DA STAFF-PERC-DBD</td>
</tr>
<tr>
<td>Educators’ perception regarding student supports</td>
<td>Questions: 1, 2, 6 STUD-T1, T2, T3 STUD-DI, EVID-B-INSTR STAFF-INSTR</td>
<td>Instructional practices and Service Delivery</td>
<td>Questions: 1, 2, 6 STUD-T1, T2, T3 EVID-B-INSTR STAFF-INSTR</td>
</tr>
<tr>
<td>Educators’ perception Regarding fidelity of Curriculum/intervention</td>
<td>Questions: 3 FID, CURR-FID, INTERV-FID</td>
<td>Fidelity of Implementation And Professional Development</td>
<td>Questions: 3 FID</td>
</tr>
<tr>
<td>Educators’ perception regarding the benefits and barriers of RTI/MTSS</td>
<td>Questions: 4, 5, 6 STAFF-PERC-BEN STAFF-PERC-BAR</td>
<td>Benefits and Barriers</td>
<td>Questions: 4, 5, 6</td>
</tr>
</tbody>
</table>

Analysis of focus group data revealed five major themes that substantiated the emergent themes from the semi-structured interviews and the self-report document. Table 32 presents the themes identified from within group patterns, indicating consensus of responses among the
majority of participants as well as across group patterns, indicating two or more respondents voiced similar comments.

This provided this researcher with a deeper understanding of how a team of grade two teachers, support staff and the building administrator at the study site perceived the process, structures, fidelity of implementation and the impact of an RTI/MTSS model of instruction.

Table 32. *Major themes identified during second-cycle coding of the focus group data*

<table>
<thead>
<tr>
<th>Major Themes Identified from focus group data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assessment and Data Informed Decisions</td>
</tr>
<tr>
<td>2. Instructional Practices and Service Delivery</td>
</tr>
<tr>
<td>3. Fidelity of Implementation</td>
</tr>
<tr>
<td>4. Benefits and Barriers</td>
</tr>
<tr>
<td>5. Communication and Collaboration</td>
</tr>
</tbody>
</table>

*Assessment and data informed decisions.* Student assessment data supports staff with early identification of at risk students and data informed decision making in order to increase student learning. Both student assessment and data informed decision making are important aspects of an RTI/MTSS framework and are directly related to Vygotsky’s (1934/1978) focus on students’ zone of proximal development (ZPD) and the instruction provided by the more knowledgeable other (MKO).

Similar to participants’ responses during the individual interviews and the results collected from the self-report survey, focus group respondents confirmed that assessment practices are essential to the RTI/MTSS process. Teachers professed an unwavering belief that assessment was critical to an RTI/MTSS process because formative assessments were the
instructional tools they used to develop their small flexible skill based groups, their guided reading groups, and to select interventions matched to the individual needs of students. The special educator noted “We use data to determine where students are and where they need to be.” The literacy coach summed up the importance of progress monitoring by stating, “The point of progress monitoring is not just to assess students but rather it’s to analyze the information you get and then determine how you can use the data to support student learning.” Consensus among staff demonstrated their belief that assessment is a tool that enables them to individualize and personalize instructional practices and make decisions about students who may need additional tiers.

Data collected across all groups showed that most participants relied on benchmark and progress monitoring assessments as a primary source of information to identify instructional needs and monitor student growth. DIBELS data was most commonly used at the site of the study to inform instructional decisions. The building administrator described DIBELS as a “research based universal screener that allows teachers to see the entire range of students’ patterns and trends in their classrooms.” The literacy coach expanded upon this notion by explaining that “DIBELS are reliable measures which allow teachers to gauge the progress of all students they instruct.” She continued by stating, “DIBEL measures are sensitive to changes in student learning and predictive of students’ later reading proficiency.” Respondents across groups credited DIBELS data for informing them about students’ strengths and areas of need which allowed staff to group the students accordingly.

The school psychologist asserted “decisions within an RTI/MTSS model of instruction are made by student support teams (SST), using a problem-solving technique.” She went on to explain that a problem-solving team provides a structure for using data to monitor student
learning so that “sound decisions with a strong probability of success could be made across all tiers”.

The majority of respondents across groups agreed that data collected through progress monitoring informed the decision-making team about whether changes in instructional practices or developing student goals was necessary. The special educator summed up the importance of the SST by stating, “Having a team approach and listening to the perspectives of all staff involved with the student’s learning is extremely helpful”. While all participants agreed about the significance of using data to identify student strengths, challenges and an appropriate placement, the psychologist cautioned staff about identifying students as a tier 1, tier 2 or tier 3 students. “Tiers or levels should be fluid placements to support student learning and should not become labels for students.” All participants recognized the magnitude of confidence they invested in DIBELS data for guiding their initial planning, developing student goals and for making decisions about moving students in and out of instructional levels.

**Instructional practices and service delivery.** Focus group participants perceived an effective RTI/MTSS framework as consisting of high quality instruction, targeted research-based practices, and differentiated instruction, across all tiers of instruction. One of the classroom teachers stated, “Some of the most effective RTI/MTSS strategies utilize instruction that is structured, planned and research-based.” The special educator noted, “You can increase retention and understanding of concepts by breaking lessons in to small manageable parts, modeling the desired learning strategy, and presenting information using multi-modal strategies to accommodate various student’s learning styles.” Classroom teachers unanimously expressed their beliefs about the importance of small flexible groups within the tier 1 core instruction. One classroom teacher stated, “Grouping students provides them with peer models and a social
learning environment which helps with engaging students in learning.” Vygotsky's (1934/1978) theory suggests that cognitive growth may occur not only when children are assisted by an adult but also when children collaborate with a more competent peer.

From analysis of the data taken from across individual interviews and the focus group discussion, it was apparent that most participants believed that effective tier 1 core instruction consists of explicit systematic instruction, ample practice opportunities, and immediate corrective feedback. According to Wertsch (1985), when educators provide feedback to children confirming that their proposed answers are correct, the child receives a boost to his or her confidence, which no doubt helps with understanding.

The building administrator stated, “Lessons should be designed so that students have multiple opportunities to respond to high order thinking questions and numerous practice times to demonstrate what they are learning”. This viewpoint was reinforced by the special educator as she noted, “The learning rate of students is different so some kids need to hear things more than once and need lots of practice and supportive feedback which helps level the playing field for them”.

Tier 1 refers to the core instruction that all students receive. The National Reading Panel (2000) has recommended that tier 1 reading instruction in the early grades focus on five reading components that are the precursors of later literacy achievement: phonemic awareness, phonics, fluency, reading comprehension, and vocabulary. Discussions within and across all groups showed mixed perceptions about whether or not these critical five components are consistently embedded within the core reading curriculum at the site of the study. Although the literacy coach stated the critical five components were embedded in the curriculum, she felt that staff needed time “to examine each component to ensure that everyone’s on the same page when it
comes to time allotted for teaching each of these early literacy skills and that consistency of programming is maintained among staff.” An additional concern was pointed out by the building administrator. “While we touch on the five essential foundational literacy skills, I feel the skill set of some staff and their understanding of certain programs negatively impacts student performance”.

The majority of participants confirmed this impression stating, “The analysis of student DIBELS data indicated that a high percentage of students did not make the benchmark in the areas of phonics, vocabulary and comprehension.” DIBELS scores can also be used to determine the effectiveness of educators’ instruction (University of Oregon, 2016). Since less than 80% of students are meeting grade level benchmarks through the general education classroom this percentage usually indicates an issue with curriculum and/or instruction rather than something inherently wrong with the student.

RTI/MTSS incorporates a range of assessment, instruction, and intervention principles. In addition, it offers multiple tiers of support for students, depending on the level of reading difficulty they may be experiencing. Educators agreed that a multi-tiered model of instruction improved their ability to support a greater number of students. Students who do not respond favorably to tier 1 strategies are given additional tier 2 small group instruction two or three times a week for approximately thirty minutes. Respondents emphasized that tier 2 instruction involves more intentional teaching strategies that pinpoint exactly what students need to learn. Educators cited the importance of slowing down the pace of direct instruction, and providing students with more opportunities to practice what they have learned. One educator summed up tier 2 instruction by stating, “I am able to teach or reteach the skills students are having difficulty
with. I also provide ample opportunities for students to practice and demonstrate their learning and I frequently conduct progress monitoring to closely monitor student progress”.

Students who do not progress in tier 2, approximately 3-5%, are referred for special education testing at the site of the study. Tier 3 is specialized and individualized based on the needs of each student identified. Students are taught in very small groups or one on one and meet criteria for having a disability. Progress monitoring is conducted weekly. The special educator noted, “If a student is successful after this intensive small group or one on one instructional intervention, they can return to tier two.” One of the classroom teachers concluded by saying, “What’s great about this multi-tiered model of instruction is that there’s movement in and out of tiers once a student begins to make gains and the gap closes. Students don’t get pigeonholed”.

**Fidelity of implementation.** Fidelity of implementation results when educators develop a common understanding of the curriculum and maintain consistency and accuracy in practices that reflect the program developer’s intent. Factors that uphold fidelity are sufficient time allocation, adequate intensity and frequency, trained, qualified staff and resources. According to Mortenson & Witt (1998), student outcomes increase when teachers implement interventions that follow the protocol developed by the program designers.

Similar to participants’ responses during the individual interviews and the results collected from the self-report survey, focus group respondents agreed that implementation fidelity is a critical component of an RTI/MTSS framework. Participant discussions across groups however, indicated that educators believed that fidelity is a factor that needs to be refined and strengthened. The special education teacher said, “I think we’re doing our best to do everything with fidelity, although it doesn’t always pan out.” One classroom teacher added, “I
think fidelity is key to everything we do. We’ve tried a lot of things, however, rather than sticking with one thing, I feel we’re all looking for a quick fix”. The literacy coach confirmed this noting, “Jumping from one thing to the next is confusing.” She expressed confidence in supporting student learning by increasing the frequency of instruction and or decreasing the group size. The literacy coach elaborated on this stating, “Tier 2 instructions should supplement, align and incorporate foundational skills that support tier 1.”

The majority of respondents agreed fidelity measures would help staff become more adept at consistently implementing the instructional practices the district had embraced. Consensus among them indicated educators must know and understand curriculum thoroughly in order to teach it skillfully. The special educator expressed her opinion by stating, “Training in a program supports fidelity. I feel the programs we’ve been trained in get implemented with integrity”. The literacy coach expanded upon this theme by stating, “When program procedures are clearly spelled out, a common understanding and consistency in practices is established among all staff.” The psychologist concluded by asserting, “The importance of monitoring fidelity increases during the SST process since the team is making high stake decisions about referred students”. She went on to explain that fidelity of implementation measures would provide the necessary evidence of what was, or wasn't done, to impact student outcomes.

All participants felt, “Since using self-report fidelity checklists, video-taping lessons, watching the recordings with colleagues and receiving peer feedback, improved implementation fidelity had been noted.” The building administrator confirmed this and added, “I feel it is necessary for our district to adopt fidelity measures across all classrooms so that all students receive consistent, high quality tier 1 literacy instruction.” While this sentiment was shared by
the literacy coach she also felt staff should keep track of meetings they have with students and the activities they use to engage the students.

The literacy coach also credited establishing a committee, made up of staff members from each grade level, as a strategy for improving literacy fidelity. Committee members are working collaboratively and designing lessons plans which will be used by grade level staff to deliver instruction. This will ensure accuracy of instructional practices and consistency of time allotment. As a result, students will receive similar learning experiences regardless of the assigned teacher or classroom.

As noted from the individual interviews, the self-report survey results and the focus group discussion, all educators at the study site agreed that assessing the quality of implementation matters when attempting to examine the effectiveness and impact of interventions on student outcomes. Respondents agreed using fidelity monitoring measures will identify the parts of interventions that need stronger implementation.

**Benefits and barriers.** A common theme entwined across the data analyzed from the individual interviews, the survey results and the focus group discussion, demonstrated that the majority of participants embraced RTI/MTSS as a beneficial framework for improving student outcomes. The psychologist elaborated upon this by explaining, “RTI/MTSS is a methodology to bridge resources and get more specialized supports and instruction into general education at the first sign of a student struggling.” She went on to explain that RTI/MTSS is designed for kids who take a bit longer on some concepts and need a little bit of a boost here and there. “I think that’s great where you can give them that boost, rather than let that small hole grow into a huge deficit”. The building administrator also recognized the benefit of the RTI/MTSS model
stating, “Students have an opportunity to reach mastery through multiple exposures to instruction and are provided with numerous opportunities to practice new skills.”

An additional benefit for students is that they receive evidence-based instructional supports as soon as assessment data indicates a student is experiencing difficulty with reading skills. The special education teacher summed up the consensus among participants across discussion groups by stating, “The main benefit of an RTI/MTSS model of instruction is for students to receive targeted instruction at their level of need and ability in order to reach their potential”. The literacy coach expanded upon this noting, “We need to give the kids the best instruction possible so that we can get as many kids as close to the benchmark as possible”.

Participants expressed the belief that students benefit from the RTI/MTSS framework because it’s a data driven, child centered model that allows staff to personalize student instruction.

While all study participants expressed the belief that an RTI/MTSS model of instruction was beneficial for students they also noted benefits for educators at the study site. Evidence-based instructional practices helped staff tailor instruction for a greater number of students within the general education population. An additional beneficial component of the RTI/MTSS model is the student support team (SST). Students that continue to struggle in the tier 1 core curriculum, in spite of receiving systematic, differentiated instruction, are referred to the SST. This multidisciplinary problem-solving team promotes collegial planning, data driven decision making and shared accountability of students among team members. All participants credited the SST for increasing communication and enhancing consistency and alignment of instruction.

A classroom teacher confirmed this saying, “SST enables us to share data, and brainstorm about how we can best meet the needs of the students”. The special educator elaborated by adding, “At SST we develop student goals based on the student’s ZPD (baseline) and create action plans to
improve fidelity and increase student performance”. The psychologist described RTI/MTSS as a model that has illuminated the importance of formative assessment (Dynamic Assessment). She stated, “Ongoing progress monitoring enables staff to continually refine and strengthen core instruction rather than using a one shot summative assessment”. The majority of participants agreed that data from progress monitoring enabled them to develop small flexible groups, and provided them with the information necessary to fluidly move students from one group to another based on gains in student performance. One teacher summed things up by saying, “I think it’s looking at kids more holistically so that they don’t get pigeonholed”.

While the majority of focus group participants agreed there are numerous benefits of implementing an RTI/MTSS model of instruction, they also noted several barriers to the implementation of this framework at the site of the study. Respondents across all discussion groups indicated the need for additional staff to improve the RTI/MTSS model of instruction. When questioned about how the site of the study compared with her prior district (in which RTI/MTSS had been fully implemented for six years), the psychologist stated, “My prior district was a very affluent community with many resources. Every school had a literacy coach, a differentiation coach, interventionists and a psychologist”. In this district, there is one literacy coach for the entire district. She explained that teachers in her prior district received numerous supports in their classrooms prior to referring a student to SST.

One educator expressed her concern saying, “I don’t feel like we have enough interventionists to help support students that are identified as at risk and require additional tiers of instruction”. She added educators meet with the literacy coach to analyze DIBELS data and develop plans to support the identified at risk students. Our intent is to meet again with the literacy coach in six to eight weeks and review student progress. However, “That’s still loosey
goosey. Sometimes it will happen and sometimes it won’t. We definitely could use more than one literacy coach”. The literacy coach confirmed this stating, “Being the only literacy coach makes it difficult to stay current about student progress”. She continued to explain that when students do not respond favorably to the classroom intervention, they get referred to the SST. “I feel like there’s a disconnect because I’m not able to attend the SST meeting, although I’d like to”.

The building administrator noted, “We definitely need more personnel. However, it’s trained personnel, quite honestly. So, it’s not just people it is skilled people we need”. The special education teacher elaborated on this stating, “I think it’s twofold. We definitely have a lack of evidence-based interventions in the district but we’re also lacking trained people to teach them”. Consensus was noted among participants that lack of evidence-based resources and lack of staff training created challenges for implementation of the RTI/MTSS model of instruction at the site of the study.

The National Reading Panel (2000) considers phonics, phonemic awareness, fluency, vocabulary and comprehension as precursors to later literacy achievement. Both the literacy coach and the building administrator expressed concerns regarding how consistently staff incorporated these reading components in their reading instruction. Although both respondents agreed staff touched on all five components, they attributed the low percentage of students meeting the DIBELS’ benchmark to teachers’ use of varied programming and inconsistent time allocated to phonics, and vocabulary instruction. One classroom teacher stated, “After reviewing the DIBELS’ data, I agree that educators at the study site need to strengthen tier 1 core reading instruction”. She confirmed that classroom teachers use different resources and allocate different amounts of time to phonics and vocabulary instruction.
As noted in both the semi-structured interviews and the focus group discussion, the majority of educators agreed that a master schedule, with specified times for tier 2 and tier 3 instruction is essential to the implementation and sustainability of a multi-tiered model of instruction. The building administrator stated, “As the building instructional leader my role is to develop and refine a schedule that meets the needs of all students by ensuring uninterrupted core instruction and scheduled intervention time so students get core plus instruction”. The Literacy coach agreed saying, “Having time written into the schedule would guarantee that students receive intervention time in addition to the core instruction”. Participants agreed having a master schedule would demonstrate administrative commitment to the RTI/MTSS initiative and provide support for staff. The special education teacher stated, “It all goes back to orchestrating and figuring out when whole class instruction takes place so students are there to participate”. She went on to explain that a more favorable time for students to receive additional tiers might be during their independent class work. A classroom teacher summed up by adding, “Time is often the culprit. Many teachers feel there’s just not enough time for interventions. Having a scheduled time for intervention will definitely help”.

An obstacle noted by participants across the individual interviews and the focus group discussion was the lack of scheduled common planning time. According to the literacy coach, “Conversations and communication that happens between teachers, interventionists and related service providers happens on the fly while they’re passing in the hall”. She continued by noting, “It would be extremely beneficial for staff to really sit down and make sure everyone’s on the same page supporting the students the best way we can”. A classroom teacher stated, “That would be huge to have time to analyze data, assess student work and reflect on our instruction”. She continued saying, “We really should meet at least bi-weekly and include interventionists,
special educators and EL teachers that may also be supporting our students”. The psychologist agreed with respondents saying, “When you have multiple personnel working with a student, especially in a related skill, communication is crucial to avoiding curriculum conflict.” Overall, participants agreed identifying barriers to the implementation of an RTI/MTSS informed them of specific areas of the process that needed to be refined in order to improve instruction and student learning.

**Communication and collaboration.** According to Ehen, Laster and Watts-Taffe (2009) collaboration among educational professionals and with students and their families is imperative for RTI/MTSS to be successful. All stakeholders must pool their resources and expertise, in order to develop instructional goals and formative assessments that meet the individual needs of students they are servicing. The special education teacher stated, “We’re developing a common language so that we can understand each other when we’re talking about students we share and how to increase their performance”. A classroom teacher said, “Sometimes as a teacher you feel very alone. I like working together with colleagues, sharing resources and working as a cohesive community for the child”.

During both the semi-structured interviews and focus group discussion, consensus was noted among all participants that an RTI/MTSS model requires purposeful, ongoing collaboration among all educators involved in a students’ learning. One teacher stated, “We do come together a lot more, however, it would be beneficial to have more opportunities to meet with related service providers, interventionists or ELL teachers to discuss what students are doing and how students are progressing with their support”. The literacy coach noted, “Exchanging ideas, concerns and various perspectives during meaningful conversations helped
us think outside the box and develop targeted strategies to improve the long-term outcomes for student learning”.

All respondents agreed that collaboration has fostered a team approach for supporting students with academic challenges. The student support team (SST) meets weekly and provides a forum for members to brainstorm about additional services that will support at risk students referred to the team. As a result, shared accountability among staff for student learning is evolving. One teacher stated, “It’s definitely a work in progress but I feel the second-grade team is really good about keeping each other in the loop. There are lots of meetings and lots of email”. While the majority of participants felt their collaboration positively impacted student outcomes, they credited the building administrator for developing a school culture that promotes collaborative problem solving and shared decision making among all staff.

Data collected from the student assessment data, semi-structured interviews, self-report survey and the focus group interview revealed deep insight into the educators’ perceptions regarding the process, structures, fidelity of implementation and impact of an RTI/MTSS framework on instruction and student learning. Participants also disclosed their beliefs about benefits and barriers of this framework. While participants agreed some of the barriers would be challenging to resolve, overall, they were all motivated and confident that they could use this information to refine, strengthen and sustain this multi-tiered model of instruction.

Summary of Findings

Study findings for this investigation come from seven semi-structured individual interviews and a focus group interview conducted with second grade team members, support staff and the building administrator involved with implementing an RTI/MTSS model of instruction at the study site during the 2016-2017 school year. The analysis of findings was
supported by a review of historic student assessment data, DIBELS, and a self-report survey revealing practitioners’ perception of their skill set of RTI/MTSS practices and their perception of the degree that RTI/MTSS practices are being implemented with fidelity at the site of the study.

**Student assessment data conclusions.** The first data set that was collected and analyzed during this study was historic student assessment data from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Since the DIBELS is indicative of future reading skills, it was important to analyze the student scores to determine the effectiveness of curriculum instruction at the study site and to identify strengths and areas in need of improvement. The DIBELS curriculum based skill assessments were administered at the beginning of the year (BOY), the middle of the year (MOY) and the end of the year (EOY) by a team of trained educators in order to gauge student progress in skill based literacy development. The DIBELS Assessment supports an RTI/MTSS model because teachers use the assessment data to make decisions about the frequency, intensity and type of instructional supports each child needs to improve their performance.

Information garnered from the DIBELS assessment results was used to inform the individual semi-structured interviews. The student assessment data demonstrated that a high percentage of students did not make the benchmark. Consequently, this prompted administrators and educators to examine curriculum and instructional practices being utilized by staff. Results indicated programming being used by staff and the time allocated for phonics and vocabulary instruction was inconsistent.
The following three data sets, semi-structured interviews, a self-report survey and a focus group interview were also used to triangulate the data. This researcher examined these data sources and reached the following conclusions:

**Semi-structured interview conclusions.** The next data set collected and analyzed by the researcher was seven semi-structured individual interviews. It was insightful to analyze the perceptions of the interviewees regarding the implementation of an RTI/MTSS model of instruction with fidelity. According to Fang (1996) educators’ beliefs about instruction and student learning impact their willingness to implement new concepts. New initiatives are most successful when teachers understand why a program is necessary and presume they have the knowledge and understanding to implement the practice with fidelity.

Results indicated that teachers at the site of the study believe that RTI/MTSS is an advantageous, general education initiative. This framework allows educators to provide students with multiple supports as soon as students are identified as struggling. Providing students with additional supports without labeling them requires a shift in staff philosophical beliefs.

DIBELS and progress monitoring are used by the student support team to make data based decisions about students’ learning challenges and the selection and scheduling of evidence based interventions to close instructional gaps. This team approach has fostered communication, collaboration and shared accountability among staff. Participants also agreed that self-report checklists and videotaping lessons enhances implementation fidelity.

Barriers identified by interviewees regarding RTI/MTSS implementation were lack of resources, inadequate planning time, unscheduled time for additional tiers of interventions and lack of curriculum training.
**Self-report survey conclusions.** The self-report survey revealed participants’ perceptions about the extent their school implements RTI/MTSS practices as well as their beliefs about their own RTI/MTSS skill set of practices. Educators at the site of the study believed professional development is critical to ensure that all staff understand and implement the essential practices of an RTI/MTSS model with fidelity.

Assessment is also critical to the RTI/MTSS process because formative assessments are the instructional tools teachers use to develop their small flexible skill based groups, their guided reading groups, and to select interventions matched to the individual needs of students. Finally, participants emphasized the importance of collaboration and communication among all stakeholders working with students in order to guarantee instructional alignment and increase student outcomes.

**Focus group interview conclusions.** The primary and final data set collected and analyzed by the researcher was a focus group interview. Participants unanimously agree that an effective RTI/MTSS framework consists of high quality instruction, targeted research-based practices, and differentiated instruction, across all tiers of instruction. Staff believes RTI/MTSS is a child centered model that allows staff to flood students with supports and to provide students with personalized instruction based on where they are at the moment and where they need to be.

Educators also believe the student support team (SST), a multidisciplinary problem-solving team, promotes collegial planning, data driven decision making and shared accountability of students among team members. The majority of participants embraced RTI/MTSS as a beneficial framework for improving student outcomes; however, all participants believe that fidelity is a factor that needs to be refined and strengthened.
Key Findings

Data analysis of all data sources generated the following findings:

1. RTI/MTSS is a general education initiative that provides students with multiple levels of supports with increasing layers of intensity in order to improve student outcomes in reading.

2. Student assessment data supports staff (MKO) with early identification of at risk students and data informed decision making in order to promote student learning based on each student’s ZPD.

3. DIBELS and progress monitoring are assessment tools used to group students based on student strengths and weaknesses, to recommend additional tiers for at risk students and to determine the evidence-based intervention that would match the student’s area of need.

4. Factors that uphold fidelity are adherence to program design, sufficient time allocation to instructional concepts, adequate intensity and frequency of interventions, trained, qualified staff and evidence-based resources.

5. A benefit of the RTI/MTSS model is students have an opportunity to reach mastery through multiple exposures to personalized instruction and numerous opportunities to practice new skills.

6. Major challenges of RTI/MTSS fidelity of implementation are lack of resources (materials and staffing), lack of common planning time, the need for more training and scheduled time for additional tiers.

7. A multidisciplinary problem-solving team (SST) promotes a team approach to collaborative planning, data driven decision making, shared accountability of students
and increased communication which results in consistency and alignment of instruction.

Table 33 displays conclusions and findings derived from the semi-structured individual interviews.

**Table 33**  
*Semi-structured interview questions, conclusions and findings*

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Conclusions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you define RTI/MTSS to someone who is unfamiliar with this concept?</td>
<td>An effective RTI/MTSS framework consists of high quality instruction, progress monitoring, data based decision making, and evidence based interventions across all tiers.</td>
<td>Finding 1</td>
</tr>
<tr>
<td>2. RTI/MTSS has been described as an approach that provides a continuum of supports for all learners and a model in which responsibility for individual student progress is shared by all educators. In your opinion, how has this framework necessitated collaboration, communication and shared accountability among staff for all student?</td>
<td>It is essential for all stakeholders working with a student to communicate and collaborate in order to align instruction and increase student outcomes.</td>
<td>Finding 7</td>
</tr>
<tr>
<td>3. Please describe how an RTI/MTSS meeting proceeds once a student is identified as struggling and has been referred to the building based support team?</td>
<td>Data –based decision making is important in order to accurately identify a student’s learning problem and to ensure appropriate selection of an intervention.</td>
<td>Finding 7</td>
</tr>
<tr>
<td>4. Please describe progress monitoring: How do you use and analyze assessments (formal and informal, student work samples) to inform your instructional practices for</td>
<td>Data analysis provides teachers (MKO) with the information they need to determine each child’s baseline or zone of proximal development (ZPD).</td>
<td>Finding 3</td>
</tr>
</tbody>
</table>
small flexible groups of students and or individual students?

5. How are evidence-based instructional methods and interventions selected? Describe how you scaffold learning activities and differentiate instruction to meet the needs of individual students.

   Data-based decision making is important in order to accurately identify a student’s learning problem and to ensure appropriate selection of an intervention.

   Finding 2

6. How do you use data to determine if a student requires tier 2 interventions or tier 3?

   Based on the student’s ZPD, (where they are) the SST would develop a goal and action plan (for where s/he needs to be).

   Finding 3

7. Describe how a student’s responsiveness to intervention is monitored. What assessment tools are used? How is fidelity of implementation measured?

   A focus on progress monitoring and tracking data helps educators see growth patterns over time and supports classroom teachers by informing their instruction. Keeping a tally list of how many times teachers actually work with a child will help with fidelity

   Finding 4

8. Describe the components of RTI/MTSS that you believe are most critical for successful implementation.

   An effective RTI/MTSS framework consists of high quality instruction, progress monitoring, data based decision making, and evidence based interventions across all tiers.

   Finding 1
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Please comment on your schools tier 1 core literacy curriculum. Is curriculum followed according to how the developer designed it to be implemented?</td>
<td>Professional Development in the curriculum being taught is key to fidelity.</td>
<td>Finding 4</td>
</tr>
<tr>
<td>10. Please discuss types of professional development/trainings that were provided to staff.</td>
<td>An effective tiered model of instruction requires a strong evidence-based tier 1 core curriculum in which all students participate.</td>
<td>Finding 6</td>
</tr>
<tr>
<td>11. In your opinion, how effective is the RTI/MTSS model of instruction in meeting the individual needs of students and closing gaps?</td>
<td>Evidence-based instructional practices helped staff tailor instruction for a greater number of students within the general education population.</td>
<td>Finding 1</td>
</tr>
<tr>
<td>12. Please describe any changes in staff practices, roles and or responsibilities as a result of RTI/MTSS implementation</td>
<td>RTI/MTSS is a framework that promotes communication and collaboration among staff due to shared accountability.</td>
<td>Finding 7</td>
</tr>
<tr>
<td>13. Early detection of at risk students and early intervention are benefits of RTI/MTSS. In your opinion, has implementation of RTI/MTSS affected the process of referring students for special education?</td>
<td>RTI/MTSS is a child centered model that allows staff to flood students with supports and with differentiated instruction based on where they are at the moment and where they need to be.</td>
<td>Finding 2</td>
</tr>
<tr>
<td>14. Is there anything I have not asked that you believe is relevant to RTI/MTSS fidelity of implementation?</td>
<td>Self-report checklists and video taping of lessons would enhance fidelity by providing staff opportunities for self-reflection and for feedback from colleagues.</td>
<td>Finding 4</td>
</tr>
</tbody>
</table>
Table 34 displays conclusions and findings derived from the focus group interview. A list of findings can be found on page 189 and 190.

Table 34  
*Focus group interview questions, conclusions and findings*

<table>
<thead>
<tr>
<th>Focus Group Questions</th>
<th>Conclusions</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How confident are you in using DIBELS screening benchmarks and formative assessments (dynamic assessments) to identify students at risk?</td>
<td>Data analysis provides teachers (MKO) with the information they need to determine each child’s baseline or zone of proximal development (ZPD).</td>
<td>Finding 3</td>
</tr>
<tr>
<td>2. How can you use these results to enhance instructional decision making and improve student performance? How confident are you with using DIBELS and progress monitoring data to match evidence-based interventions to student needs?</td>
<td>Data –based decision making is important in order to accurately identify a student’s learning problem and to ensure appropriate selection of an intervention.</td>
<td>Finding 3</td>
</tr>
<tr>
<td>3. RTI/MTSS offers students a continuum of supports based on student needs. How have the levels or tiers of instruction impacted student achievement? In your opinion, is the RTI/MTSS framework an effective model of instruction? How has this framework impacted instruction in your classroom?</td>
<td>Evidence-based instructional practices helped staff tailor instruction for a greater number of students within the general education population. A component of RTI/MTSS is ongoing progress monitoring which enables staff to continually refine and strengthen core instruction.</td>
<td>Finding 5</td>
</tr>
<tr>
<td>4. How have fidelity measures impacted students’ performance? Please give examples.</td>
<td>Professional Development in the curriculum being taught is key to supporting staff with fidelity of implementation.</td>
<td>Finding 4</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
<td>Finding</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>5. What benefits if any have you experienced since implementing an RTI/MTSS model of instruction?</td>
<td>Classroom teachers are closing student gaps by differentiating and scaffolding classroom instruction.</td>
<td>Finding 5</td>
</tr>
<tr>
<td>What barriers, if any, have you experienced since implementing an RTI/MTSS model of instruction? What practices would you identify as critical to the process?</td>
<td>A significant barrier of RTI/MTSS implementation has been the lack of resources and a lack of staff training in evidence-based interventions.</td>
<td>Finding 6</td>
</tr>
<tr>
<td>6. Describe how the RTI/MTSS process has necessitated collaboration and communication among all staff. How does staff communicate and collaborate about student achievement for students requiring additional tiers of instruction from multiple instructors?</td>
<td>It is essential for all stakeholders working with a student to communicate and collaborate in order to align instruction and increase student outcomes. Collaboration and communication have fostered a team approach for supporting students with academic challenges.</td>
<td>Finding 7</td>
</tr>
<tr>
<td>7. How will staff ensure continued sustainability and fidelity of the RTI/MTSS implementation?</td>
<td>It is important for the building administrator to develop a school culture that promotes collaborative problem solving and shared decision making among all staff.</td>
<td>Finding 4</td>
</tr>
<tr>
<td>8. Based on your experiences, has tiered instruction helped you meeting the diverse needs of students in your classroom? What practices in particular have you identified as most effective for meeting the diverse needs of your students?</td>
<td>RTI/MTSS is a general education initiative that provides students with multiple levels of supports with increasing layers of intensity to at risk students having difficulty with reading content.</td>
<td>Finding 1</td>
</tr>
</tbody>
</table>
Trustworthiness

Student assessment data, individual interviews, a self-report document and a focus group interview were the multiple data sources used to investigate the process, structures, fidelity and impact of an RTI/MTSS model of instruction at the site of the study as perceived by grade two team members, support staff, and the building administrator. Triangulation of the data sets collected and analyzed allowed this researcher to corroborate multiple findings by coming up with similar themes from all the sources. Trustworthiness also includes credibility, transferability, dependability and confirmability.

Credibility, one of most important factors in establishing trustworthiness was enhanced since multiple sources of evidence were collected. Credibility was also developed with the study participants by informing each participant about confidentiality and anonymity both verbally and in a written follow up letter. This researcher also spent a prolonged amount of time developing rapport and trust with participants at the site of the study. In addition, member checking was conducted to ensure the credibility of this case study. Participants had an opportunity to check the accuracy of the data both during and at the end of the data collection dialogues. Informants were asked to read transcripts of dialogues in which they had participated in order to confirm their accuracy.

This researcher has provided rich thick, comprehensive details and descriptions of all the contextual components educators created at the site of the study while implementing an RTI/MTSS model with fidelity. Thorough documentation of the steps and processes that were involved in RTI/MTSS implementation were maintained to increase dependability so other researchers replicating this study would finalize their investigation with consistent findings. Therefore, transferability of the findings may be effectively replicated by practitioners in districts
with similar environments as they implement an RTI/MTSS model of instruction. These findings were based on participants’ responses rather than any potential or personnel bias of this researcher. As a result, confirmability was established. Transcripts from the semi-structured interviews, the focus group interview and the self-report surveys are available for third party access.

**Conclusion**

RTI/MTSS is a framework that has been implemented at the site of the study so teachers can more effectively meet the diverse needs of students in their classrooms. The researcher conducted this qualitative case study in order to examine how a team of grade two teachers, support staff and the building administrator perceived the process, structures, fidelity of implementation and impact of an RTI/MTSS framework. In addition, the researcher’s intent was to identify practices that both supported and challenged RTI/MTSS implementation. This information will be used to refine, strengthen and sustain this multi-tiered model of instruction.

Multiple data sources were collected and analyzed to attain and cross verify multiple perspectives from the participants regarding RTI/MTSS. The first data source was grade two student DIBELS data. Next semi-structured interviews were conducted to determine each participant’s perception of the RTI/MTSS framework. The third data source was a self-report survey which revealed practitioners’ perception of their skill set of RTI/MTSS practices and their perception of the degree that RTI/MTSS practices are being implemented with fidelity at the site of the study. The final data set was from a focus group discussion interview. Data from each source was analyzed by this researcher to identify common trends, patterns and themes.

Overall, the majority of respondents perceived RTI/MTSS as an effective model for meeting the individual needs of all students. Although participants discussed many benefits of
implementing a multi-tiered model of instruction for both staff and students, they also identified barriers of the framework that needed to be refined and improved in order to increase student performance.

The final findings that emerged from the triangulation of the data support Lev Vygotsky’s sociocultural theory of cognitive development (1934/1978) on how children learn. According to Vygotsky (1934/1978) social learning precedes cognitive development. Educators positively influence student learning by providing students with opportunities to interact with peers in small flexible groupings, cooperative learning structures and by utilizing peer tutoring in their classrooms.

Important tenets of Vygotsky’s theory are the zone of proximal development (ZPD) the more knowledgeable other (MKO) and dynamic assessment (DA). The teacher or MKO uses assessment to determine a student’s readiness level. Since students have different learning rates, some students require additional instruction time and multiple opportunities to practice. The MKOs then use this information to inform and refine instruction. This enables the teacher to meet the learners where they are by scaffolding and differentiating instruction and bringing the student through the zones or tiers of learning.

The final chapter of this thesis will address the major findings in depth. This researcher will include recommendations for refining and improving the implementation and effectiveness of the RTI/MTSS framework at the study site as well as suggest recommendations for future study.
Chapter V: Findings, Discussion and Implications

Introduction

In this chapter, major findings generated, following the analysis of student assessment data, semi-structured interviews, self-report surveys and a focus group interview are presented. Key findings grounded in Vygotsky’s sociocultural theory and the bodies of literature researched in this study are also discussed. Finally, implications of these findings for educational practice, educational community and future research are addressed.

The purpose of this qualitative descriptive case study was to document a rich, detailed description of the participants’ knowledge, experiences, and perceptions of the critical components of the RTI/MTSS framework. This researcher examined both the benefits and barriers identified by educators during the implementation of this problem solving (PS) model as well as the extent to which this RTI/MTSS model was implemented with fidelity.

Although this study compliments existing research about the process, structures, and fidelity measures required for successful RTI/MTSS implementation, the study contributes to the literature by revealing participants’ experiences and beliefs about factors that facilitate or challenge implementation fidelity of an RTI/MTSS model of instruction. Districts with environments similar to the site of the study may benefit from these disclosures as they implement the RTI/MTSS framework.

Teachers are in the trenches and play an integral role in the implementation of an RTI/MTSS model. Therefore, Castro-Villarreal, Rodriguez and Moore, (2014) believe it’s critical to examine teachers’ attitudes, beliefs and challenges regarding RTI/MTSS so that districts are aware of the actions and supports practitioners have identified as necessary for implementation and sustainability of an effective RTI/MTSS model.
RTI/MTSS is an adaptation of Vygotsky’s (1934/1978) Zone of Proximal Development (ZPD) in which the teacher or the More Knowledgeable Other (MKO) uses assessment (dynamic assessment, DA) to determine a student’s readiness level (ZPD). Learning is inherently a social phenomenon where individuals make sense of information and develop new knowledge through activities and social interactions (Vygotsky, 1934/1978). The MKO is able to meet the learners where they are by discussing, modeling, differentiating and scaffolding instruction and assisting students through the zones or tiers of learning.

**Research Questions**

Vygotsky’s (1934/1978) socio-cultural theory supports the research questions driving this qualitative research study. Vygotsky’s (1934/1978) theoretical framework provides insight into how fidelity of implementation of a multitier model of instruction promotes student achievement and decreases the number of students with debilitating gaps in their learning. The overarching research question that served to guide this study is:

1. How do grade two team members, support staff, and the building administrator in one Massachusetts elementary school perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model?

The following sub-questions served to elicit the information that informed the researcher of the factors that either facilitated or hindered the implementation of an RTI/MTSS model based on the perceptions of school based educators.

a) What components or instructional practices facilitate the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?
b) What barriers hinder the implementation of an RTI/MTSS model as perceived by the grade two team members, support staff and the building administrator?

c) What are the indicators that assist in determining to what extent the critical components of the RTI/MTSS process are being implemented with fidelity as perceived by the grade two team members, support staff and the building administrator?

Review of Themes from Research

Student assessment data, surveys and seven individual interviews informed a focus group discussion, which served as the primary source of data for this study. Data was coded, analyzed and triangulated within and across participant groups to identify and cross validate emergent themes.

Salient themes garnered from the semi-structures individual interviews included teachers’ perceptions of RTI/MTSS, the significance of assessment practices, the effect that fidelity of program implementation has on student outcomes, collaboration and communication, professional development, and benefits and barriers. Similar to the themes that emerged from the individual interviews, data examined from the self-report surveys also revealed teacher’s perceptions, assessment practices, fidelity of implementation, collaboration/communication and professional development.

Analysis of the primary data set, a focus group interview, identified themes that confirmed the emergent themes from the semi-structured interviews and the self-report surveys. After triangulation, a smaller, more select list of themes evolved. These major themes include assessment and data informed decisions, instructional practices and service delivery, fidelity of implementation, benefits and barriers of an RTI/MTSS framework and collaboration and communication. The following overview highlights each theme.
An assessment system of universal screening and progress monitoring within an RTI/MTSS framework allows general educators (MKOs) to identify student needs and then gauge the effectiveness of the intervention service delivery. Data from continuous progress monitoring of student’s responses is used by educators to determine whether the intervention is working, the intervention needs to be changed, or whether additional diagnostic assessments are necessary. These data driven decisions are made by a student support team of educators who use data to refine instruction and to select evidence-based interventions matched to each student’s needs.

Although assessment is a critical component of an RTI/MTSS framework, instruction is the key factor that truly drives the changes teachers hope to see in student performance. The intent of the core program is the delivery of high-quality instructional programs that have established known outcomes when implemented with fidelity.

Fidelity of implementation is a critical component of the RTI/MTSS model of instruction. Fidelity impacts every facet of an RTI/MTSS framework by ensuring that the RTI/MTSS practices are integrated and the model is sustained. The importance of RTI/MTSS fidelity of implementation increases as high stakes decisions are being made about students’ instructional needs and placement. Fidelity checks also promote communication and collaboration among staff by providing them with feedback to reflect upon and discuss.

There are both benefits and barriers to an RTI/MTSS model of instruction. Benefits include early intervention for students who are struggling with reading, multiple levels of instruction with increasing levels of intensity and shared responsibility and accountability for student learning. Major barriers of RTI/MTSS fidelity of implementation include lack of resources, time constraints, the need for more training and the need for a master schedule with
scheduled time for additional tiers of instruction and scheduled time for staff to communicate and collaborate.

An effective RTI/MTSS framework requires active participation, communication and collaboration among general educators, special educators, support staff and other professionals responsible and accountable for providing optimal instruction for all students they share. Educators must establish a common language and basic understanding of the RTI/MTSS structures and critical components. Teachers must also have a sound understanding of the instructional curriculum being implemented and be provided with scheduled time for coordinated planning. Ongoing collaboration forces educators to surpass existing comfort zones as they redefine their understanding of a tiered model of instruction and pool their resources and areas of expertise to collectively support student learning.

The themes identified through triangulation of data align with the bodies of literature that this researcher examined during this study and determined to be integral to successful implementation and sustainability of an RTI/MTSS framework. Moreover, these themes correlate with Vygotsky’s sociocultural theory of cognitive development (1934/1978) which provides a framework for understanding the interrelationship between teaching, learning and development. According to Vygotsky, (1934/1978) children’s cognition develops as a result of social interactions with a more knowledgeable other (MKO). The distance between what a child can do independently and what the child is capable of doing with the support of an MKO is a student’s zone of proximal development (ZPD). According to Vygotsky, (1934/1987) learning occurs only in the Zone of Proximal (potential) Development. It is uniquely individual and based on a student’s learning needs and potential.
Discussion of Key Findings from Research

Following an in-depth analysis of the data sets utilized in this study, this researcher developed a list of conclusions. A thorough examination of the conclusions enabled the researcher to generate seven key findings.

**Instructional practices and service delivery.** The following finding aligns with the theme of instructional practices and service delivery:

**Finding 1.** RTI/MTSS is a general education initiative, which provides students with multiple levels of supports, with increasing layers of intensity, in order to improve student outcomes in reading.

Study participants agreed that an effective RTI/MTSS framework consists of the following components: high quality instruction, progress monitoring, data based decision making, and evidence based interventions at all tiers. They also noted that an effective tiered model of instruction required a strong evidence-based tier 1 core curriculum in which all students participate. All students receive high-quality, scientifically based instruction provided by qualified personnel to ensure that their learning difficulties are not due to inadequate instruction. Data from universal screening and continuous progress monitoring enables teachers to identify student who required additional tiers of instructional support to successfully meet grade level benchmarks. Universal screening also provides educators with important information about curriculum and instruction. Optimally, 80% of students in the general education classroom should make effective progress when exposed to evidence-based instruction implemented with fidelity. If less than 80% of students are responding positively to the core instruction there may be a curriculum or instructional issue. Curriculum must be implemented the way the author intended in order to increase student performance. Students also benefit from explicit core
instruction when educators model or demonstrate decoding skills and strategies, fluency, vocabulary word meanings and word-learning strategies, and comprehension strategies (National Reading Panel, 2000).

Staff acknowledged that students progress at different rates. Therefore, a model such as RTI/MTSS, allows teachers to personalize students’ instruction. Educators are able to use data from progress monitoring to tailor instruction to meet the individual needs of students by increasing the frequency and intensity of instruction, by scaffolding instruction, providing differentiated instruction informed by assessment results and providing students with ample opportunities to practice new skills. Classroom teaching should also consist of a combination of whole-class, small group and individual instructional models.

Educators unanimously agreed that additional layering of instructional tiers should be scheduled so that students do not miss tier 1 general education classroom instruction.

**Assessment and data informed decisions.** The following findings align with the theme of assessment and data informed decisions:

**Finding 2.** Student assessment data supports staff (MKO) with early identification of at risk students and data informed decision making in order to promote student learning based on each student’s ZPD.

**Finding 3.** DIBELS and progress monitoring are assessment tools used to group students based on student strengths and weaknesses, to recommend additional tiers for at risk students and to determine the evidence-based interventions that would match the students’ areas of need.

RTI/MTSS is a multi-tier approach to the early identification and support of students with learning needs. Study participants cited the importance of both formal and informal assessment data for informing and guiding their pedagogy. Universal screening and
progress monitoring are the tools that support staff (MKO) with early identification of at risk students. Teachers professed an unwavering belief that assessment was critical to an RTI/MTSS process because formative assessments were the instructional tools they used to develop their small flexible skill based groups, their guided reading groups, and to select interventions matched to the individual needs of students. Educators noted that accurately identifying a student’s learning problem and examining the cause of the problem would help teachers with the selection of appropriate instruction or intervention.

The majority of respondents agreed that data collected through progress monitoring informed the decision-making student support team (SST) about whether changes in instructional practices or developing student goals was necessary. Consensus among the participants demonstrated that they embraced having the opportunity to personalize instruction for students by scaffolding concepts, differentiating instruction, and developing small flexible groupings that allowed students to move from one group to another based on skill set. Participants also believed that effective tier 1 core instruction consists of explicit systematic instruction, ample practice opportunities, and immediate corrective feedback. Overall, educators agreed that a multi-tiered model of instruction improved their ability to support a greater number of students in the tier 1 core curriculum.

**Fidelity of implementation.** The following finding aligns with the theme of fidelity of implementation.

**Finding 4.** Factors that uphold fidelity include, adherence to program design, sufficient time allocation to instructional concepts, adequate intensity and frequency of interventions, trained, qualified staff and evidence-based resources.
After educators identify and implement an evidence-based intervention or program to support the needs of students, staff must evaluate the implementation process. Fidelity of RTI/MTSS implementation is the extent to which educators adhere to RTI/MTSS procedures as these were designed, intended, and planned. All participants agreed that implementation fidelity is a critical component of an RTI/MTSS framework.

While participants unanimously agreed that fidelity significantly impacts RTI/MTSS implementation, the majority of staff agreed fidelity is a component which needs to be strengthened at the site of the study. Participants felt that educators were still participating in RTI/MTSS training and adopting concepts. As a result, this has resulted in staggered staff abilities in implementation fidelity. Participants felt strongly that completing self-report checklists and video taping of lessons enhanced fidelity by providing staff with opportunities for self-reflection and to receive feedback from colleagues. Participants noted however, that although many personnel were delivering intervention, not all educators were completing the self-report fidelity checklists.

While Classroom teachers agreed that fidelity checklists supported program adherence and guided them through program steps, they agreed the tendency to drift from protocol did happen due to time constraints, students being pulled for additional tiers during core instruction or insufficient program training or resources. Study participants emphasized the importance of educators developing a common understanding of the curriculum and maintaining consistency and accuracy in practices that reflect the program developer’s intent. Participants wholeheartedly agreed that factors that uphold fidelity are sufficient time allocation, adequate intensity and frequency of interventions, trained, qualified staff and resources. According to
Mortenson & Witt (1998), student outcomes increase when teachers implement interventions that follow the protocol developed by the program designers.

The majority of participants agreed fidelity measures would help all staff become more adept at consistently implementing the instructional practices the district had embraced. Consensus among them indicated educators must know and understand curriculum thoroughly in order to teach it skillfully. Participants unanimously agreed that the programs which staff has been trained in get implemented with fidelity. All educators at the study site agreed that assessing the quality of implementation matters when attempting to examine the effectiveness and impact of interventions on student outcomes. In addition, they agreed that using fidelity monitoring measures will assist all staff with identifying the parts of interventions that need stronger and more consistent implementation.

**Benefits and barriers of an RTI/MTSS framework.** The following findings align with the theme of benefits and barriers of an RTI/MTSS framework:

**Finding 5.** A benefit of the RTI/MTSS model is that students have an opportunity to reach mastery through multiple exposures of personalized instruction and numerous opportunities to practice new skills.

**Finding 6.** Major challenges of RTI/MTSS fidelity of implementation are lack of resources (materials and staffing), lack of common planning time, the need for more training and scheduled time for additional tiers.

Study participants agreed that the main benefit of an RTI/MTSS model of instruction is for students to receive targeted instruction at their level of need and ability in order to reach their potential. Overall, participants embrace RTI/MTSS as a methodology to bridge resources and get more specialized supports and instruction into general education at the first sign of a student
struggling. An additional benefit for students is that students receive evidence-based instructional supports as soon as assessment data indicates a student is experiencing difficulty with reading skills. Students’ progress is closely monitored at each stage of intervention to determine whether students need additional layers and/or increased frequency of evidence-based instruction or interventions.

Study participants credited the RTI/MTSS framework as being the catalyst that compelled them to improve and strengthen the tier 1 core instruction. Teachers believe they are becoming adept at strengthening their tier 1 core curriculum and closing student gaps by differentiating and scaffolding instruction and providing students with all the supports they need without labeling them. The majority of participants agreed that data from formative assessments (dynamic assessments) enabled teachers to develop small flexible groups, and provided staff with the information necessary to fluidly move students from one group to another based on gains in student performance.

Educators agreed that another benefit of RTI/MTSS is that all students are learning together, students feel included and staff has an opportunity to meet children where they are both academically and social emotionally. Participants also noted that RTI/MTSS has prompted a mind shift on how classroom teachers view at risk students. General education classroom teachers are willing to support students in small flexible groups with differentiated instruction in order to reduce learning disparities prior to referring students for special education evaluations. Participants expressed the belief that students benefit from the RTI/MTSS framework because it’s a data driven, child centered model that allows staff to tailor instruction to meet the individual needs of students in the general education classrooms. Students have an opportunity
to reach mastery through multiple exposures of personalized instruction and are provided numerous opportunities to practice new skills.

While all study participants expressed the belief that an RTI/MTSS model of instruction was beneficial for students they also noted benefits for educators at the study site. Evidence-based instructional practices helped staff tailor instruction for a greater number of students within the general education population. An additional beneficial component of the RTI/MTSS model for staff is the student support team (SST). This multidisciplinary problem-solving team promotes collegial planning, data driven decision making and shared accountability of students among team members. All participants credited the SST for increasing communication and enhancing consistency and alignment of instruction. Educators agreed that SST enabled staff to develop student goals based on the student’s ZPD (baseline) and create action plans to improve fidelity and increase student performance.

Although numerous RTI/MTSS benefits were cited by participants at the site of the study, educators noted factors that have posed barriers as well. In order for a multitier model of instruction to work effectively, the following features must be established: educators need to be trained in evidence based interventions (EBI), have the necessary resources, engage in common planning time and receive a master schedule that includes time for additional tiers. Participants noted that lack of these necessary components have posed a significant barrier of RTI/MTSS implementation at the site of the study.

All participants agreed staff collaboration is imperative to the implementation and sustainability of a successful RTI/MTSS model. Consensus among participants, however, was that educators lacked adequate time for communication and common planning time in order to optimize instruction for students they shared. Educators felt that the majority of conversations
among staff take place on the fly as opposed to being able to sit down and make sure they’re on the same page supporting these students. Participants agreed having a master schedule would demonstrate administrative commitment to the RTI/MTSS initiative and provide support for staff.

Educators’ perception of a multi-tiered model of instruction is that it is a framework that allows staff to effectively meet the individual needs of students. Participants felt however, their school needed additional trained interventionists, reading teachers, and a building literacy coach in order to provide the frequency and intensity of supports required by students. While participants agreed these areas posed difficulty, consensus among them was this information identified areas they could refine or improve.

The National Reading Panel (2000) considered phonics, phonemic awareness, fluency, vocabulary and comprehension as precursors to later literacy achievement. A final concern expressed by the study participants had to do with how consistently staff incorporated these reading components in their reading instruction. Although participants agreed staff touched on all five components, they attributed the low percentage of students meeting the DIBELS’ benchmark to teachers’ use of varied programming and inconsistent time allocated to phonics, and vocabulary instruction.

**Communication and collaboration.** The following finding aligns with the theme of communication and collaboration.

**Finding 7.** A multidisciplinary problem-solving team (SST) promotes a team approach to collaborative planning, data driven decision making, shared accountability of students and increased communication which results in consistency and alignment of instruction.
Participants described the procedure staff followed when students did not respond favorably to the evidence-based strategies implemented by the classroom teacher. Struggling students were referred to the building-based student support team (SST). This problem-solving team would then schedule a meeting with the referring teacher. Team members examine student data and engage in collegial discussions about additional evidence based strategies/interventions teachers can implement to support the student. Based on the student’s ZPD, the SST would develop a goal and action plan aligned to the selected intervention.

Study participants agreed that addressing educational deficits in the general education classroom, without waiting for an official label, has helped teachers and administrators understand that they are collectively responsible for the entire student body, including struggling learners. Participants believe adopting a multitier model of instruction has promoted a team approach for supporting students. For this reason, communication and collaboration are critical to the process in order to ensure the alignment of instruction. Agreement was evident among participants that the RTI/MTSS framework provides students with an opportunity to reach mastery of content they struggle with by receiving multiple exposures without being labeled.

**Theoretical Framework**

Key findings of this study are grounded in Lev Semyonovich Vygotsky’s socio-cultural theory of cognitive development (1934/1978). Finding 1 contends that RTI/MTSS is a general education initiative that provides students with multiple levels of supports with increasing layers of intensity in order to improve student outcomes in reading. Vygotsky (1934/1978) believed effective instruction must target a learner’s zone of proximal development (ZPD). Each student’s ZPD is uniquely individual and based on individual learning needs and potential. The teacher (MKO) must have a sound understanding of each student’s baseline and ability to
problem solve independently. Teachers must design instruction that targets a student’s actual developmental level. Educators, however, must also challenge a student with instructional activities that are slightly beyond his/her independent ability but attainable with supports from a more capable adult or peer. In a similar manner, an RTI/MTSS framework allows teachers to make data informed decisions about the levels and intensity of evidence-based supports students need to improve outcomes in reading.

Vygotsky (1934/1987) believed that assessments should measure a child’s potential or what the child is capable of learning when assisted by a more knowledgeable other (adult or peer). Dynamic Assessment (DA) based on Vygotsky’s ZPD, reveals something about how children learn. Finding 2 asserts that student assessment data supports teachers with early identification of at risks students based on each student’s zone of proximal development (ZPD). A significant feature about dynamic assessment is that assessment and instruction occur simultaneously. A teacher (MKO) promotes development by offering assistance to a student while concurrently assessing the student’s abilities (Lantolf & Poehner, 2004, p. 305). As a result, information obtained from these assessments allows teachers to address problems, issues and concerns during classroom instruction.

Vygotsky (1978) theorized that the level of teaching is critical to student success. The intensity of instruction must align with student skill levels, and build on their existing repertoire of knowledge. Finding 3 reflects educators’ perceptions that DIBELS and progress monitoring are assessment tools used to group students based on student strengths and weaknesses, to recommend additional tiers for at risk students and to determine the evidence-based intervention that would match the student’s area of need. Dynamic Indicators of Basic Early Literacy (DIBELS) is a universal screening tool for students in grades kindergarten through six which
measures student acquisition of early literacy skills. Results of DIBELS assessment data, at the study site, have caused concern among practitioners. This in turn has prompted administrators to provide staff training on Fundations, an evidence-based intervention, in order to ensure fidelity of instruction across grade levels district-wide. Vygotsky (1934/1978) suggested that teachers should teach skills at a level that is beyond the students’ ability to achieve on their own, but simple enough to accomplish with targeted assistance.

Progress monitoring is used to systematically evaluate the child’s response to the MKO’s instructional practices. The teacher then uses this data to adjust the intensity of his or her instruction so that it is matched to each student’s ZPD or level of need. As the student progresses toward mastering targeted skills, interventions and supports are gradually phased out. A more competent person collaborates with a child to help him/her move from where he/she is to where he/she can be with help. A teacher who understands how to provide guidance within a child’s ZPD can structure responses to instruction and student feedback in a way that leads the child to new understandings.

The concept of finding 4 is that specific factors uphold fidelity. These factors include adherence to program design, sufficient time allocation to instructional concepts, adequate intensity and frequency of interventions, trained, qualified staff and evidence-based resources. This finding is grounded in Vygotsky’s (1934/1978) tenet of the more knowledgeable other (MKO). One of Vygotsky’s main assertions is that children are entrenched in different sociocultural contexts through which their cognitive development is advanced through social interaction with more skilled individuals. The MKO is someone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept. The task of implementing an RTI/MTSS framework with fidelity is the responsibility of the
teacher (MKO). Teachers must explicitly adhere to evidence-based curriculum protocols, and engage students in instruction that reflects the frequency and intensity the child requires. Ongoing progress monitoring provides teachers with the data they need to match interventions to students’ areas of need and to determine how well students are responding to a specific intervention. A review of research suggests that treatment fidelity is directly related to treatment outcomes and that the greater degree of correct implementation, the greater the degree of behavior change (Gresham, Gansle, & Noell, 1993; Gresham, Gansle, Noell, Cohen, & Rosenblum, 1993).

Vygotsky’s (1934/1978) sociocultural theory offers a suitable lens through which to view teachers’ beliefs revealed in finding 5 which states a benefit of the RTI/MTSS model is that students have an opportunity to reach mastery through multiple exposures to personalized instruction and numerous opportunities to practice new skills. Understanding individual differences and the pedagogies required for addressing individual differences is deeply rooted in concepts such as the zone of proximal development, scaffolding, mentors, and modeling. Individual variability in conventional classroom learning environments is the norm rather than the exception. Learners differ in the ways that they perceive and comprehend information that is presented to them. For this reason, educators must develop flexibility in the way information is presented, develop options for students to respond or demonstrate knowledge and skills, and employ a variety of methods for student engagement. Teachers must provide varied pathways, tools, strategies, and scaffolds to address student challenges, while still maintaining high achievement expectations for all students to reach mastery. Expert teachers apply evidence-based programming and differentiated instruction according to each student’s ZPD. The zone of proximal development is used in grouping students with others that can support and advance
each other’s knowledge. Learning, and transfer of learning, occurs when multiple modes of instruction are used, because it allows students to make connections within, as well as between, concepts. Ideally, tiered learning tasks engage students slightly beyond what they find easy or comfortable. Students work with the same essential knowledge, understanding and skill but at different levels of difficulty based on their actual proficiency level.

In finding 6, staff perceived major challenges of RTI/MTSS fidelity of implementation include lack of resources (materials and staffing), lack of common planning time, the need for more training and scheduled time for additional tiers. This finding is grounded in Vygotsky's (1978) notion about the importance of learning as a social and interactive function and the zone of proximal development (ZPD). ZPD most often describes the learning potential of children. However, it can also be applied to the concept of teacher professional development and common planning time. Vygotsky described ZPD as the current or actual level of development of the learner and the next level attainable by connecting with a capable adult or peer/colleague. Vygotsky (1934/1978) states that higher mental functions go through an external social stage in development before becoming an internal mental function. This process is called internalization. Individuals learn best when working together, sharing knowledge and expertise and collaborating with others who are more skilled. Common planning provides staff with time to collaborate, reflect on instructional practices and support each other with constructive feedback. During professional development a consultant models, demonstrates and engages teachers in activities that will help educators learn new initiatives. After completing the training and having opportunities to practice and receive feedback from colleagues, staff will likely be able to implement the initiative independently. In addition to common planning time and professional development, having resources (materials and staff) and time built into a master schedule for
additional tiers of instruction are vital for implementation and sustainability of an RTI/MTSS model of instruction.

Finding 7 identifies educators’ feelings that a multidisciplinary problem-solving team (SST) promotes a team approach to collaborative planning, data driven decision making, shared accountability of students and increased communication which results in consistency and alignment of instruction. This finding is grounded in Vygotsky’s (1934/1978) sociocultural theory of development which proposed that students learn through social interactions, shared activities and dialogues which eventually lead to more individualized thinking. This process involves people interacting during shared activities, which often are for solving problems. Student support teams (SST) help teachers plan and implement tiered interventions and collect data to identify which students need more intensive academic support. The SST is made up of people from different educational positions who can offer different perspectives about students’ needs. Collectively the team uses data to determine the difference between the student’s expected level of performance and the student’s actual level of performance. This team approach encourages communication, alignment of instruction and shared accountability for increasing student performance.

**Literature Review**

All study participants expressed an overall understanding regarding finding 1 which is RTI/MTSS is a general education initiative that provides students with multiple levels of supports with increasing layers of intensity in order to improve student outcomes in reading. Consensus was noted among practitioners that an effective tiered model of instruction requires a strong evidence-based tier 1 core curriculum in which all students participate. This belief was reinforced through research conducted by Reschly (2014) who noted that an RTI/MTSS model is
a general education initiative that supports all students with the delivery of high quality evidence-based interventions to prevent academic challenges for the majority of students. A secondary purpose of this framework is early identification of students who appear to be falling below grade level benchmarks and require additional tiers with varying levels of intensity. Study participants credited the RTI/MTSS framework as being the catalyst that compelled them to improve and strengthen the tier 1 core instruction at the study site by differentiating and scaffolding instruction and providing students with all the supports they need without labeling them. Participants’ perceptions substantiated Gibbs’ (2011) finding that the degree to which teachers are successful in using data to differentiate small group instruction will directly impact the success of the tier one instruction for all grades.

Study participants unanimously agreed that an effective RTI/MTSS framework requires essential components such as multiple tiers of high quality instruction, data based decision making, evidence-based interventions and fidelity of implementation to operate effectively. Evidence collected from this study substantiated findings from research conducted by Glover and DiPerna (2007) who confirmed participants’ perceptions. The authors of this investigation noted that since RTI/MTSS practices support all students, multitier models provide a continuum of services to meet students’ diverse needs. These researchers also emphasized the importance of data-based decision making to ensure students, identified as at risk, receive appropriate evidence-based services matched to student needs and that students’ progress are monitored consistently to ensure adherence to these empirically tested programs.

All staff acknowledged that since students progress at different rates, a model such as RTI/MTSS is advantageous since this model offers a continuum of tiered supports to students as soon as they are identified as struggling or at risk. Results from this study support the research
of Stecker, Fuchs, and Fuchs (2008) who noted that multiple tiers of instruction avoid inadequate instruction from being implemented over time and prevent disabilities from developing or becoming more severe. Participants’ viewpoints also corroborated research conducted by Tilly (2003) who investigated 121 schools in Iowa that were utilizing a multi-tiered service delivery model. Results of this research indicated substantial student growth in early reading performance as well as a decrease in special education referrals in these schools. Evidence from this study further substantiated findings from a similar study conducted in Minneapolis by researchers Marston, Meuystens, Lau and Canter (2003) and Reschly and Stark-Weather (1997). Results indicated that multi-tiered instructional services reduced the number of students referred to special education placements from ethnic minority backgrounds. Finally, participants’ perceptions were supported by an investigation conducted by Kovaleski, Gickling, Morrow and Swank (1999) of a multi-tiered framework in Pennsylvania which resulted in fewer grade level retentions, reduced number of special education referrals and an increase in student comprehension, student time on task, and task completion.

Educators in this study unanimously agreed with finding 2 which states that student assessment data supports staff (MKO) with early identification of at risk students and data informed decision making in order to promote student learning based on each student’s ZPD. Educators cited the importance of both formal and informal assessment data for informing and guiding their pedagogy and as an integral component of an RTI/MTSS model. Data based decision making provides teachers with the information they need to determine each child’s baseline or zone of proximal development (ZPD). Participant’s beliefs also supported findings set forth by IRIS (2014) who noted that the closer an educator can match a practice or program to the individual students’ needs, the greater the possibility it will lead to the desired outcome.
Results of this study also support the thinking of researchers such as Stecker, Fuchs and Fuchs (2008) who asserted instruction is paramount to successful implementation of RTI/MTSS, however, assessment data is essential for decision making. This belief was supported by research conducted by Reschly (2014) who posits that early identification and intervention is more effective for closing gaps than later identification and intervention. Finally, participants’ perceptions were supported by the findings of Johnson, Mellard, Fuchs and McKnight (2006) who suggested examining a student’s progress monitoring data allows educators to gain insight into how the student is responding to instruction he or she is receiving, which in turn enables teachers to make appropriate instructional decisions. Participants cited a purpose for implementing an RTI/MTSS model of instruction is to enhance student learning so that the majority of students meet tier 1 benchmarks or grade level reading expectations. This evidence aligns with Reschly’s (2014) belief that a purpose of RTI/MTSS is early intervention and treatment of students who appear to be falling below the benchmarks.

Participants confirmed the significance of finding 3, using data from DIBELS and progress monitoring in order to group students based on student strengths and weaknesses, to recommend additional tiers for at risk students and to determine the evidence-based intervention that would match the student’s area of need. They also felt that accurately identifying a student’s learning problem and examining the cause of the problem would help them with the selection of appropriate instruction or intervention. This belief was reinforced through research conducted by Deno, Lembke, and Reschley-Anderson (2005) who noted since efforts to improve schools has intensified an increased emphasis has been placed on the importance of measuring student achievement. Participants’ perceptions were also validated through the work of Gibbs (2011) who noted assessments identify students who are struggling and need intervention, assessment
data also guides staff in determining the type of intervention necessary to meet students’ needs and finally assessment data is used to determine the effectiveness of the evidence based intervention in moving the student toward the desired outcomes. Participants’ beliefs were further corroborated by the finding of Mike Schmoker (1999) who asserted that results are the key to student improvement since results tell us which of our processes are most successful and which need alterations. Overall, progress monitoring is relevant for classroom teachers because the interpretation of this data is vital when making decisions about the adequacy of student progress and developing effective instructional programs (Fuchs & Fuchs, 2008).

Universal screening is an assessment administered to all students in the classroom to identify students who are performing at grade level in a specific skill area as well as to identify students who are struggling. Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are a set of standardized quick, instructional assessment probes that assess students in the area of phonemic awareness, phonics, fluency, vocabulary and comprehension, areas that are precursors to later literacy achievement (The National Reading Panel, 2000). Although these assessment probes are integral elements of reading curriculum, educators expressed concern regarding the consistency that staff incorporated these reading components in their reading instruction. Participants agreed staff touched on all five components; however, they attributed the low percentage of students meeting the DIBELS’ benchmark to teachers’ use of varied programming and inconsistent time allocated to phonics, and vocabulary instruction.

Participants agreed that DIBELS measures allowed teachers to gauge the progress of all students and provided teachers with the information necessary to group the students accordingly. All participants recognized the magnitude of confidence they invested in DIBELS data for guiding their initial planning, developing student goals and for making decisions about moving
students in and out of instructional levels. This evidence corroborates the work of Good and Kaminski (2011), National Reading Panel (2000) and Reschy (2014) who noted universal screening is most prominent for screening early reading development, where simple fluency measures requiring from three to five minutes per child are used as part of tier I in RTI/MTSS systems. The trajectories of many children below benchmarks can be changed with early identification and interventions.

Participants in this study expressed a clear understanding about finding 4, the significant impact that fidelity has on the implementation of an RTI/MTSS model of instruction. Perceptions of the study participants were substantiated by researchers such as Burns and Gibbons (2008), Gansle and Noell (2007), Kovaleski, (2007) and Shinn, (2007) all of whom confirmed that implementation fidelity of the RTI/MTSS system is arguably one of the most important aspects identified as necessary for successful RTI/MTSS implementation. Results from this study also substantiated findings from research conducted by Tilly (2003) who investigated 121 schools in Iowa. Findings from this research indicated that the effectiveness of any evidence-based practice varies in relation to the fidelity in which it’s implemented. This belief was further reinforced through a study conducted in Michigan by Sparks (2016) which indicated that reading benchmarks improved when schools fully implemented the RTI/MTSS framework with fidelity.

Study participants understood and agreed that fidelity of RTI/MTSS implementation is the extent to which educators adhere to RTI/MTSS procedures as program designers intended and planned. Participants’ perceptions were supported by the findings of NASDSE (2007) and Burns & Gibbons (2008) that demonstrate that RTI/MTSS, when implemented with fidelity, has resulted in closing achievement gaps in schools with struggling learners. In addition, research
conducted by Johnson, Mallard, Fuchs and McKnight (2006) confirmed this perception noting, fidelity of implementation is “the delivery of instruction in the way in which it was designed to be delivered” (p. 2). Educators cited factors that uphold fidelity which include adherence to program design, sufficient time allocation to instructional concepts, adequate intensity and frequency of interventions, trained, qualified staff and evidence-based resources. This belief was reinforced through research conducted by Mortenson and Witt (1998) who concluded that student outcomes increase when teachers implement interventions that follow the protocol developed by the program designers. Researchers Glover and DiPerna (2007) also substantiated this perception suggesting that educators must develop the ability to identify evidence-based interventions and the ability to monitor the implementation for adherence to protocols.

Study participants unanimously agreed that self-report checklists and video taping of lessons enhance fidelity by providing staff with opportunities for self-reflection and to receive feedback from colleagues. Participant perceptions supported the beliefs of Keller-Margulis, (2012) who suggest that regular and consistent monitoring of implementation fidelity can provide staff with the data they need to improve implementation and student performance. Participants’ perceptions also corroborated the findings of an investigation conducted by Sterling-Turner, Watson, Wildmon, Watkins and Little (2001) all of whom suggested that training does enhance procedural fidelity and that rehearsal/feedback training produced the highest level of treatment fidelity.

Participants in this study expressed concerns regarding teachers’ consistency of implementation fidelity for certain programs. Although teachers understood the significance of program fidelity, evidence revealed that at times, staff inadvertently altered or strayed from the implementation procedures that validated the research of the intervention by modifying or
omitting steps or activities of the practice or program. This tendency typically occurred when educators perceived they had mastered the procedures and stopped referring to the implementation guidelines or fidelity checklists. A study conducted by Tappe, Galer-Unit and Bailey, (1995) substantiated this conclusion noting that in the absence of monitoring, teachers tend to alter implementation procedures or discontinue their use. Participant perceptions are further corroborated by researchers Hardcastle and Justice (2010) who concluded that, staff must demonstrate that changes in student performance are directly related to adherence of the intervention plan when evaluating a student’s response to the intervention.

Educators’ perceptions regarding the purpose or effectiveness of an intervention on student learning impact the fidelity implementation of intervention at the classroom level. Treatment acceptability is, “the extent to which people perceive an intervention as “appropriate, fair, and reasonable” (Kazdin, 1981, p.483). Participants’ perceptions are substantiated by the research of Witt and Elliott (1985) who suggested that educators’ acceptability of an intervention has a significant impact on whether staff uses the intervention, the fidelity with which the intervention is implemented, and eventually how effective the intervention meets student needs. In other words, if staff does not believe an intervention will work, they will not implement it with fidelity.

Study participants felt strongly about the importance of professional development. Educators believed training in evidence-based instructional curriculum and ongoing training about components and structures of an RTI/MTSS framework would enable staff to maintain fidelity and sustainability of a tiered model of instruction. This belief was confirmed through research conducted by Elliot and DiPerna, (2001) and Castro-Villarreal & Rodriguez Moore (2014) who maintained that training for staff has the most significant impact on intervention
fidelity. Participants’ perceptions also supported the research of Kovaleski (2007), who claimed professional development for staff should be frequent and sustained with follow up opportunities for guided practice so teachers will gain the knowledge and understanding they need to implement interventions with integrity. According to Burns (2007) “Perhaps the greatest challenge to successful RTI/MTSS implementation and the factor that could most likely lead to its downfall, is the fidelity with which we implement the model, decision rules, quality core curricula, and subsequent interventions” (p.38).

Finding 5 reveals educators’ beliefs that a benefit of the RTI/MTSS model is that students have an opportunity to reach mastery through multiple exposures to personalized instruction and numerous opportunities to practice new skills. Study participants agreed that a significant benefit of an RTI/MTSS model of instruction is for students to receive targeted instruction at their level of need and ability in order to reach their potential. Study participants’ beliefs were reinforced by research conducted by IRIS (2007) who found benefits of an RTI/MTSS model include early intervening for students who are struggling with reading, increasingly intense, fluid levels of instructional interventions, data based decision making, and enhanced communication and collaboration. Educators agreed that another benefit of RTI/MTSS is that all students are learning together in the general education classroom, students feel included and staff has an opportunity to meet children where they are both academically and social emotionally. Evidence from this research is supported by the research of Reschy (2014) who suggested that an RTI/MTSS approach involves multiple levels of intervention intensity and measurement precision, delivered across general, remedial, and special education. Overall, participants embraced RTI/MTSS as a methodology to bridge resources and get more specialized supports and instruction into general education at the first sign of a student struggling. This evidence
supports the No Child Left Behind Act (NCLB, 2001), the Individuals with Disabilities Education Act (IDEA, 2004) and Every Student Success Act (ESSA, 2014) which state that schools, when possible, should make certain that every student has the same opportunity to participate in high quality curriculum in the general education environment with appropriate supports and services.

Although educators embraced the many benefits of the RTI/MTSS framework, study participants in finding 6 noted that lack of resources (materials and staffing), lack of common planning time, the need for more training and scheduled time for additional tiers to be major challenges of an RTI/MTSS model. This researcher found evidence of teachers’ perceptions to be in agreement with the findings of Castro et al. (2014) who found that effective implementation of RTI across a school system is complex and requires training, support, leadership, and coordination from a team of educators. Data gathered from participants in this study revealed that educators had concerns about lack of training in evidence-based interventions and lack of both materials and personnel which are resources necessary to improve the RTI/MTSS model of instruction. Teachers felt they needed additional staffing to adequately support the diverse needs of the students in the classroom and to assist with implementation of evidence-based interventions matched to student needs. These perceptions were validated through the work of researchers such as Greenfield, Rinaldi, Proctor, and Cardarelli (2010) who suggested effective RTI models require substantial staff training, resources, and support.

Study participants’ perceptions were disclosed in finding 7 which noted unanimous agreement among them in that a multidisciplinary problem-solving team (SST) promotes a team approach to collaborative planning, data-driven decision making, shared accountability of students and increased communication which results in consistency and alignment of instruction.
Study participants also expressed the belief that the student support team (SST) was a beneficial component of the RTI/MTSS model. Participant beliefs corroborate the findings from research conducted by Burns, Appleton, and Stehouwer, (2005) which demonstrated districts that implemented problem solving student support teams resulted in overall improvement in student learning and a decrease in student referral and placement in special education. Participant perceptions also support findings of Batsche, Elliott, Graden, Grimes, Kovaleski, Prasse, Reschly, Schrag and Tilly, (2005) all of whom noted that the problem solving decision making team support educators with the selection and adaptation of curricula and the evaluation of the progress and enhancement of systems.

Consensus was noted among all participants that RTI/MTSS is a model in which educators share accountability for all students they instruct. Participants agreed that when multiple personnel are working with students on related skills, communication and collaboration is crucial to student success so staff are not confusing students by teaching conflicting concepts. Participants’ perceptions supported the finding of Stuart and Rinaldi (2009), who found that when districts are able to provide time for incorporating collaborative planning structures, schools are able to address academic difficulties regardless of with whom or where individual students receive services. Collaboration and communication enables staff to provide general education curricula access to all students, while still addressing the needs of students who are academically at risk.

**Study Limitations**

This study has provided rich, real life, in depth information, about the experiences of a small purposeful sample of educators in one Massachusetts school district and how they perceive the structures, processes, fidelity of implementation and impact of RTI/MTSS. This researcher is
confident that the data gained from student data assessment, in-depth interviews, self-report documents, and a focus group interview will allow the researcher to answer the research questions guiding this study. In addition, this MA district and other districts may benefit, by using this information about factors that facilitate or challenge the implementation of an RTI/MTSS model to refine the existing RTI/MTSS model. “While purposive sampling targets a very specific population and may provide detailed insight into the problem of practice a limitation of purposeful sampling is there is no guarantee that the selected informants’ views are typical or representative of the larger school population” (Maxwell, 2005, p. 91).

**Implications for Educational Practice**

The key findings from this qualitative case study have revealed several implications for educational practice which will support districts as they implement an RTI/MTSS framework. Several factors must be in place in order to ensure fidelity of implementation.

First an effective RTI/MTSS model must consist of several essential components. Student assessment and decision making is critical because this facet allows teachers to accurately determine which students need extra help. Another component is multiple tiers of instruction. Each tier increases in frequency and duration of time and provides students with evidence-based supports, tailored to each student’s needs. Finally, a significant factor which impacts student performance is procedural fidelity. When teachers adhere to curriculum design and deliver instruction accordingly, student outcomes increase.

Ongoing professional development in evidence-based curriculum is critical in order to build capacity among all stakeholders and sustain fidelity of implementation. Educators must have a sound understanding of the curriculum and maintain consistency and accuracy in instructional practices that reflect the program developer’s intent. In addition, educators must
have access to instructional materials and work in an environment with adequate staffing so that students receive the frequency and intensity of additional tiers of instruction they need.

RTI/MTSS is a model in which educators share accountability for all students they instruct. Consequently, administrators must build consensus among their staff and establish a positive culture and an understanding in their buildings that a strong tier 1 instructional curriculum needs to be provided to all students. Addressing educational deficits in the general education classroom, without waiting for an official label, has helped teachers and administrators understand that they are collectively responsible for all students. In addition, educators need to feel supported by having administrators develop a master schedule that has all three tiers scheduled in order to ensure additional tiers of instruction for identified students do not interfere with their core instructional time.

A multitier model of instruction also requires a mind shift from a focus on summative assessment data, such as state test scores, to formative assessment data (dynamic assessment), to help improve student learning outcomes. A key benefit of formative assessment is that it provides the information staff needs to adjust teaching and learning while instruction and learning is happening. All educators must be provided with data of students they instruct so that they are able to continuously make data driven decisions to inform their instruction.

Finally, a multitier framework requires a team approach for servicing students due to the number of teachers that may be providing research-based instruction for students in order to meet their individual instructional needs. As a result, communication and collaboration is essential in order to ensure alignment of instruction. Again, administrators must work diligently and think outside the box in order to coordinate planning time for grade a-like teams of teachers and
related service providers. Strategies that have allowed districts to provide planning time for staff are monthly early release days and bi-monthly late starts for students.

Explanations about RTI/MTSS procedures, evidence-based programs, assessments and schedules that have been adopted at the site of the study to enhance the implementation and sustainability of this framework have been provided in appendix H.

Implications for Future Research

During this qualitative case study, the researcher examined how grade two team members, support staff, and the building administrator at the site of the study perceive the process, structures, fidelity of implementation and impact of an RTI/MTSS model. Future studies could support districts with scaling up an RTI/MTSS framework to include implementation at the secondary level. The RTI/MTSS framework continues to be emerging at the elementary level. Study participants, however, have identified specific components that must be in place in order to meet the individual needs of students and increase student outcomes. Administrators must also support staff by developing master schedules, so students can move fluidly from one tier to another as well as adjust structures of the school to allow communication and collaboration among staff.

Since the middle school and the high school schedules operate very differently than the elementary schools, where the majority of students spend the brunt of their day with one staff member, future studies that might reveal how secondary schools could overcome challenges of scheduling additional tiers for students and co-planning time for educators sharing students would be very beneficial. Additional future studies on implementing a multitier model of instruction to target math and other content areas at all levels would also be advantageous.
Conclusion

The Every Student Succeeds Act (ESSA, 2015) preserves the spirit of the No Child left Behind Act (NCLB, 2001) with its emphasis on inclusive practices for students with disabilities as well as English Language Learners to the greatest extent possible. This mandate coupled with the diverse needs of students educators instruct in today’s classrooms have compelled district administrators to adopt and provide training for staff in high quality, evidence based curriculum. As a result, many districts, including the district of this study site, have launched an RTI/MTSS framework.

The purpose of this study was to document the perceptions of a grade two team of teachers, support staff and administrator’s experiences about the process, structures, fidelity of implementation and impact of an RTI/MTSS model on student learning. The participants engaged in individual, semi-structured interviews, a self-report survey and a focus group interview. Student assessment data provided information about student performance. Information collected from their individual and collective experiences provided a rich in-depth understanding and insight into their perspectives as they implemented an RTI/MTSS model of instruction at the study site.

The findings of this study have identified specific components that must be in place in order to meet the individual needs of students and increase student outcomes. Critical components include high quality instruction, student assessment and decision making, a multi-tier model of instruction, evidence-based interventions and development and sustainability of systems level capacity. The findings of this study are significant, not only for staff and administrators in the district where this study was conducted, but may also be used as a catalyst for similar districts in order to meet the diverse needs of all learners and to increase student performance.
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Appendices

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

Northeastern University, College of Professional Studies, Doctor of Education Program

Date

Dear (Name of Superintendent),

I am a doctoral student enrolled in the College of Professional Studies at Northeastern University. I am writing to you to request permission to conduct my doctoral research at (name of the school) in order to fulfill my doctoral requirements. The purpose of this case study is to investigate how grade two team members, support staff and the building administrator perceive the purpose, structures, fidelity of implementation and the impact of RTI/MTSS in the teaching and learning of students.

In order to conduct this study I will need access to (name of the school) second grade DIBELS data from the fall, winter and spring of 2015-2016. In addition, educators (the building administrator, psychologist, literacy coach, a special educator and three second grade general education classroom teachers), at (name of the school) will be asked to participate in semi-structured individual interviews, an educators’ perception survey, and a focus group interview with six other participants. The three grade two team members will also be asked to complete a self-report guided reading fidelity checklist.

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. Although there is no direct benefit to any of the participants, it is hoped that the findings of this study will provide insight and suggestions for this district and potentially similar districts on how to successfully implement and sustain an RTI/MTSS model of instruction.

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

Sincerely,

Linda M. Maniglia
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 fulfill my requirements to obtain a Doctorate in Education. The goal of my study is to investigate how grade two team members, support staff and a building administrator in one Massachusetts school district perceive the process, structures, fidelity of implementation and the impact of RTI/MTSS in the teaching and learning of students.

If you decide to take part in this study, you will be asked to engage in an individual interview, a focus group with this researcher and six other participants and an educator’s perception survey. The three grade two team members will also be asked to complete a self-report guided reading fidelity checklist. The individual interviews will last between 45 and 60 minutes, and will take place at any location you choose, outside of normal school hours. The focus group interview will last for approximately 60 minutes, and will take place at a location that is convenient for all participants outside of normal school hours. The self-report fidelity measure and survey will be hand delivered to each participant or placed in your mailbox for you to complete.

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 would like to volunteer to participate in this project, or have any questions regarding the procedures involved, please contact me by email or telephone. My email is maniglia.l@husky.neu.edu, and my telephone number is 508-405-6672. Thank you for your consideration.

Sincerely,

Linda M. Maniglia
Appendix B

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 fulfill my requirements to obtain a Doctorate in Education. The goal of this proposed qualitative study is to investigate how grade two team members, support staff and a building administrator in one Massachusetts school district perceive the process, structures fidelity of implementation and impact of RTI/MTSS in the teaching and learning of students.

If you decide to take part in this study, you will be asked to engage in an individual semi-structured interview, a focus group interview with this researcher and six other participants and an educator’s perception survey. The individual interviews will last between 45 and 60 minutes, and will take place at any location you choose, outside of normal school hours. The focus group interview will last for approximately 60 minutes, and will take place at a location which is convenient for all participants outside of normal school hours. The self-report survey will be hand delivered to you or placed in your mail box for you to complete.

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 would like to volunteer to participate in this project or have any questions regarding the procedures involved, please contact me by email or telephone. My email is maniglia.l@husky.neu.edu, and my telephone number is 508-405-6672. Thank you for your consideration.

Sincerely,

Linda M. Maniglia
Appendix C

Informed Consent Form

Northeastern University, College of Professional Studies

Name of Investigator(s):
- Dr. Margaret Dougherty, Principal Investigator
- Linda M. Maniglia, Student Researcher

Title of Project: How Educators Perceive the Process and Implementation of a Multi-Tiered System of Supports (MTSS): A Case Study

Informed Consent to Participate in a Research Study
You are being invited to take part in a research study. This written form will tell you about the study, however, the researcher will explain it to you first. You may ask this person any questions you may 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 provide you with a copy to keep for yourself.

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 is involved in the implementation of a RTI/MTSS model of instruction.

Why is this research study being done?
The purpose of this study is to investigate how school based practitioners perceive the process, structures, fidelity of implementation and the impact of an RTI/MTSS model of instruction.

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. Following the interview you will be asked to engage in a self-report fidelity measure and an educator’s perception survey. Finally, you will be asked to participate in a focus group with six other study participants. This focus group will be conversational in nature and will be recorded only for the purpose of transcription by the researcher. The focus group will follow a semi-structured questioning format. 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 surveys will be placed in each participant’s mailbox or hand delivered. Participants can complete the survey at their convenience and return the completed survey to the researcher within a specified time frame. The individual interview will take place at any location you choose at a time and date that is convenient for you, outside of normal school hours. 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 outside of normal school hours at a location that is convenient for 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 engaging in the study. However, the information gleaned from this study may benefit practitioners in this district and possibly in similar districts as they implement an RTI/MTSS model of instruction.

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 any information that may 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: Linda M. Maniglia, Doctor of Education Student, 9 Onset Avenue Buzzards Bay, MA; telephone: 508-405-6672; email address: maniglia.l@husky.neu.edu. You can also contact Dr. Margaret Dougherty, the Principal Investigator, Northeastern University, Boston, MA 02115. Email m.dougherty@neu.edu.
Who can I contact about my rights as a participant?

If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 490 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.4588. Email:n.regina@neu.edu. You may call anonymously if you wish.

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.

Research Participant (Signature) Date

______________________________________________

Research Participant (Printed)

______________________________________________

Researcher Obtaining Consent (Signature) Date

______________________________________________

Researcher Obtaining Consent (Printed)
Appendix D  
INTERVIEW PROTOCOL

**Purpose:** The purpose of this interview is to discuss teachers’ perceptions of the impact, process, structures and fidelity of implementation of a RTI/MTSS model of instruction.

**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:**

The purpose of question 1 is to gather data on how well the participants understand the concepts of a RTI/MTSS model of instruction.

1. How would you define RTI/MTSS to someone who is unfamiliar with this concept?  
   *Follow-up probe:* Describe how staff is using the RTI/MTSS framework in this building. Who is primarily responsible for implementing tier 1? Who is responsible for implementing tier 2? Tier 3?

2. RTI/MTSS has been described as an approach that provides a continuum of supports for all learners and a model in which responsibility for individual student progress is shared by all educators. Do you agree with these principles?  
   *Follow-up probe:* In your opinion, how has the RTI/MTSS framework necessitated collaboration, communication and shared accountability among staff for all students?

3. Please describe how an RTI/MTSS meeting proceeds once a student is identified as struggling and has been referred to the building based student support team.  
   *Follow-up probe:* Who continues to collect data on the student? How often does the team monitor the student’s progress?

4. Please describe progress monitoring: How do you use and analyze assessments (formal, informal, student work samples) to inform your instructional practices for small flexible groups of students and/or individual students?

5. How are evidence-based instructional methods and interventions selected? Describe how you scaffold learning activities and differentiate instruction to meet the needs of individual students.

6. How do you use data to determine if a student requires tier 2 interventions? How do you use data to determine if a student requires tier 3 interventions?
The following questions were developed to inform the researcher of educator’s perceptions regarding the impact, process, structures and fidelity of RTI/MTSS implementation.

7. Describe how a student’s responsiveness to interventions is monitored. What assessment tools are used for progress monitoring? How is fidelity of implementation measured?

8. Describe the components of RTI/MTSS that you believe are most critical for successful implementation of RTI/MTSS.

*Follow-up probe:* In your opinion, what is the main goal of implementing a RTI/MTSS model of literacy instruction?

9. Please comment on your schools Tier 1, core literacy curriculum. Are curriculum, instruction, and assessment aligned between grades and across classrooms at the same grade levels? Is curriculum followed according to how the program developer designed it to be implemented?

*Follow-up probe:* How well does the core curriculum incorporate the critical components of effective literacy instruction? (phonics, fluency, phonemic awareness, vocabulary, comprehension). Please describe your beliefs about having all students participate in tier 1 instruction.

10. Please discuss types of professional development/trainings that were provided to staff. How did the PD prepare/support staff with RTI/MTSS implementation in your school?

*Follow-up probe:* What additional PD trainings would you suggest to help staff more effectively implement the RTI/MTSS framework?

11. In your opinion, how effective is the RTI/MTSS model of instruction in meeting the individual needs of students and closing student gaps?

*Follow-up probe:* Describe your thoughts regarding the benefits of RTI/MTSS on student learning. Please describe any barriers you’ve experienced since the implementation of a RTI/MTSS model. Do you have adequate resources for RTI/MTSS implementation with your students?

12. Please describe any changes in staff practices, roles and/or responsibilities as a result of RTI/MTSS implementation?

*Follow-up probe:* Please describe the building administrator’s role in the implementation of the RTI/MTSS process.

13. Proponents of a multi-tiered, RTI/MTSS approach believe that it provides a framework for school improvement on two fronts: Early detection of “at risk students” and early intervention. In your opinion, has the implementation of RTI/MTSS affected the process of referring students for special education? If so, please give examples.

14. Is there anything that I have not asked that you believe is relevant to RTI/MTSS fidelity of implementation?
Appendix E
FOCUS GROUP INTERVIEW PROTOCOL

Purpose: The purpose of this focus group is to gather additional evidence as well as to substantiate evidence that has already been collected from the qualitative interviews and the fidelity measures.

Date: ______________________________________________________________

Location: ___________________________________________________________

Participants: _________________________________________________________

Duration: 60 Minutes

The researcher will remind the participants that the focus group discussion will be audio recorded to allow for repeated access to the data. Participants will also be assured 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 substantiate the information gathered from the interviews and to expand upon the information collected during individual interviews.

1. How confident are you in using DIBELS screening benchmarks and formative assessments (progress monitoring) to identify students at risk? How can you use these findings to enhance instructional decision making and improve student performance? 
   Follow-up probe: How will a RTI/MTSS framework support all students? How confident are you in using DIBELS data and progress monitoring to match evidence-based programs or interventions to meet the individual needs of students?

2. RTI/MTSS offers a continuum of supports based on student needs. How have the levels of instruction impacted student achievement? In your opinion, is the RTI/MTSS framework an effective instructional model? How has RTI/MTSS impacted instruction in your classroom? Please elaborate.

3. There is no way to determine whether unsuccessful student outcomes reflect a failure of the student responding to a particular curriculum/intervention or due to failure to implement the curriculum/intervention as intended. How have fidelity measures impacted student performances? Please give examples.

4. What benefits if any have you experienced since implementing an RTI/MTSS model of instruction? What barriers, if any, have you experienced since implementing an RTI/MTSS model of instruction? 
   Follow up probe: What practices would you identify as most critical to the process? What challenges, if any, have you experience since implementing an RTI/MTSS model of instruction?
5. Describe how the RTI/MTSS process has necessitated collaboration and communication among all staff. How does staff communicate and collaborate about student achievement for students requiring additional tiers of instruction from multiple instructors? How will staff ensure continued sustainability and fidelity of the RTI/MTSS implementation?

6. Based on your experiences, has tiered instruction helped you become more effective at meeting the unique and diverse needs of individual students in your classroom? What practices in particular have you identified as most effective for meeting the diverse needs of students you work with and as a result have increased student performance?

*Follow-up probe:* Are there any other topics related to tiered instruction that you’d like to see covered in future professional development?
Appendix F
Permission to use Self-Report Fidelity Checklist for Guided Reading

Informal fidelity checklist

Linda Maniglia <lmaniglia@rocklandschools.org>  
Jun 2 (13 days ago)

to kbechdol

Hi Karen,

Thanks for taking my call. It was a pleasure speaking with you today.

As I mentioned during our conversation, I am the Director of Pupil Personnel Services for the Rockland Public School District in Rockland MA.

I am also a doctoral student enrolled in the College of Professional Studies at Northeastern University in Boston, MA.

I am in the process of writing my thesis on the fidelity of implementation of a Multi-Tiered System of Supports (MTSS).

As part of my research study data collection I am looking to collect fidelity measures for guided reading.

I happened to come across one of your informal walk through fidelity checklists for guided reading that I really liked.

I am requesting permission from you to adapt this document to meet the needs of my district and for use in my study. I'd like to use the same format, however, I've made a few revisions and I'd like to use it as a self-report fidelity check.

I've attached the informal fidelity checklist for your review.

I would appreciate your consideration in this matter. Thank you!

Respectfully,

Linda M. Maniglia
Attachments area

Bechdol, Karen  
Jun 6 (9 days ago)

to me

Linda, we are pleased you find our document helpful for your work. Could you please change the bottom to: Adapted from the City School District of Albany. Thank you. Karen
Karen Bechdol

Director of Curriculum and Instruction
City School District of Albany
(518) 475-6060
kbechdol@albany.k12.ny.us

From: Linda Maniglia<imaniglia@rocklandschools.org>
Sent: Thursday, June 2, 2016 8:04 PM
To: Bechdol, Karen
Subject: Informal fidelity checklist

Hi Karen,

Thank you very much!

Sincerely,

Linda
Appendix F
Self-Report Fidelity Checklist: Guided Reading
Adapted from the City School District of Albany (2013-2014)

<table>
<thead>
<tr>
<th>Guided Reading</th>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher and students are prepared, organized and text is at the student’s</td>
<td></td>
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</tr>
<tr>
<td>instructional level</td>
<td></td>
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</tr>
<tr>
<td>Teacher can see all students, students can see the teacher.</td>
<td></td>
<td></td>
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<tr>
<td><strong>Duration &amp; Frequency</strong></td>
<td></td>
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</tr>
<tr>
<td>Session length is at least 15-20 minute sessions.</td>
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</tr>
<tr>
<td>Student takes part in guided reading daily.</td>
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<tr>
<td><strong>Before the Reading</strong></td>
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<tr>
<td>Teacher briefly introduces the story, keeping in mind language, interest</td>
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<tr>
<td>level, meaning and attention to words.</td>
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<tr>
<td>Invite students to make predictions, raise questions, and anticipate the</td>
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<tr>
<td>text.</td>
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<tr>
<td>Point out unusual language structures- Have students hear them and say them.</td>
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<tr>
<td><strong>During the Reading</strong></td>
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<tr>
<td>Teacher listens in as students read silently or aloud.</td>
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<tr>
<td>Teacher confirms students’ problem solving attempts and successes.</td>
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<tr>
<td>Teacher interacts with students to assist with problem solving.</td>
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<tr>
<td>Teacher makes notes about the strategy use of individual students.</td>
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<tr>
<td><strong>After Reading</strong></td>
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<tr>
<td>Teacher talks about the story with the students.</td>
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<tr>
<td>Teacher returns to the text for one or two teaching opportunities.</td>
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<tr>
<td>Teacher assesses the students’ understanding of what he/she read.</td>
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<tr>
<td>Teacher uses appropriate question stems based on Bloom’s Taxonomy and</td>
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<tr>
<td>discusses the story with students.</td>
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<tr>
<td>Teacher reteaches as needed.</td>
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<tr>
<td>Teacher may provide instruction in word work when needed.</td>
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<tr>
<td><strong>Effective Instructional Strategies</strong></td>
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</tr>
<tr>
<td>Instruction is well paced.</td>
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<tr>
<td>Teacher employs immediate corrective feedback.</td>
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<tr>
<td>Teacher transitions smoothly from one exercise to the next.</td>
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<tr>
<td>Expectations are clear (posted/stated and or referred to).</td>
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<tr>
<td>Teacher provides positive reinforcement/specific praise.</td>
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<tr>
<td>Students are on-task and/ off task behavior is addressed</td>
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</tbody>
</table>
Appendix F
Permission to use Perception of RTI/MTSS Skills Survey

5/13/2016
Mail - Florida Statewide Manual surveys

Linda Maniglia <lmaniglia@rocklandschools.org>

Florida Statewide Manual surveys
7 messages

To: jmcastil@usf.edu
Tue, Feb 9, 2016 at 2:03 PM

Dear Dr. Castillo,

I am the Director of Pupil Personnel Services for the Rockland Public School District in Rockland MA.

I am also a doctoral student enrolled in the College of Professional Studies at Northeastern University in Boston, MA.

I am in the process of writing my dissertation which is on the perceptions of building-based practitioners regarding the impact, process, structures and implementation of a Multitiered System of Supports.

As part of my research study data collection, I am conducting two focus group interviews: one with a leadership team in the Rockland School District and another focus group interview with district grade two elementary staff. In addition, I would like to develop a survey for both the leadership team and the elementary staff members to participate in.

I have read through the Florida Statewide Problem Solving/Response to Intervention Evaluation Tool Technical Assistance Manual, and I am respectfully requesting your permission and your co-authors permission to adapt questions from your belief Survey and the Perceptions of Educators Survey to use in my research study.

Thank you, I greatly would appreciate your consideration of my request.

Respectfully,

Linda M. Maniglia

Castillo, Jose <jmcastil@usf.edu>
Tue, Feb 16, 2016 at 5:38 PM

To: "Hyde, Judith" <judyhyde@usf.edu>
Cc: "lmaniglia@rocklandschools.org" <lmaniglia@rocklandschools.org>

Hi Judi,

Please see the request below and provide Linda with information regarding the process for requesting permission to use or adapt our surveys. Thanks!

Linda, I apologize for the delay in responding. I was out of town last week at a conference. The form we ask people to fill out is not very intensive so it shouldn’t take too much longer.

Jose
Hi Linda,

The Florida Problem Solving/Response to Intervention Project received your fax dated 2/22/2016, requesting permission to reproduce the following materials:

- SAPSI
- Beliefs on RtI Scale
- Perceptions of Practices Survey
- Perceptions of RtI Skills Survey
- Tools for Examining Integrity of FSI/RtI Implementation (Tier I & II Observation Checklist, Tier I & II Critical Components Checklist, Problem-Solving Team Meeting Checklists, Tier III Critical Components Checklist)

Permission is granted by the copyright holder to print and use for educational purposes with the following conditions:

- An appropriate acknowledgment of the Florida Problem Solving/Response to Intervention Project (a collaborative project between the Department of Education and the University of South Florida) is included.
- The material is not used for commercial purposes.

Thank you for your interest in these resources. Please contact me if you need further assistance.

Sincerely,

Judi Hyde

----------

Judi Hyde, MA
Communications Coordinator
Problem Solving/Response to Intervention Project
University of South Florida
Appendix F

Educator’s Perception of RTI/MTSS Skills Survey
(Adapted from Florida’s Technical Assistance Manual)

**Directions:** For each item on this survey, please indicate how frequently or infrequently the given practice occurred in your school for both academics (i.e., reading and math) during the 2015-2016 school years. Please use the following response scale:

- Never Occurred (NO)
- Often Occurred (OO)
- Rarely Occurred (RO)
- Always Occurred (AO)
- Sometimes Occurred (SO)

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<table>
<thead>
<tr>
<th>In My School…</th>
<th>(NO)</th>
<th>(RO)</th>
<th>(SO)</th>
<th>(OO)</th>
<th>(AO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Data (e.g., Curriculum-Based Measurement, DIBELS, PARCC) were used to determine the percent of students receiving core instruction (general education classroom only) who achieved benchmarks (district grade-level standards) in ELA/Math</td>
<td></td>
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<tr>
<td>2. Data were used to make decisions about necessary changes to the core curriculum to increase the percent of students who achieved benchmarks (district grade-level standards) in Math and ELA</td>
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<tr>
<td>3. Data were used (e.g., Curriculum-Based Measurement, DIBELS) to identify at-risk students in need of supplemental and/or intensive interventions for ELA and Math:</td>
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<td>4. The students identified as at-risk routinely received additional (i.e., supplemental) intervention(s) for ELA and Math:</td>
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<tr>
<td>5. Progress monitoring occurred for all students receiving supplemental and/or intensive interventions for ELA and Math:</td>
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</tr>
<tr>
<td><strong>In My School….</strong></td>
<td>(NO)</td>
<td>(RO)</td>
<td>(SO)</td>
<td>(OO)</td>
<td>(AO)</td>
</tr>
<tr>
<td>6. A standard protocol intervention (i.e., the same type of intervention used for similar problems) was used initially for all students who required supplemental instruction for ELA and Math:</td>
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</tbody>
</table>
Directions: Items 9-18 refer to the typical Problem-Solving Team (i.e., Student Support Team, Intervention Assistance Team, School-Based Intervention Team, Child Study Team) meeting in your school (2015-2016) that included a student who had been referred for problem-solving or a special education evaluation. While addressing each item for academics (math and reading), think of a typical case in which a student was referred for an academic concern. Then, please indicate how frequently each of the given practices occurred in your school using the same scale.

<table>
<thead>
<tr>
<th>In My School......</th>
<th>(NO)</th>
<th>(RO)</th>
<th>(SO)</th>
<th>(OO)</th>
<th>(AO)</th>
<th>(DK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. The target behavior was routinely defined in terms of the desired behavior (e.g. Susie will read 90 correct words per minute) instead of the problem behavior (e.g., Susie reads below grade-level) for academics:</td>
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<tr>
<td>8. Quantifiable data (e.g., reading fluency score, percent compliance, percent on-task behavior) were used to identify the target student’s current performance in the area of concern for academics:</td>
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<tr>
<td>9. Quantifiable data (e.g., reading fluency score, percent compliance, percent on-task behavior) were used to identify the desired level of performance (i.e., the benchmark) in the area of concern for academics:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>In My School.....</th>
<th>(NO)</th>
<th>(RO)</th>
<th>(SO)</th>
<th>(OO)</th>
<th>(AO)</th>
<th>(DK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Quantifiable data (e.g., reading fluency score, percent compliance, percent on-task behavior) were used to identify the current performance of same-age peers using the same data as the target student for academics:</td>
<td></td>
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<tr>
<td>11. The Problem-Solving Team routinely developed hypotheses (i.e., proposed reasons) explaining why the target student was not demonstrating the desired behavior for academics</td>
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<tr>
<td>12. Data were collected to confirm the reasons that the student was not achieving the desired level of</td>
<td></td>
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</tr>
</tbody>
</table>
13. Intervention plans were routinely developed based on the confirmed reasons that the student was not achieving the desired level of performance for academics:

14. The teacher of a student referred for problem-solving routinely received staff support to implement the intervention plan developed by the Problem-Solving Team for academics:

15. Data were collected routinely to determine the degree to which the intervention plans were being implemented as intended for academics:

16. Data were graphed routinely to simplify interpretation of student performance for academics:

17. Progress monitoring data were used to determine the degree to which the target student’s rate of progress had improved for academics:

18. Progress monitoring data were used to determine whether the gap had decreased between the target student’s current performance and the performance of same-age peers for academics:

19. A student’s response-to-intervention data (e.g., rate of improvement) were used routinely to determine whether a student was simply behind and could learn new skills or whether the student’s performance was due to a disability for academics:

In My School….

<table>
<thead>
<tr>
<th>Statement</th>
<th>(NO)</th>
<th>(RO)</th>
<th>(SO)</th>
<th>(OO)</th>
<th>(AO)</th>
<th>(DK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Progress monitoring data were used to determine whether the gap had decreased between the</td>
<td></td>
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<tr>
<td>target student’s current performance and the performance of same-age peers for academics:</td>
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<tr>
<td>19. A student’s response-to-intervention data (e.g., rate of improvement) were used routinely</td>
<td></td>
<td></td>
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<tr>
<td>to determine whether a student was simply behind and could learn new skills or whether the</td>
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<tr>
<td>student’s performance was due to a disability for academics:</td>
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</tbody>
</table>

**Directions:** Please read each statement about a skill related to assessment, instruction, and/or intervention below, and then evaluate YOUR skill level within the context of working at a school/building level. Where indicated, rate your skill separately for academics (i.e., reading and math). Please use the following response scale:
I do not have this skill at all (NS)
I have minimal skills in this area; need substantial support to use it (MnS)
I have this skill, but still need some support to use it (SS)
I can use this skill with little support (HS)
I am highly skilled in this area and could teach others this skill (VHS)

<table>
<thead>
<tr>
<th>In My School.......</th>
<th>(NS)</th>
<th>(MnS)</th>
<th>(SS)</th>
<th>(HS)</th>
<th>(VHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. I am able to access the data necessary to determine the percent of students in core instruction who are achieving benchmarks (district grade-level standards) in academics</td>
<td></td>
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<tr>
<td>21. Overall, I can use data to make decisions about individuals and groups of students for the core academic curriculum</td>
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<tr>
<td>22. In general I can define the referral concern in terms of a replacement behavior (i.e., what the student should be able to do) instead of a referral problem for academics</td>
<td></td>
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<tr>
<td>23. Use data to define the current level of performance of the target student for academics</td>
<td></td>
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<tr>
<td>24. Calculate the gap between student current performance and the benchmark (district grade level standard) for academics</td>
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<tr>
<td>25. Use gap data to determine whether core instruction should be adjusted or whether supplemental instruction should be directed to the target student for:</td>
<td></td>
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<tr>
<td>26. Identify the most appropriate type(s) of data to use for determining reasons (hypotheses) that are likely to be contributing to the problem for academics</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>In My School.......</th>
<th>(NS)</th>
<th>(MnS)</th>
<th>(SS)</th>
<th>(HS)</th>
<th>(VHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. Identify the appropriate supplemental intervention available in my building for a student identified as at-risk for academics</td>
<td></td>
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</tr>
</tbody>
</table>
28. Access resources (e.g., internet sources, professional literature) to develop evidence-based interventions for:

d) Academic core curricula

e) Academic supplemental curricula

f) Academic individualized intervention plan

29. Ensure that the proposed intervention plan is supported by the data that were collected for academics

30. Provide the support necessary to ensure that the intervention is implemented appropriately

31. Determine if an intervention was implemented with fidelity or as it was intended

32. Construct graphs for large group, small group, and individual students

f) Graph target student data

g) Graph benchmark data

h) Graph peer data

i) Draw an aimline

j) Draw a trend line

33. Interpret graphed progress monitoring data to make decisions about the degree to which a student is responding to intervention (e.g., positive, questionable or poor response).

34. Use appropriate data to differentiate between students who have not learned skills (e.g., did not have adequate exposure to effective instruction, not ready, got too far behind) from those who have barriers to learning due to a disability

35. Collect Curriculum-Based Measurement

Collect DIBELS

Access data from appropriate district- or school-wide assessments
Appendix G
Interview Information to Inform Focus Group Interview

Interview Themes
Understanding/Perceptions

- RTI/MTSS is multiple layers of supports, with increasing levels of intensity, provided to students who are at risk or having difficulty with reading content.
- An effective RTI/MTSS framework consists of the following components: high quality instruction, progress monitoring, data based decision making, and evidence based interventions at all tiers.
- An effective tiered model of instruction requires a strong evidence-based tier 1 core curriculum in which all students participate.
- A reason for implementing this model is for the majority of students to meet Tier 1 benchmarks or grade level reading expectations.
- Students progress at different rates. A model such as RTI/MTSS is advantageous because it offers a continuum of supports to students as soon as they are identified as struggling or at risk.
- Additional layering of instructional tiers should be scheduled so that students do not miss Tier 1 general education classroom instruction.
- During Tier 2 or Tier 3 instruction, instructional intensity increases when staff either creates a small flexible homogeneous group or delivers one on one instruction.
- RTI/MTSS model is a child centered model that allows staff to flood students with supports and to provide students with differentiated instruction based on where they are at the moment and where they need to be.

Assessment Practices

- Data analysis provides teachers with the information they need to determine each child’s baseline or zone of proximal development (ZPD).
- DIBELS and progress monitoring are used to group students based on student strengths and weaknesses, to recommend additional tiers for at risk students and to determine the evidence-based intervention that would best match the student’s area of need.
• Data–based decision making is important in order to accurately identify a student’s learning problem and to ensure appropriate selection of an intervention.
• Staff embraced having the opportunity to personalize instruction for students by scaffolding concepts, differentiating instruction, and developing small flexible groupings that allowed students to move from one group to another based on skill set.
• When students do not respond favorably to the evidence-based strategies implemented by the classroom teacher, struggling students are referred to the building-based student support team (SST).
• Based on the student’s ZPD, (where they are) the SST would develop a goal and action plan (for where they need to be).
• Unlike the traditional “wait to fail” discrepancy model used to identify students with potential disabilities, the problem solving SST analyzes data and intervenes by providing students with supports immediately.
• a focus on progress monitoring and tracking data helps educators see growth patterns over time and supports classroom teachers by informing their instruction

**Fidelity of Implementation**
• Although there is agreement that fidelity significantly impacts RTI/MTSS implementation, the majority of staff agrees fidelity is a component which needs to be strengthened.
• Keeping a tally list of how many times teachers actually work with a child will help with fidelity
• Scripted interventions (such as LLI) support staff with fidelity.
• Fidelity may be compromised at times due to changes in the daily schedule.
• Self-report checklists and video taping of lessons would enhance fidelity by providing staff with opportunities for self-reflection and allow for feedback from colleagues.
• Staff agreed the tendency to drift from protocol did happen due to time constraints, students being pulled for additional tiers during core instruction or insufficient program training or resources.
• Fidelity may be impacted by variations in staff interpretations of programs.
• Professional Development in the curriculum being taught is key to supporting staff with fidelity.
Collaboration and Communication

- RTI/MTSS is a model in which educators share accountability for all students they instruct.
- RTI/MTSS is a framework that promotes communication and collaboration among staff.
- Teachers are open to owning student problems and working through them rather than focusing on how to have struggling students removed from their class.
- Staff believes it is important to collaborate with related service providers and interventionists as well as grade level staff so they know what students are doing when they leave their classrooms.

Benefits of RTI/MTSS

- RTI/MTSS is viewed as the catalyst to motivate educators to improve and strengthen the Tier 1 core instruction.
- RTI/MTSS is a shift in philosophical beliefs: Provide students with all the supports they need without labeling them.
- RTI/MTSS is a framework in which all students are learning together, everyone feels included and staff has the opportunity to meet children where they are both academically and social emotionally.
- Students have an opportunity to get that extra dose of what they need. Staff provide optimal instruction in order to get as many kids as close to the benchmark as possible.
- Classroom teachers feel they are becoming adept at strengthening their Tier 1 core curriculum and closing student gaps by differentiating and scaffolding classroom instruction.

Barriers of RTI/MTSS

- A significant barrier of RTI/MTSS implementation has been the lack of resources and a lack of staff training in evidence-based interventions.
- Although collaboration and communication is vital to an RTI/MTSS framework, educators lack adequate time for communication and common planning time in order to optimize instruction for students they shared.
- Professional learning communities (PLCs) would foster opportunities to collaborate as a group.
• Staff frowns at having a colleague instruct their students especially if they are not confident in their colleagues’ instructional abilities.

• In order to effectively meet the individual needs of students, educators agree the school needs additional interventionists, reading teachers, and a building literacy coach in order to provide the frequency and intensity of supports required by students.

• Although paraprofessionals are available to support students, staff feel struggling students require certified staff with expertise in curriculum in order to progress.

• In order for a multi-tiered model to be effective there needs to be time written into the schedule where intervention can happen.

• Previously provided professional development is not repeated for new staff.

• Major challenges of RTI/MTSS fidelity of implementation are lack of resources, time constraints, the need for more training and scheduled time for additional Tiers.

• While educators agreed these areas posed difficulty, consensus among them was this information identified areas they could refine or improve.

**Professional Development**

• Professional development opportunities were integral to successful implementation and fidelity of an RTI/MTSS model.

• Training or refresher training in evidence-based interventions, balanced literacy and guided reading protocols was cited by educators as necessary to ensure that these programs are used accurately and consistently as the authors of these programs intended.

• Program implementation (phonics, phonemic awareness, vocabulary) lacked consistency among educators.

• A philosophical shift doesn’t mean changing a few things and doing business as usual. It means changing the face of how instruction is delivered. This takes time.

• Professional development will guide the implementation and fidelity of an RTI/MTSS model in schools.
Perceptions of RTI/MTSS Skill Survey Academic Domain

Survey Item

Mean Staff Skill Level

0 1 2 3 4 5

21 - Access data on core
22 - Use data to make decisions
23 - Define referral concern related
24 - Use data to define academic
25 - Calculate gap between student
26 - Use gap data to determine
27 - Identify appropriate data to
28 - Identify appropriate supp
29a - Access resources for core EBIs
29b - Access resources for supplemental
29c - Access resources for...
30 - Ensure EBIs are suppl by data
31 - Provide implementation support
32 - Determine implementation fidelity
33a - Graph student data
33b - Graph benchmark data
33c - Graph peer data
33d - Draw aimline
33e - Draw trendline
34 - Interpret graphed progress monitoring
35 - Use data to distinguish ineffective in
36 - Collect CBM
37 - Collect DIBELS
38 - Access data from appropriate
Perceptions of RTI/MTSS Practice Survey

Academic Domain

Mean Staff Practice Level

Survey Item

1. Access data
2. Use data to make decisions
3. Use data to identify at-risk students
4. Access resources to develop EBIs
5. Select data for progress monitoring
6. Standard protocol EBI was initially used
7. Define referral concern as desired behavior
8. Quantifiable data was used to identify...
9. Quantifiable data was used to identify...
10. Quantifiable data was used to identify...
11. SST identified why student did not perform
12. Use data to determine lack of performance level
13. Use data to develop EBI
14. Referring teacher provided with implementation support
15. Data used to determine implementation fidelity
16. Graph student data
17. Progress monitoring data used to determine progress
18. Data was used to determine gap
19. Data was used to determine gap
20. Use data to determine ineffective instruction from disability
Appendix H

Schedules, Programs and Assessments

Developing master schedules is critical for the implementation and sustainability of an RTI/MTSS framework. School schedules help optimize time on learning and provide routine for the school day. Educators use assessment data to group students homogeneously based on skill set and instructional concepts. A strategy this district has adopted for tier 2 reading intervention is the walk to read model. This methodology considers grouping students by grade level.

Students walk to another classroom for thirty minutes of additional tier 2 instruction or enrichment. Educators meet every six to eight weeks throughout the year to analyze student data and to revise student groupings based on student progress.

Tier 1 reading instruction is scheduled for approximately 90 minutes. Core instruction includes a mix of whole group and small group instructional evidence-based curriculum.

<table>
<thead>
<tr>
<th>Tier 1 Instruction</th>
<th>Foundations 30 minutes K-3</th>
<th>Fontas &amp; Pinell Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core instruction</td>
<td>Readers workshop</td>
<td>Foundation Unit Assessment</td>
</tr>
<tr>
<td>90 minutes</td>
<td>Writers workshop</td>
<td>Developmental Reading</td>
</tr>
<tr>
<td>Differentiated instruction</td>
<td>Guided reading</td>
<td>Level (DRA)</td>
</tr>
<tr>
<td>Whole group instruction</td>
<td></td>
<td>DIBELS Assessment- Sept. 5-8, 2017, Jan. 8-12, 2018, May 7-11, 2018</td>
</tr>
<tr>
<td>Small flexible groups</td>
<td>Independent learning stations</td>
<td>Progress monitoring-monthly</td>
</tr>
<tr>
<td>Grade alike /Data meetings weekly</td>
<td>Word study</td>
<td></td>
</tr>
</tbody>
</table>
Tier 2 or enrichment instruction is for 30 minutes per day.

<table>
<thead>
<tr>
<th>Tier 2 Instruction</th>
<th>Additional 30-minute instruction</th>
<th>Foundations (double dose)</th>
<th>Fontas &amp; Pinell Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Differentiated instruction</td>
<td>Leveled literacy Instruction (LLI)</td>
<td>Foundation Unit Assessment</td>
</tr>
<tr>
<td></td>
<td>Whole group instruction</td>
<td>Homogeneous Skills groups</td>
<td>Developmental Reading Level (DRA)</td>
</tr>
<tr>
<td></td>
<td>Small flexible groups</td>
<td>DIBELS Assessment</td>
<td>DIBELS Assessment- Sept. 5-8, 2017, Jan. 8-12, 2018, May 7-11, 2018</td>
</tr>
<tr>
<td></td>
<td>Data meetings</td>
<td>Progress monitoring weekly</td>
<td></td>
</tr>
</tbody>
</table>

Tier 3 instruction is scheduled for 3-5 days a week for 30-45 minutes.

<table>
<thead>
<tr>
<th>Tier 3 Instruction</th>
<th>Additional 30-45-minute during core 1 independent stations</th>
<th>Foundations (double dose)</th>
<th>Fontas &amp; Pinell Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data meetings</td>
<td>Leveled literacy Instruction (LLI)</td>
<td>Foundation Unit Assessment</td>
</tr>
<tr>
<td></td>
<td>Differentiated instruction</td>
<td>Homogeneous Skills groups</td>
<td>Developmental Reading Level (DRA)</td>
</tr>
<tr>
<td></td>
<td>Small intensive 1:1 or 1:2</td>
<td>Visualizing Verbalizing Seeing Stars</td>
<td>DIBELS Assessment- Sept. 5-8, 2017, Jan. 8-12, 2018, May 7-11, 2018</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Progress monitoring weekly</td>
</tr>
</tbody>
</table>

Grade level schedules are as follows:
<table>
<thead>
<tr>
<th>Time</th>
<th>Grade - Teacher</th>
<th>Activity</th>
<th>Day of the Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-8:30</td>
<td></td>
<td>Prep for everything!</td>
<td></td>
</tr>
<tr>
<td>8:30-9:00</td>
<td>Grade 4 Ferry</td>
<td>Math intervention</td>
<td></td>
</tr>
<tr>
<td>9:00-9:30</td>
<td>Grade 2</td>
<td>Walk to Read</td>
<td></td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>Grade 1</td>
<td>Walk to Read</td>
<td></td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Grade 2 Teachers S &amp; P</td>
<td>Reading group intervention</td>
<td></td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00-11:30</td>
<td>Grade 4 Cohen</td>
<td>Math intervention</td>
<td></td>
</tr>
<tr>
<td>11:30-12:00</td>
<td>Grade 2 Teacher-S</td>
<td>Math intervention</td>
<td></td>
</tr>
<tr>
<td>12:00-12:30</td>
<td>Pat's lunch</td>
<td></td>
<td>Thurs &amp; Friday</td>
</tr>
<tr>
<td>12:30-1:00</td>
<td>Grade 4</td>
<td>Walk to Read</td>
<td></td>
</tr>
<tr>
<td>1:00-1:30</td>
<td>Grade 3</td>
<td>Walk to Read</td>
<td></td>
</tr>
<tr>
<td>1:30-2:00</td>
<td>Prep with paras</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Grade One Schedule Teachers C & M

**date: 8/9**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Time</th>
<th>Contains</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:40-8:00</td>
<td>Breakfast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00-8:30</td>
<td>Morning Meeting</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>8:15-9:00</strong> Teachers C &amp; M</td>
<td>K &amp; B N &amp; F</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tr>
<tr>
<td>8:30-9:30</td>
<td>Math</td>
<td></td>
<td>Math intervention</td>
<td>Teachers- C &amp; M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>K &amp; B N &amp; F</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>9:30-10:00</td>
<td>WTR</td>
<td></td>
<td></td>
<td>Teachers- A, F, K, C, D, N, C</td>
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<td></td>
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</tr>
<tr>
<td>10:00-11:20</td>
<td>Reading /Writing</td>
<td></td>
<td>Mini Lesson - Guided</td>
<td>10:00-10:25</td>
</tr>
<tr>
<td></td>
<td>Workshop</td>
<td></td>
<td>Reading</td>
<td>Teachers-C &amp; M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>K &amp; B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:20-12:00</td>
<td>Lunch &amp; Recess</td>
<td></td>
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</tr>
<tr>
<td>12-12:30</td>
<td>Phonics</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12:30 - 1:00</td>
<td>Science &amp; SS</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1:00-1:40</td>
<td><strong>Specials</strong></td>
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</tbody>
</table>
### Grade 2 Schedule

Teachers J & H  

date: 8/9

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Time</th>
<th>Contains</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:40-8:00</td>
<td>Breakfast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00-8:30</td>
<td>Morning Meeting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30-9:00</td>
<td>Phonics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00-9:30</td>
<td>WTR</td>
<td></td>
<td></td>
<td>Teachers S, N, C, K, N, F, D</td>
</tr>
<tr>
<td>9:30-10:30</td>
<td>Reading Writing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30-11:10</td>
<td>Lunch &amp; Recess</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30-12:10</td>
<td>Specials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:15-1:15</td>
<td>Math</td>
<td>12:15-12:55</td>
<td>Math intervention small group</td>
<td>Teacher E</td>
</tr>
<tr>
<td>1:5-1:45</td>
<td>Science &amp; SS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1:35-2:25 Grade Level meetings  

Wednesday  

Teachers K & H  F & S  

N & P  C & J
## Grade 2 Schedule - Teachers S & P date: July 7

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Contains</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:40-8:00</td>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00-8:30</td>
<td>Morning Meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30-9:00</td>
<td>Phonics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00-9:30</td>
<td>WTR</td>
<td></td>
<td>Teachers S, N, C, K, F, A, D</td>
</tr>
<tr>
<td>9:30-10:30</td>
<td>Reading/writing workshop</td>
<td>10:00-10:30 Reading intervention group</td>
<td>Teacher D</td>
</tr>
<tr>
<td>10:30-11:10</td>
<td>Lunch &amp; Recess</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:20-12:10</td>
<td>Math</td>
<td>11:30-12:00 Math intervention</td>
<td>Teachers D &amp; S N &amp; P</td>
</tr>
<tr>
<td>12:15-12:55</td>
<td>Specials</td>
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<tr>
<td>1:00-1:20</td>
<td>Math continued</td>
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</tr>
<tr>
<td>1:20-1:50</td>
<td>Science &amp; SS</td>
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</table>
Grade 3 Schedule date: 8/9

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Time</th>
<th>Contains</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:40 - 8:00</td>
<td>Breakfast</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8:00-8:30</td>
<td>Morning meeting</td>
<td>WEDNESDAY CHORUS 7:45-8:25</td>
<td>Faith to support Jeff in Gym</td>
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</tr>
<tr>
<td>8:30-9:10</td>
<td><strong>Specials</strong></td>
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<tr>
<td>9:15-10:30</td>
<td>Math</td>
<td>10-10:30</td>
<td>Math intervention</td>
<td>Teachers C &amp; K, N &amp; S F &amp; J A &amp; C</td>
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<tr>
<td>10:30-10:55</td>
<td>Quiet Time/Read aloud</td>
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<tr>
<td>10:55-11:35</td>
<td><strong>Lunch &amp; Recess</strong></td>
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<tr>
<td>11:45-12:15</td>
<td>Phonics</td>
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<tr>
<td>12:15-1:00</td>
<td>Reading/writing workshop</td>
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<tr>
<td>1:00-1:30</td>
<td>Walk to Read</td>
<td></td>
<td></td>
<td>Teachers N, A, Ch, C, K, D, F,</td>
</tr>
<tr>
<td>1:30-1:50</td>
<td>Science &amp; SS</td>
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</tr>
<tr>
<td>Time</td>
<td>Activity</td>
<td>Time</td>
<td>Contains</td>
<td>Support</td>
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<tr>
<td>7:40-8:00</td>
<td>Breakfast</td>
<td>7:45-8:25</td>
<td>Chorus Friday Gym</td>
<td>Faith to support Jeff</td>
</tr>
<tr>
<td>8:00-8:30</td>
<td>Morning Meeting</td>
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<tr>
<td>8:30-10:00</td>
<td>Reading workshop</td>
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<td>10:00-10:40</td>
<td><strong>Specials</strong></td>
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<tr>
<td>10:45-11:45</td>
<td>Math</td>
<td>11:00-11:30</td>
<td>Math intervention</td>
<td>Teachers D &amp; C N &amp; H</td>
</tr>
<tr>
<td>11:45-12:25</td>
<td>Lunch &amp; Recess</td>
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<tr>
<td>12:30-1:00</td>
<td>Walk to Read</td>
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<td></td>
<td>Teachers D, A, M, N, F, Ch, K</td>
</tr>
<tr>
<td>1:00-1:50</td>
<td>Writing</td>
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## Grade Four Schedule Teachers D & F

date: 8/9

<table>
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<th>Time</th>
<th>Contains</th>
<th>Support</th>
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</thead>
<tbody>
<tr>
<td>7:40-8:00</td>
<td>Breakfast</td>
<td>7:45-8:25</td>
<td>Chorus Friday Gym</td>
<td>Faith to support Jeff</td>
</tr>
<tr>
<td>8:00-8:30</td>
<td>Morning Meeting</td>
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<tr>
<td>8:30-9:15</td>
<td>Math</td>
<td>8:30-9:00</td>
<td>Math intervention</td>
<td>Teachers D &amp; F D &amp; N</td>
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<tr>
<td>9:15-9:55</td>
<td>Specials</td>
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<tr>
<td>10:00-11:45</td>
<td>Reading &amp; Writing Workshop</td>
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<tr>
<td>11:45-12:25</td>
<td>Lunch &amp; Recess</td>
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<tr>
<td>12:30-1:00</td>
<td>Walk to Read</td>
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<td></td>
<td>Teachers D, A, M, N, F, C, K</td>
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<tr>
<td>1:00-1:50</td>
<td>Con’t math</td>
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