ENHANCING TEACHER FORESIGHT: A QUALITATIVE EXPLORATION INTO EDUCATOR CAPACITY TO PROACTIVELY SOLVE STUDENTS’ ACADEMIC CHALLENGES IN THE RESPONSE TO INTERVENTION (RTI) FRAMEWORK

A thesis presented by Stephanie J. Petricone to the Graduate 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
March 2020
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Abstract

The purpose of this qualitative research study was to gain insight into the experiences of middle school educators involved in Response to Intervention (RTI) implementation, a common intervention framework used throughout K-12 education settings. The need for this study was made evident through an extensive review of previous RTI research that revealed a host of challenges in effective implementation and fidelity. This study aimed to understand the sources that have contributed to educator self-efficacy in implementing the knowledge and skills necessary for effective intervention through the RTI process as well as the barriers and needs that would lead to increased self-efficacy for educators implementing RTI at the middle school level. A general qualitative research design was used to collect data from eight middle school educators through the use of semi-structured, individual interviews. A comprehensive review of previous research and the use of Social Cognitive Theory (SCT) as a theoretical lens aided a comprehensive data analysis process leading to four findings. (1) RTI is messier at the middle school level; (2) Data use in intervention frameworks involves layers of complexity, (3) as a pathway to the identification of learning disabilities, RTI can be a ‘vicious circle’ and (4) Supports are needed to sustain and maximize the potential of RTI. Since intervention frameworks are central to improving teaching and learning and serve as a means to identify potential learning differences in students throughout K-12 education, this study’s findings have important implications for education stakeholders.

Keywords: response to intervention (RTI), multitiered systems of support (MTSS) professional development, Data-Based Decision Making (DBDM); Data-Based Individualization (DBI), reading science; teacher efficacy.
Acknowledgements

I would like to thank my advisor, Dr. Sara Ewell, for her unwavering professionalism and encouragement throughout the research process. She is an amazing leader in education who provided me with great insight and motivation. I would also like to thank Dr. Christopher Unger, my second reader, for his feedback and time on this research as well as the entrepreneurial insights in education he instilled in me as his student. Special thanks are also extended to Dr. Andrew Anderson, my third reader, for his time and interest in this research as a middle school leader. I am beyond grateful to my dissertation committee for their expertise and contributions to helping me grow as scholar-practitioner and change agent in education.

To my husband, Lou, thank you for giving me the necessary encouragement during each step of this journey and enduring the hard and long, work-filled days. I would also like to thank my supportive parents for the sacrifices they have made in their lives to give me the opportunities that I have today. Without each of you, the completion of this journey would not have been possible, and I am eternally grateful.
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Chapter I: Introduction

Response to Intervention (RTI) is an educational reform effort that has produced a renewed focus on evidence-based practice and the use of data for instructional decision-making that also serves as a gateway to identifying students with specific learning disabilities (SLD) across the United States (Hudson & Mackenzie, 2016; Zirkel, 2017). With numerous provisions to improve educational outcomes, RTI has the potential to serve as a vehicle for educational equality (Avant, 2016; Robinson, 2016). However, more than a decade after its inception, inherent complexities and challenges persist in implementing a strong RTI process (Balu et al., 2015; Fuchs & Fuchs, 2017; Maier et al., 2016; Nichols, Castro-Villarreal & Ramirez, 2017; Piety, 2019).

The purpose of this qualitative research study was to understand the experiences of middle school educators involved in RTI implementation through uncovering sources that have contributed to teacher efficacy as well as the barriers that persist for educators in this endeavor. Specifically, this study aimed to understand the capacity of educators to provide individualization and interventions for students in the RTI framework. For the purpose of this study, the capacity to enact change referred to the perceived abilities, skills, and expertise of educators (Castillo, Wang, Daye, Shum, & March, 2017). This study’s findings serve to inform practices in K-12 school contexts by providing school leaders with insight into the enabling factors that led educators in this study to effective implementation, while addressing the needs that constrain effective implementation.

Context and Background

There is no shortage of challenges in implementing RTI. Since the Federal Individuals with Disabilities Education Improvement Act (IDEIA) (2004) guidelines, each of the 50 states
where RTI is in use (Zirkel, 2017) has developed individual RTI regulations (Brown-Chidsey & Andren, 2012). This has resulted in large variability in RTI policies and practices across districts and states (Hauerwas, Brown, & Scott, 2013; Hudson & McKenzie, 2016). Despite RTI’s central premise of providing high-quality, evidence-based instruction and intervention, national assessment results present “a sobering picture of poor reading and writing scores” (Wijekumar, Beerwinkle, Harris, & Graham, 2019, p. 6) such as those reported by the National Assessment of Educational Progress in which one-third of US students did not meet grade level literacy proficiency (NAEP, 2015). RTI also serves as a gateway to identifying learning disabilities with its focus on early screening and intervention. However, research has revealed gaps that affect quality assurance in validating RTI as a pathway to timely and accurate identification, including issues with the amount of time spent in RTI prior to referral, as well as a lack of guidelines on how to use RTI and data for specific learning disability identification (Hauerwas et al., 2013; Hudson & Mackenzie, 2016; Zirkel, 2018).

RTI aims to improve classroom practice through a tiered intervention framework that includes the use of actionable data, “data collected from educational practices to inform, alter, and guide” instruction (Piety, 2019, p. 394). Walker, Reeves, & Smith outline how data requires pedagogical knowledge, content knowledge, assessment knowledge and the ability to effectively analyze data to match data to instructional need(s). This multi-dimensional process is “notoriously complex and difficult” (2018, p.488). Researchers have revealed teacher data use to be “limited and inconsistent” across all fifty-seven studies reviewed by Sun, Przybylski, and Johnson (2016, p.17). “The field of education still has much to learn about how data are being used for instructional improvement, how leaders cultivate thoughtful data-use practices, and the impact on equity and student learning” (Park, 2018). Since teachers are expected to use data to
inform their instruction for students at risk, it is crucial to understand the knowledge they have about RTI in their individual contexts (Al Otaiba et al., 2019).

This study aimed to address the problem of effective implementation of intervention frameworks through a qualitative exploration of the sources that have contributed to middle school educators’ capacities to make instructional improvements in the RTI framework. Based on previous research and literature, sources such as teacher preparation (Goldhaber, 2019; Mandinach & Gummer, 2016), professional learning (Eun, 2018; Guskey, 2016), shared collaboration (Goddard & Kim, 2018; Guskey, 2009) and leadership (Maier et al., 2016) were explored with regard to how these sources contributed to participants’ capacity to implement RTI.

This study specifically sought out to examine the experiences of middle school educators’ with RTI in order to understand persisting barriers to implementation as well as the factors that contribute to teacher efficacy in implementing RTI. Research on RTI implementation at the middle-school level was particularly salient because the bulk of previous RTI research has been conducted in elementary settings (Miciak et al., 2014; Nelson, Van Norman, & Vanderheyden, 2017; Piety, 2019).

Rationale and Significance of the Study

School-based implementation of RTI occurred quickly in response to federal legislation, with little focus on fidelity (Keller-Margulis, 2012). It was important to study educators’ perspectives related to RTI to inform systems-level implementation as these belief systems are often not addressed in reform efforts, despite teacher beliefs and capacity being “at the heart of the connection between data and instructional change” (Datnow & Hubbard, 2016, p.24). An extensive, systematic review of literature conducted by Sun and colleagues (2016) highlighted
that a problem in the field of education and educational research is how to develop the capacity of educators to change and improve practice. “Focusing capacity-building efforts on exploring teacher belief systems and expanding teachers’ toolbox of instructional strategies could provide significant leverage in implementing data-driven decision making” (Datnow & Hubbard, 2014, p.24). Data use research rarely specifies “what level the practitioners being studied might have reached in terms of building (or losing) capacity” (Piety, 2019, p. 409). This study’s findings expand the research on RTI with key insights into the sources that lead to the success and constrained efforts in implementing RTI at the middle school level.

Capacity studies are “important to understanding enabling/constraining conditions” and highlight the “challenges of data use within the complex social settings of educational institutions, including professional development and its relationships to educator data use” (Piety, 2019, p.404). According to Orland, “data-based decision-making in education reflects a burgeoning sub-discipline of scholarship on the topic that has been stimulated by the constantly evolving educational policy landscape” (2015, p.1). Therefore, in addition to supporting the work of K-12 and schools of education in their efforts to refine and enhance RTI practices, the findings of this study also serve to enhance the literature on data-use practices and education policy community.

Successful RTI frameworks within schools can lead to increased social justice and opportunities for students (Avant, 2016; Robinson, 2016). Studying how educators understand and develop their capacity to implement key tenets of RTI including high-quality tiered instruction, use of data to inform practice, professional learning communities engaged in problem-solving, and meaningful partnerships with families that attend to the needs of students serves to provide equity and improve outcomes for students of all backgrounds (Robinson,
2016). The documented lack of implementation consistency across the United States, coupled with the fact that multiple states use RTI as the criteria for special education identification, allow the findings from this study to support the use of RTI as a tool for social justice by providing educational experiences that provide all students experiences and learning opportunities for success.

**Research Problem and Research Questions**

The purpose of this qualitative research study was to explore the experiences of middle school educators involved in RTI implementation through uncovering sources that have contributed to teacher efficacy along with barriers that may persist for educators in this endeavor. The findings serve to inform professional practices for K-12 systems of education, teacher preparation programs and the education policy community. This study aimed to address the following research questions:

- How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) framework?
- What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI?

**Definition of Key Terminology**

**Data Use** - data “collected from educational practices to inform, alter, and guide those same practices” (Piety, 2019, p. 394). *Data-driven decision making* (DDDM) *data-based individualization* (DBI) *data-based decision making* (DBDM) are related terms frequently used in kindergarten through high school (K–12) settings developed out of federal laws, policies, and funding streams.
Data Literacy - “the ability to transform information into actionable instructional knowledge and practices by collecting, analyzing, and interpreting all types of data (assessment, school climate, behavioral, snapshot, longitudinal, moment-to-moment, etc.) to help determine instructional steps. It combines an understanding of data with standards, disciplinary knowledge and practices, curricular knowledge, pedagogical content knowledge, and an understanding of how children learn (Datnow & Hubbard, 2016, p. 14).

Data/Problem-Solving/RTI Team- A group of school personnel who work collaboratively to address the needs of students.

Every Student Succeeds Act (ESSA, 2015)- The nation’s major federal education law governing grades pre-kindergarten through high school (formerly the No Child Left Behind; NCLB, 2002) and the Elementary and Secondary Education Act (ESEA, 1965).

Intervention: A change in instruction in an area of learning or behavior in order to improve student performance.

Evidence-Based Practice/Scientifically-Based Reading Instruction (SRBI) - the use of the current research in making decisions about the quality of education and the learning of students (Schildkamp, 2019).

Individuals with Disabilities Education Improvement Act (IDEIA 2004) The US’s federal special education law that outlines instruction specially designed to meet the individual needs of a child with a disability.

Multi-tiered Systems of Support (MTSS)- Every Student Succeeds Act (ESSA) of 2015 did not include the term RTI. Instead, the legislation introduced MTSS which accounts for a broader range of supports than academics and includes supports for behavioral and social-emotional learning (SEL) (Al Otaiba et al., 2019). Schools use the terms RTI and MTSS synonymously.
Response to Intervention (RTI): a proactive, preventative approach to instruction that emphasizes high-quality, evidence-based practices and interventions, grounded in ongoing use of data (Swindlehurst, Shepherd, Salembier & Hurley, 2015).

Tiered framework- RTI utilizes a tiered instructional delivery model in which “progress is closely monitored to assess both the learning rate and level of performance of individual students” (Hudson & Mackenzie, 2016, p. 58). RTI is commonly designed as a three-tier model, where students receive instruction through a progression of targeted interventions.

Tier 1 refers to the core curriculum provided to all students. In Tier I, teachers use assessment to inform whole class instruction and identify students who may require more differentiated instructional support.

Tier 2 refers to supplemental instruction provided to small groups of students who are failing to meet Tier 1 benchmarks. Students failing to respond in Tier 2 move to Tier 3 where more intensive, individualized intervention is provided to students.

Tier 3 interventions include explicit, evidence-based, scaffolded instruction that is targeted and provides frequent opportunities for progress monitoring.

SLD: The acronym for the disability category of specific learning disabilities (Hudson & Mackenzie, 2016).

Teacher Self-Efficacy - refers to teachers’ beliefs in their ability to generate desired student outcomes (Goddard & Kim, 2018, p.7).

Theoretical Framework

Constructivism is not a theory, “rather a collection of perspectives that share the common assumption that learning is the construction of meaning from experience” (Merriam & Bierema, 2014, p. 36). In line with the constructivist paradigm, the primary theoretical
framework of the current study will be Social Cognitive Theory (SCT) (Bandura, 1977). Since Bandura’s seminal article *Self-Efficacy: Toward a Unifying Theory of Behavioral Change* (1977), educators and researchers have applied self-efficacy theory to different aspects of learning and development (Bembenutty, White, & Vélez, 2015) and is regarded to be a critical theoretical contribution to the study of academic achievement, motivation, and learning (Pajares, 1996; Schunk, 1991).

There is growing interest and research in the relationship between teacher efficacy and positive student learning outcomes. (Datnow & Hubbard, 2014; Piety et al., 2019; Prasse et al., 2012). Researchers and theorists have called for more qualitative investigations to understand how teacher efficacy beliefs operate and to expand the lack of research in the sources of teacher efficacy (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). “Research investigating the sources of teacher efficacy would help explain the process by which teacher efficacy develops and might lead to insights into how to better enhance the self- and collective efficacy of teachers” (Klassen, Tze, Betts & Gordon, 2011, p. 24).

A central concept of SCT is that learning occurs in a social context with dynamic and *reciprocal triadic relations* among personal, environmental, and behavioral factors. Bandura visualized this concept as a triangle in which learning, the person, and the environment are interactive and reciprocal (Merriam & Bierema, 2014). The functioning of one component depends upon the functioning of the other and, in turn, behaviors influence both individual and the environment. SCT emphasizes the importance of human agency and provides a framework “to study how learners acquire competencies, skills, dispositions, beliefs, and self-regulation” (Bembenutty et al., 2015, p. 9). Rooted in human functioning in which individuals are agents proactively engaged in their development and can make things happen by their actions, SCT is
comprised of several constructs outlined in the following sections as they align to this research study.

**Psychological and Environmental Determinants of Behavior**

Efficacy beliefs are the foundation of human agency and are rooted in the core belief that one has the power to produce effects by one’s actions (Bandura, 2001). According to SCT, *self-efficacy* beliefs are the most “central and pervasive influence on the choices people make, their goals, the amount of effort they apply to a particular task, how long they persevere at a task in the face of failure or difficulty, the amount of stress they experience and the degree to which they are susceptible to depression” (Iroegbu, 2015, p. 171). “The cognitive construal of past performances, situational factors, and one’s knowledge and skills all influence how much one will perceive to be capable of attaining a certain performance level” (Eun, 2018, p.3). These elements directly shaped the research questions in this study.

For self-efficacy to occur, Bandura described 4 types of experiences an individual must have: mastery experiences, vicarious experiences, verbal persuasion, and arousal mastery experiences. Mastery experiences are those in which an individual successfully completes a given task through persistence and determination and are considered the primary source to obtaining self-efficacy. Vicarious experiences are those in which one has the opportunity to observe a task being successfully implemented and completed (1977). If individuals see successful demonstration of a behavior, often through exposure or modeling, they believe they can also complete the behavior successfully (Wiley & Cory, 2013). However, observational learning is limited to what factors individuals have access to observe and what people attend to is determined by the value placed on the expected outcome. Arousal mastery experiences are those
in which one is adept with his or her emotions and how they affect one’s experiences are paramount in judgment of self-efficacy.

SCT explains that people learn from the consequences of their behavior, which also affects their environment. Incentive motivation, or reinforcements, refer to the internal or external responses to a person’s behavior that affects the likelihood of continuing or discontinuing the behavior. Reinforcements can be self-initiated or in the environment, and reinforcements can be positive or negative. Verbal persuasion occurs when one is motivated by others through encouragement (Bandura, 1997). Motivation is often determined by the expectations of the benefits versus the cost of engaging in a behavior.

According to Eun, the acquisition of new knowledge and skills may not translate into performance, despite having self-efficacy, if there are strong disincentives or performance constraints. Teachers require resources and support to implement what they have learned through professional development experiences in their classrooms. Teachers who had strong efficacy beliefs after going through extensive professional development that equipped them with effective instructional skills and pedagogical knowledge did not change their classroom practices when adequate support was not provided by their schools (2018, p.11). Research indicates that the most important performance incentives come from the school-level, especially by the principal’s strong leadership in providing the adequate resources and continuous support of the use of innovative instruction in the classroom (Bandura, 1997). This aspect of SCT was utilized in this study to unearth constraints to RTI implementation.

Facilitation and behavioral capability, key constructs in SCT, refer to one’s actual ability to perform a behavior through essential knowledge and skills. In order to successfully perform a behavior, a person must know what to do and how to do it. Facilitation involves giving tools,
resources, or environmental changes in order to perform behaviors and seeks to enable or empower individuals to engage in a behavior. Sociostructural practices “impose constraints and provide enabling resources and opportunity structures for personal development and functioning” (Bandura, 2001, p.15). Public policies, education laws such as NCLB, ESSA, RTI all aim to improve learning outcomes for students. NCLB placed hard penalties on schools who failed to make adequate yearly progress (AYP). This construct helped justify the need for this study with regard to data use impact on educators’ abilities and efficacy to change their instruction and behavior to respond to student needs.

According to Bandura, people are both agents of action and self-examiners of their own functioning (2001). The metacognitive capability to reflect on oneself and the adequacy of one’s thoughts and actions is a core feature of agency. Self-reflection, allows individuals to analyze experiences, think about their own thought processes, and alter thinking accordingly. According to SCT, people develop perceptions about their abilities and characteristics that subsequently guide their behavior by determining what a person tries to achieve and how much effort they will put into their performance. In this metacognitive activity, “people judge the correctness of their predictive and operative thinking against the outcomes of their actions, the effects that other people’s actions produce, what others believe, deductions from established knowledge and what necessarily follows from it” (p.10). These notions of metacognitive activities and self-reflection supported this study’s qualitative research design. The use of semi-structured interviews increased the likelihood of capturing rich metacognitive detail among the participants in this study.

**Theory Alignment**
SCT emphasizes the importance of human agency and provides a framework “to study how learners acquire competencies, skills, dispositions, beliefs, and self-regulation” (Bembenutty et al., 2015, p. 9). Educator beliefs and attitudes are a prerequisite to effective change in practices and improvement outcomes (Guskey, 1986). Research on the association between educator beliefs and degree of intervention implementation, confirm the importance of beliefs. Educator beliefs predicted initial implementation fidelity and were associated with “significant changes” in beliefs that were associated with improved implementation (Cook, Lyon, Kubergovic, Browning Wright, & Zhang, 2015, p.49). Nine large-scale meta-analyses consistently demonstrated that the efficacy beliefs of organization members contribute significantly to their level of motivation and performance (Bandura & Locke, 2003). Therefore, the central tenets of SCT provided an appropriate theoretical frame for this study.

SCT’s core concept of triadic reciprocity is aligned to this study in a number of ways. At its core, teachers in the RTI framework provide interventions for student success through personal, behavioral, and/or environmental factors. An educator’s readiness and ability to implement RTI with fidelity involves personal factors, such as emotional beliefs, states and self-efficacy; behavioral factors, such as data-use skills and ability to differentiate instruction based on teacher training and professional development; or environmental factors, such as the classroom setting as well as the ability to access resources. This dynamic concept supported the use of the chosen qualitative methodology as an appropriate design for this study.

According to Bandura, an agent “intentionally make things happen by one’s actions…and embodies the endowments, belief systems, self-regulatory capabilities and distributed structures and functions through which personal influence is exercised” (2001, p.2). John Hattie’s meta-analysis concluded that what teachers do matters, especially those who teach in a deliberate and
visible manner. This includes the capability to see learning when it is occurring or not occurring and intervening in “calculated and meaningful ways to alter the direction of learning to attain various shared, specific, and challenging goals” (Hattie, 2009, p 22). This notion shaped the specific lens of looking at self-efficacy in the RTI framework, which included effective data-use. A review of previous research and scholarly literature indicated a need for domain-specific efficacy research, specifically Data-Based Decision Making (DBDM). Therefore, DBDM as it relates to effective RTI practices and was explored with the participants in this study.

Bandura contends that the most powerful source of efficacy beliefs are derived from enactive, or mastery, experiences where success leads to improved self-efficacy beliefs, while failure depresses such beliefs (1997). Goddard and Kim (2018) posit that teachers’ mastery experiences are affected by collaboration, which in turn, increases teaching efficacy. Their research demonstrated the importance of teachers’ collaborative work around school improvement, curriculum and instruction, and professional development.

SCT’s notions of mastery experiences, vicarious experiences, verbal persuasion, and arousal mastery experiences were utilized to shape this study’s semi-structured interview questions that aided in uncovering and analyzing the types of experiences that educators described as having contributed to their knowledge and skills in implementing RTI components and practices. SCT’s construct of facilitation, the tools, resources, or environmental changes to enable or empower individuals to engage in a behavior, enabled the participants in this study to identify and share examples with such constructs in their contexts and experiences.

Critics of SCT

SCT is a broad-reaching theory and would be difficult to address each of its constructs in entirety. Bandura (2001) acknowledges the limitation of how worldwide problems of growing
magnitude can undermine perceived efficacy to find effective solutions; instilling a sense of paralysis that there is little people can do to solve such problems. Additionally, SCT assumes that changes in the environment will automatically lead to changes in the person, when this may not always be true. The theory is based on the dynamic interplay between person, behavior, and environment, but does not address or offer an explanation if one is more influential than another.

**Conclusion**

This study aimed to enhance educator and school district implementation and reform efforts by exploring educators’ experiences and sources of efficacy related to RTI implementation. Although it is argued that qualitative research lacks generalizability, this study aimed to impact educators beyond study participants, as previous research notes lack of implementation fidelity (Maier et al., 2016; Snowling & Hulme, 2013; Mandinach, Honey & Light, 2012). In turn, the findings from this study serve as a tool for social justice by enhancing intervention implementation for students in K-12 education, improving the curriculum and experiences of educator-preparation programs and education policy as it relates to RTI’s role in SLD identification under IDEA.

Social Cognitive Theory (SCT) provided a lens for a robust exploration of educator experiences implementing RTI given their environment, personal factors, and past experiences to shift their behavior and anticipate students’ needs. In accordance with SCT, a lack of self-efficacy can hinder successful implementation of RTI (Walker et al., 2018). “The concept of teacher efficacy has far-reaching effects that can impact student beliefs and achievement, parental relations, teacher performance, collegiality, and the school organization as a whole” (Taylor, 2013, p. 1068). Previous research on teacher efficacy lacks attention to the sources of teacher efficacy (Klassen et al., 2011). This supported the use of SCT as an appropriate
framework for this study by examining how educators develop the understanding, knowledge and skills to enact change and provide effective intervention for students through the RTI framework.
Chapter II: Literature Review

Though more than a decade has passed since the inception of Response to Intervention (RTI) in K-12 school settings, fundamental complexities in implementing a strong RTI process exist (Balu et al., 2015; Nichols et al., 2017; O’connor, Freeman, Jones & Ball, 2012; Piety, 2019). At its core, RTI aims to improve educational outcomes for students but educators face misconceptions and challenges implementing its components to fidelity (Balu et al., 2015; Maier et al., 2016). This study sought to understand the capacity and sources of self-efficacy that have led educators to meaningful RTI implementation in addition to uncovering the perceived needs to effect change through the RTI process. The documented lack of implementation consistency across the United States, coupled with the fact that multiple states use RTI as the criteria for special education identification, allows this study’s findings to serve as a tool to promote equity for students of all backgrounds.

A comprehensive synthesis of existing research has revealed a plethora of challenges in implementing RTI that span from a high variability among frameworks being used throughout the nation (Al Otaiba et al., 2019; Maki & Adams, 2019) to nuanced challenges with implementation in secondary school settings (Fuchs & Fuchs, 2009; Miciak et al., 2014; O’Reilly, Sabatini, Bruce, Pillarisetti & McCormick, 2012). Previous literature also indicated a need to understand how to develop the capacity of educators to change and improve practice through expanding domain specificity in efficacy research (Klassen et al., 2011; Piety et al., 2019; Sun et al., 2016). The following review of literature examines the history and aims of RTI, domain-specific reading pedagogy and data-based decision-making entities of RTI, as well as implementation fidelity and quality.
Peer-reviewed research was generated through Northeastern’s Wiley Online Library, Education Research Complete (EBSCOhost), Education Journals, ERIC, PsychARTICLES (ProQuest) Educator’s Reference Complete (Gale Cengage), SAGE Journals through a combination of the following search terms.

**Keywords:** Response to Intervention (RTI), multi-tiered system of supports (MTSS), data-based decision making, data-based individualization, reader/reading profiles, implementation fidelity, treatment integrity, professional learning.

### Aims and Challenges of Response to Intervention (RTI)

RTI encourages a culture of equity where all students have the same opportunity to learn by utilizing data-based decision making to provide evidence-based instruction and individualized interventions. The following section will outline the historical aims and elements of the RTI framework and highlight the pressing challenges educational contexts face implementing RTI.

#### Emergence of RTI & Core Features

Response to Intervention (RTI) takes on a proactive, preventative and inclusive approach to education (Swindleherst et al., 2015). RTI represents a shift from a student-deficit perspective to a philosophy aimed at strengthening universal instruction and supporting all students (Castro-Villarreal, Rodriguez & Moore, 2014). A multi-tiered intervention framework is characterized by both content and structure; high-quality instruction and intervention matched to student need, with educational decisions that are made based on data generated from “student response to instruction delivered across multiple tiers of intervention” (Prasse et al., 2012, p.80).

RTI is commonly designed as a three-tier model, where students receive instruction through a progression of targeted interventions. Tier 1 refers to the core curriculum provided to all students. In Tier I, teachers use assessment to inform whole class instruction and identify
students who may require more differentiated instructional support. Tier 2 refers to supplemental instruction provided to small groups of students who are failing to meet Tier 1 benchmarks. Students failing to respond in Tier 2 move to Tier 3 where more intensive, individualized intervention is provided. Tier 3 interventions include explicit, evidence-based, scaffolded instruction that is targeted and provides ongoing progress monitoring. A review of literature by Noltemeyer, Boone and Sansosti (2014) noted six components of RTI that consistently emerge across the literature: assessment; data-based decision making; high-quality research-based instruction and intervention; treatment integrity; professional development; as well as administrative leadership and schoolwide supports.

RTI is both a preventative tool that helps all students avoid falling behind as well as a diagnostic process for SLD identification (O’Reilly et al., 2012). The RTI framework emerged as a way to assist educators to “better identify needs, remediate, and expeditiously intervene to support students who are performing below grade level peers and who are at-risk for a learning disability,” (Nichols et al., 2017, p.3). Due to contention over the traditional IQ-achievement discrepancy model for diagnosing learning disabilities, the 2002 President’s Commission on Excellence in Special Education recommended the IQ discrepancy method be replaced with RTI for a more ecological process for identifying, diagnosing, and supporting students with learning disabilities (Nichols et al., 2017). Under No Child Left Behind (NCLB, 2002), the Individuals with Disabilities Act (IDIEA, 2004) encouraged schools to provide additional support for students within general education by using the RTI framework to determine if a student responds to intervention as part of a protocol to determine if students have a specific learning disability (SLD) and require special education.
Under the RTI framework, prior to referral for special education, more carefully designed, evidence-based options for students are utilized (Robinson, 2016). RTI’s emphasis on problem-solving, using data for instructional decisions can be contrasted with traditional, teacher-centered classrooms that focus on whole-group instruction and summative assessments where students who fail to show proficiency are referred for special education. The Every Student Succeeds Act (ESSA, 2015) continues to include these provisions under the synonymous Multi-Tiered Systems support (MTSS), a framework dedicated to student success through the use of assessments, innovations, and evidence-based interventions.

Concerns within RTI

There are problems surrounding RTI due to undefined and loose implementation practices, insufficiently trained personnel, as well as substantial variability in the structure of RTI between and within states and districts (Hudson & McKenzie, 2016; Zirkel, 2017). Fuchs and Fuchs (2009) assert that the only way to come to a collective understanding of RTI is to establish a unified model across all states in order to reduce variability and practice, improve communication and determine if RTI is accomplishing its intended goals. However, under the ESSA (2015), states are granted flexibility in implementation; a unified model of RTI does not seem likely in the foreseeable future.

In theory, RTI addresses the long-standing criticism of the ‘wait to fail’, IQ-discrepancy route to SLD identification by implementing early screening for at-risk learners as well as progress monitoring to ensure that students are provided with necessary support before they fail (O’Reilly et al., 2012). However, issues have surfaced regarding RTI’s impact on the delayed identification of students with learning disabilities. The amount of time often consumed while students receive RTI support before being deemed ineligible or referred for a comprehensive
evaluation is a cause for concern (Hudson & McKenzie, 2016). In their survey of 31 state-level special education directors, 90% of states do not regulate or recommend the maximum number of days a student may spend in RTI prior to referral for evaluation and only 7% indicated their state had a system for evaluating the effectiveness of RTI. Additionally, Zirkel (2017) argues that the universal screening and progress monitoring measures within RTI are not legally equivalent to a comprehensive evaluation.

RTI implementation often requires a change in the way teachers think and conduct their instructional routines. Implementing RTI with fidelity requires educators build their capacity with knowledge of multiple tiers of instruction, intervention matched to student need, ongoing assessment and the use of data within a problem-solving process to make decisions (Castillo et al., 2017; Piety, 2019). A meta-analysis of 57 studies addressing teachers’ use of data revealed most teachers were still in the process of learning how to use data to inform instruction, with their use of data being limited and inconsistent (Sun et al., 2016, p.17).

The goal of improving learning outcomes for students and reducing achievement gaps requires teachers have “a knowledge base and professional competencies that have a positive impact on diverse learners in diverse settings” (Prasse et al., 2012, p.75). However, researchers Snowling and Hulme (2013) found educators often fail to understand the features of reading disorders and the skills that require remediation. The multifaceted and intertwined skills required for proficient reading fall on a continuous dimension with no clear-cut off between normal and impaired reading. In addition to complexities in reading development, it is often believed that academic deficits are well established by middle and high school (Fuchs, L., Fuchs, D., & Compton, 2010; Nelson et al., 2017). Despite comprehensive primary-grade screening and
interventions, future reading problems can still emerge (Lipka, Lesaux & Siegel, 2006; Scarborough, 2005; Shaywitz, S., Escobar, Shaywitz, B. A., Fletcher, & Makuch, 1992).

The findings of Noltemeyer et al.’s implementation integrity tool indicated high-quality professional development is often a critical need for teachers (2014). Teachers' perceived barriers to RTI implementation included inadequate teacher training and a lack of professional development (PD) (Castro-Villarreal et al., 2014; Sales, Moliner & Francisco Amat, 2017). Understanding contextual and individual needs is crucial, particularly with regard to shaping professional learning needs (Darling-Hammond, Hyler & Gardner, 2017; Drago-Severson, 2016).

**Conclusion.** RTI aims to improve educational outcomes for students but educators face misconceptions and challenges implementing its components to fidelity (Balu et al., 2015; Maier et al., 2016). There are problems surrounding RTI due to undefined and loose implementation practices, insufficiently trained personnel, as well as substantial variability in the structure of RTI between and within states and districts (Hudson & McKenzie, 2016). RTI requires a change in the way teachers think and conduct their instructional routines as well as increased capacity and knowledge to implement multiple tiers of instruction, intervention matched to student need, and ongoing use of data to inform instructional decision-making (Castillo et al., 2017). The following section explores the literature on a core component of RTI; essential data practices.

**Data-Based Decision Making (DBDM)**

Current education policies such as the Every Student Succeeds Act (ESSA, 2015) and its predecessor, No Child Left Behind (NCLB, 2002) spurred a culture of data collection and decision-making in educational contexts (Grapin, Waldron, & Joyce-Beaulieu, 2019; Orland, 2015; Piety, 2019). RTI requires multiple layers of decision-making that includes identifying
students who are at risk of academic difficulty; who will benefit from intervention; the types of interventions that will best serve students; whether students are benefitting from intervention; whether students should be moved to a more intense tier, or whether students should be evaluated for special education services. This type of data use and interpretation has proven to be a difficult aspect of multi-tiered intervention systems (Datnow & Park, 2018; Snowling & Hulme, 2013; Mandinach et al., 2012). Educators are faced with critical choices regarding data use that can profoundly affect students’ educational experiences and trajectories (Datnow & Park, 2018). The following literature strand explores data and assessment practices being used in educational contexts for RTI placement as well as the complex nuances of reading development that impact intervention implementation.

**Data Use in RTI**

Data-based decision making is referred to variously as *data literacy, data-based individualization, data-driven decision making, data for teaching and learning, data-informed decision making*. Data-based decision making requires the efficient and effective use of data and is central to RTI implementation (Coolong-Chaffin & McComas, 2016; Shapiro et al., 2012). Educators are expected to use data that can profoundly affect students’ educational experiences and trajectories (Datnow & Park, 2018).

There is consensus that *universal screening* is an essential component of intervention frameworks in order to determine the appropriate tiered intervention according to student need (Shapiro et al., 2012). Stevenson, Reed, & Tighe define universal screening assessments as “measures of robust academic skills that are highly predictive of overall ability and allow schools to quickly identify students at risk for failure in key academic areas” (2016, p. 533). The rationale for screening all students to determine risk of failure in the RTI framework is powerful
and compelling (VanDerHeyden, Burns, & Bonifay, 2018). Students who are identified as at-risk are typically done so by a predetermined cut-off score on benchmark assessments (Nichols et al., 2017). However, there is much diversity in how students are screened for risk in RTI frameworks and wide variance in the way that schools use and interpret screening tests (Nelson et al., 2017).

A key tension is data use spawned by the last decade of education reform is accountability-driven data use, typically high-stakes data that emphasizes “complying with external pressures and bureaucratic demands” (Datnow & Park, 2018, p.136). Many universal screening models, particularly at the middle school level, use standardized state assessment data as the criterion to identify students for RTI. Practitioners must consider the limitations associated with using state tests for prediction as state tests are not designed for screening. Nelson et al. (2017) explain, “benchmarks on state tests are intended to capture the degree to which students have mastered specific grade-level standards”. Thus, proficiency scores in one year may not represent the optimal cut point for identifying students who are at risk in future years” (2017, p. 685). Most state assessments do not have diagnostic utility and are effective in identifying students who are proficient versus those who are not proficient. They “provide little information on the specific subskill difficulties that may be at the root of the problem for readers” (O’Reilly et al., 2012, p. 170). Schools using state assessment data must recognize the lack of actionable information that can be used to modify instruction and pinpoint student needs. Scholars call for more research, particularly at the secondary level, to help schools select an approach to screening and assessment that is appropriate and feasible (Nelson et al., 2017).

In addition to the effective use of universal screening data for identifying students in need of intervention, there are other types of assessments used in RTI models that can lead to effective
intervention and instruction. Teams should collect and synthesize data to decide “when to modify instruction, when students should change tiers, when students are responders and nonresponders to tiered interventions, and when to refer students for an evaluation to determine special education eligibility” (Shapiro et al., 2012, p. 335). Research highlights the importance of using comprehensive measures of assessment across multiple domains of reading to identify specific reading deficits to inform intervention design. Diagnostic assessments should be carefully selected to provide information on mastery of specific skills to tell practitioners, “why a student with good language comprehension is struggling to comprehend what the student reads” (Gillis, 2017, p. 46). Research on late-emerging reading problems suggests screening and intervention for both broad language weaknesses and phonological weaknesses may help prevent future reading difficulties (Scarborough, 2005). This research has implications for practitioners; not considering these components could translate to a large number of students being ineligible for intervention, despite the need documented by a comprehensive evaluation of their reading skills.

Within an RTI model, progress monitoring is also an important aspect of decision-making (Silberglitt, Parker, & Muyskens, 2016). Once an evidence-based intervention based on diagnostic information is determined for a student, progress monitoring assessments must be carefully selected and administered in order to demonstrate a student’s progress toward proficiency. The frequency of progress monitoring increases at Tier 2, with most researchers recommending weekly data collection (Burns & Gibbons, 2012). As data are analyzed and graphed, trend lines and aim or goal lines are used to see if proficiency gaps are decreasing. Based on data, adjustments are made to the intervention itself and/or the intensity of delivery (Gillis, 2017). Districts need to be aware of the difference between subskill mastery measurement (SSM) approaches and a long-term measurement approach used with general
outcome measures (GOM), and how each fits within a school’s tiered intervention model in planning intervention and progress monitoring measures (Burns & Gibbons, 2012).

The quality and number of data points, as well as the length of progress monitoring, are important factors in tiered instructional frameworks such as RTI. However, there seems to little consensus among researchers in the field. Ardoin, Christ, Morena, Cormier, and Klingbeil (2013) reviewed approximately 80 empirical articles and manuals focused on the number of data points necessary to determine student responsiveness to intervention. The most common recommendation was seven data points, followed by six or ten data points. Later work of Klingbeil, Bradley, and McComas (2016) reported that evaluations of individual growth estimates would suggest inferences based on that number of data points would likely be inaccurate. Collecting more data over a longer duration of time would improve the reliability of decisions made based on trend lines. Rules such as “3 data points above the aim line and 10 weeks before making a trend line comparison are often fairly arbitrary and have no research supporting them” (Silberglitt et al., 2016, p. 288). These researchers discuss concerns with the practice of making high-stakes decisions using arbitrary rules, as that is what led to criticism of the IQ-discrepancy model and to dual-discrepancy models such as RTI for the identification of learning disabilities. Using multiple data points, effective professional judgement and a team-based decision model will increase efficient decision-making while the research continues to evolve.

Decisions on individual students should be made with a sufficient amount of data (Sharp, Sanders, Noltemeyer, Hoffman & Boone, 2016). It is critical that a single piece of datum not be used to classify a student. Shapiro and colleagues (2012) reported that the reliance on any single metric has been found to result in less accurate decision-making than when data teams combined
relevant data sources. “Data-based decision making should involve multiple sources of information about a student and take into consideration the limitations of each source” (Stevenson et al., 2016, p. 544). The use of any single criterion measure would have resulted in a large number of students identified as adequate responders in Miciak et al.’s research (2014). Using multiple forms of data and examining discrepancies across the data allows for a more holistic picture of student learning in order to provide targeted interventions and to evidence student growth (Datnow & Park, 2018).

Team decision making is essential to the RTI process. An RTI leadership team consisting of teachers, support personnel and administrators should review and manage data to make student decisions (Gillis, 2017). “Across all tiers, educators will want to strive to analyze data in a systematic process, let it guide instruction, and put decision rules in place that are documented to help guide student supports (Sharp et al., 2016, p.158). Establishing a core RTI data team comprised of a diverse team of school stakeholders, clearly defined norms and protocols, and a systematic process to analyze problems encultured in the habits of mind for using data effectively (Bocala & Boudett, 2015) are essential considerations for school-based RTI stakeholders.

**Data-Based Individualization (DBI) and Reading Science**

It is often believed that academic deficits are well established by middle and high school (Fuchs, L, Fuchs, D., & Compton, 2010; Nelson et al., 2017). K-12 school contexts must understand that despite comprehensive primary-grade screening and interventions, future reading problems can still emerge (Catts, Compton, Tomblin, & Bridges, 2012; Lipka et al., 2006; Scarborough, 2005; Shaywitz et al., 1992). Being responsive to intervention entails that practitioners “have access to measures for identifying students at risk, aligning those measures to
skills that span the range of potential reading difficulties, and monitoring their progress over time” (O’Reilly et al., 2012, p. 182).

Data use requires “integration with content knowledge and pedagogical content knowledge” (Gummer & Mandinach, 2015). Analyzing patterns to understand a student’s strengths and weaknesses requires teachers “deeply understand the subject matter, the curriculum standards, and how students learn. Teachers draw on their professional wisdom in making sense of data” (Datnow & Hubbard, 2016, p.23). Since reading skills occur along a continuum, prominent reading researcher David Kilpatrick suggests, “all aspects of reading must be considered in selecting assessments to drive instruction; from phonological skills to word reading to fluency to comprehension” (2015, p. 218). Tests of fluency provide information that can assist practitioners in sifting out the root causes of reading difficulties. Kilpatrick explains that a student may read quickly and accurately, but lack prosody which could indicate that a student is using the bulk of their resources to decode, with little working memory left for prosody or comprehension, a pattern found among compensators and mild dyslexics (2015). Prominent dyslexia researchers Snowling & Hulme explain, “when word-level decoding skills are poor, reading comprehension can still be intact and is a reading profile sometimes associated with discrepancy defined dyslexia” (2013, p. 188). Spelling is also important, even if reading ability tends to be average to low average, as spelling difficulties can be an indicator of a phonological core deficit and are “a window into a student's phonological and orthographic skills” (Kilpatrick, 2015, p. 187). Additionally, listening comprehension, vocabulary, grammatical and syntactical skills, background knowledge, working memory, as well as motivation and attention are important assessment considerations. Accounting for these aspects of reading development are essential given RTI’s role in SLD identification.
According to Miciak and colleagues, as students grow older and are confronted with more complex and cognitively demanding tasks, specific difficulties in reading comprehension may emerge in students without adequate decoding and fluency skills. Their quantitative study on adequate and inadequate responders to reading intervention in middle school concluded decoding was the most closely related subskill for students who fail to respond to intervention (Miciak et al., 2014). Another study of middle school reading intervention concluded word reading to be a statistically significant predictor of reading comprehension that contributed to other components of the reading process. “Consistent with the Lexical Quality hypothesis (Perfetti, 2007), word-level instruction for struggling comprehenders should include multiple facets such as spelling, word reading accuracy and fluency, and word meaning to foster word-level proficiency” (Oslund, Clemens, Simmons & Simmons, 2018, p. 375). Hart and Stebick (2016) utilized Stahl and McKenna’s (2013) cognitive-based, hierarchy of reading skills to develop intervention courses based on multiple assessments aligned to reading profiles that resulted in more targeted, explicit instruction and subsequent increase in student achievement.

Reading comprehension is crucial at the intermediate level where text becomes a primary source to gain knowledge. A greater understanding of the sources of adolescents’ reading comprehension difficulty can foster more targeted instruction that may lead to greater reading growth (Oslund et al., 2018). A comprehensive assessment system that accounts for a range of reading skills is important for middle and secondary schools, where there is less focus on foundational reading pedagogy and a tendency to focus on high-stakes assessment. Most secondary-trained educators have never been exposed to coursework on the nuances of reading difficulties and disabilities described in this section. Additional diagnostic and formative assessments can assist in improving the accuracy of screening decisions and in planning for
effective intervention (Kilpatrick, 2015; Nelson, Van Norman, & Lackner, 2016). Such data sources offer a “rich and valued contribution to the data decision-making process” (Shapiro et al., 2012, p. 336). A decision tree such as Gillis’ (2017) can guide the process and the selection of diagnostic assessments for digging deeper into sources to provide targeted instruction.

There is a lack of evidence among researchers on the number of data points and length of time spent in intervention in RTI frameworks (Ardoin et al., 2013; Klingbeil et al., 2016; Silberglitt et al., 2016). Middle and secondary schools need to consider that aggregate effects for middle school interventions are generally smaller than the effect sizes of similarly designed interventions in early elementary school (Fuchs et al., 2010; Miciak et al., 2014). According to Lipsey and colleagues’ (2012) research, effect sizes on standardized measures for elementary and middle school students are not equivalent. “Effect sizes for a full year of instruction on standardized reading measures drop from 0.97 between Grades 1 and 2 to 0.23 between Grades 6 and 7” (as cited in Miciak et al., 2014). While no consensus exists for the amount of time in intervention a student should stay in intervention or how many data points should be collected, schools must also consider and understand that students with pervasive skill deficits may respond more slowly and will require more individualized and intensive instruction (Gillis, 2017, p. 45).

Conclusion. Data can provide important information about intervention effectiveness, informing whether modification or intensification is needed. DBDM is difficult with many decision-makers involved, complex processes of data use, variation within and across contexts as well as data from high-states assessment being used to make important decisions at the student, teacher, grade, school, district, and state level (Datnow & Park, 2018). To reduce this variation and provide consistency, schools must establish and sustain routines for student problem-solving and data-use processes that include evaluation of progress (O’connor et al., 2012). Since the
inadequate response to intervention can be the result of a mismatch between practice and student need (McKenna, Flower, & Ciullo, 2014; McKenna & Parenti, 2017), educators involved in RTI implementation must have knowledge of and understand the specific reading difficulties that can manifest in students beyond elementary school. Research highlights the importance of diagnostic reading assessments to provide data-based individualization beyond primary grades.

**Implementation Fidelity & Quality**

In order to ensure effective RTI systems, systems must be in place to ensure the quality and fidelity of implementation. Ongoing quality assurance can be achieved by collecting data on implementation fidelity and providing practitioners meaningful and connected professional development. These essential components of effective intervention frameworks are discussed in the sections that follow.

**Implementation Fidelity**

Implementation of RTI is complex, requiring both collaborative and interdependent work (Noltemeyer et al., 2014). The terms *implementation science, fidelity of implementation, treatment integrity and quality assurance* are synonymous with monitoring the degree to which elements of an intervention are operationalized and implemented as intended (Sharp et al., 2016). “The multilevel and systemic nature of RTI results in a complex collection of activities, all of which must be monitored for implementation fidelity,” (Keller-Margulis, 2012, p. 343). The components of RTI that require monitoring include assessments, instruction across tiers, intervention, data-use, and decision-making procedures. It is also beneficial to use multiple methods to assess fidelity such as observation, self-assessment, and analysis of products (Keller-Marguilis, 2012; McKenna et al., 2014; McKenna & Parenti, 2017).
Monitoring RTI fidelity regularly is important since implementation quality has been linked to student outcomes. The RTI Implementation Scale for Reading (RTIS-R) developed by Noltemeyer and colleagues (2014) allows educators to indicate their perceptions of RTI implementation on a five-point Likert scale, across five RTI components and three tiers of RTI. Findings based on data from 64 principals and school psychologists at 43 elementary schools indicated data-based decision making and Tier 3 implementation integrity significantly predicted student reading outcomes (Sharp et al., 2016). Regular and consistent monitoring of implementation can provide data to improve implementation and student performance (Keller-Margulis, 2012).

Tier 3 implementation integrity significantly and positively predicted student reading performance in research conducted by Sharp and colleagues (2016). Collecting fidelity data throughout the year can assist in identifying teachers who need support or whose practices may drift from established procedures (McKenna et al., 2014). Providing actionable, high-quality feedback to practitioners who are implementing RTI is essential (Keller-Margulis, 2012). Schools must measure implementation fidelity to make changes as necessary to ensure student success.

Implementation integrity tools such as those published by the National Center for Response to Intervention [NCRTI] (Nelson et al., 2016) as well as the RTIS-R (Noltemeyer et al., 2014) can be used to plan and assess RTI implementation. Without a system for collecting and reviewing fidelity of implementation data, it will be difficult to interpret student response to intervention and draw conclusions about assessment and procedural decisions (Keller-Margulis, 2012). Having a procedure for monitoring the quality and fidelity of implementation can assist stakeholders in evaluating the impact of RTI models (Shapiro et al., 2012).
Capacity Building and Professional Development

Scaling-up tiered intervention frameworks requires commitment, sustained effort and systematic professional development (Prasse et al., 2012, p. 80). Implementing RTI with fidelity requires educators build their capacity with knowledge of multiple tiers of instruction, intervention matched to student need, ongoing assessment and the use of data in a problem-solving process to make decisions (Castillo et al., 2017). The findings of Noltemeyer et al.’s implementation integrity tool indicated high-quality professional development supports are often a critical need for teachers (2014). Despite being an area of need, Tait-Mccutcheon & Drake's research indicated an unfavorable relationship between teachers and their professional learning and development (2016). Traditional professional development tends to be short in duration, lacking opportunity for fluency building, and missing systemic implementation supports for sustained use.

Instead, professional development must be targeted, comprehensive, efficient, and relevant (Freeman, Sugai, Simonsen, & Everett, 2017). Well-designed and implemented professional learning is an essential component of a comprehensive system of teaching and learning that supports students to develop the knowledge, skills, and competencies needed to thrive in the 21st century (Darling-Hammond et al., 2017). Hudson & Mckenzie recommend administrators and teachers receive training to understand their responsibilities under IDIEA (2016) since RTI serves a dual purpose of strengthening core instruction as well as a means to identify students with learning disabilities.

Targeted Professional Learning Area: Assessment/Data Use

A problem facing education and research is how to develop the capacity of educators to change and improve practice (Sun et al., 2016). School leaders must determine levels of
assessment literacy and create an action plan for assessment implementation that builds slowly on existing knowledge (Johnson, Earles-Vollerath, Pool, & Carter, 2012). Datnow & Hubbard’s review of research revealed teachers’ beliefs about data-use are shaped within their professional communities, in their interactions with colleagues, school leaders, curriculum facilitators, previous experience with data and cultural and policy contexts where teachers work (2016).

Data-use efforts should also address the range of beliefs that teachers hold about data-use and instructional change.

Researchers have noted teachers often conceptualize data only in terms of numeric representations derived from large-scale assessment tests (Datnow & Park, 2018; Bocala & Boudett, 2015). Building educators’ capacity for data-use “must be decoupled from external accountability demands and involve a variety of information on student learning” (Datnow & Hubbard, 2016, p. 7). School leaders can set the tone for data use among teachers, focusing them away from or towards accountability and continuous improvement and should encourage a culture of data use that includes teacher-created assessments, curriculum-based measures, portfolios and observations of student learning. Drawing on this wide range of data allows for a much fuller portrait of student learning (Datnow & Park, 2018).

To identify and provide appropriate instruction, assessments for students identified at-risk must be administered with fidelity to determine the specific nature of the reading difficulty (Kilpatrick, 2015; Gillis, 2017). Data should be accurate and valid therefore requiring practitioners receive training on administration and scoring of measures (Shapiro et al., 2012; Sharp et al., 2016). “The high-stakes nature of the decisions made for students receiving intensive interventions requires the most exacting assessment practices and scrutiny of evidence
for the procedures, measures, and interpretations of the resulting data” (Klingbeil et al., 2016, p. 344).

When high-quality assessments are used, what is done with the data becomes an important indicator of student outcomes. It is often stated that the data speaks for itself, but according to Deno, this is not always the case. “Data are only numbers without meaning until one interprets them” (2016, p. 14). Data literacy is an essential skill in collaborative, team inquiry processes such as RTI (Bocala & Boudett, 2015; Shapiro et al., 2012). An ongoing, approach through job-embedded practices with multiple opportunities to apply and practice what is learned is pivotal to improving teachers' and principals' effectiveness in raising student achievement. "Job-embedded PD entails regular and ongoing consultation with other educators and facilitates learning by using real data and evaluation to foster application of knowledge" (Castillo et al., 2017, p. 3). Practitioners should analyze data using a systematic process to inform intervention and tier placement, collecting sufficient data points in all tiers to inform decisions and use documented cutoff scores that are empirically supported to guide placement decisions.

Targeted Professional Learning Area: The Science of Reading

The ability to read and construct meaning from written text is foundational to learning. In addition to creating a culture of data and building teachers’ capacity to use data effectively, there is a need to match the data to effective and appropriate interventions. Francis, Kulesz, and Benoit explain, “comprehension is a dynamically varying product that is influenced by the component skills of the reader and the features of the text and their interactions” (2018, p. 277). There are complex relationships involved in the multi-component processes inherent in proficient reading. Educators must understand the factors that underlie the reading profiles of adolescent readers in order to design effective instruction in order to accelerate reading progress (Oslund et al., 2018).
K-12 school contexts should ensure these reading subskills are accounted for in comprehensive RTI assessment systems for a more complete view of reading wherein students are matched to targeted interventions.

Through their research, Snowling & Hulme (2013) found that educators often fail to understand the features of reading disorders and the skills that require remediation. Educators in an RTI framework who understand the nature of differing reading profiles are in a position to administer and analyze assessment data to determine the most appropriate and effective prescription for appropriate intervention (Kilpatrick, 2015; Gillis, 2017). Reading patterns “capture many instructionally relevant distinctions about reading problems, such as distinctions between reading comprehension problems based solely in decoding or fluency and those with a core comprehension component” (Spear-Swerling, 2015, p. 194). Knowledge of these profiles and patterns can help teachers integrate and interpret information from multiple assessments to form instructional groups with targeted instruction and progress monitoring.

The Simple View of Reading (SVR) (Gough & Tunmer, 1986) is the basis for three reading profiles that have guided reading research for over 30 years. It is a widely used framework for conceptualizing the skills that readers must use to comprehend written language (Francis et al., 2018). The SVR explains that both decoding and language comprehension are essential for skilled reading to occur and “implies that there are children who might be good at one aspect of reading and not the other, or in some cases, may have difficulty with both components of reading” (Gillis, 2017, p. 42). Three reading profiles emerged out of the SVR and present a way for practitioners to flesh out reading difficulties in order to understand the source of the reading difficulty so that targeted instruction and intervention can be provided (Kilpatrick, 2015). Students with a dyslexic profile present with word reading skills, reading
fluency, and reading comprehension that are substantially below a student’s language comprehension skills. *Mixed profiles* have both poor word-level reading and language skills and are often represented by individuals with intellectual disabilities or speech and language impairments. *Hyperlexics*, the least common profile, present with word-level reading that is substantially above what a student can understand and is based on difficulties with general language comprehension.

In recent years, a number of researchers have expanded upon the SVR. Dyslexia researcher David Kilpatrick describes the *compensator*, a mild form of the dyslexic pattern where students compensate with strong language skills making this problem difficult to recognize. These students do not attract much attention from their teachers and often do not receive remedial instruction because their overall reading scores tend to be in the average range. Compensators have effortful word-reading; drawing valuable working memory resources from their comprehension. Kilpatrick highlights the importance of collecting and considering qualitative information from students, parents, and teachers about their difficulties with academic tasks as it is often parents who shed light on the effort it takes to get through academic tasks (2015). It is common to find this profile among late-emerging poor readers and is an important consideration for middle and secondary schools.

Oslund and colleagues’ research drew from theories that highlight the role of word identification (Gough & Tunmer, 1986) and vocabulary (Perfetti & Stafura, 2014) on text processing (Kintsch, 1988). Their research found vocabulary impacts reading comprehension directly and influences other important skills, including reading efficiency. These areas are integral to reading comprehension; deficits in either can result in reduced reading comprehension (2018). Francis and colleagues contend that as originally formulated, the SVR is a framework
for understanding differences between individuals in comprehension at a given point in time but is not developmental in nature. These researchers examined changes in the effects of reader and text characteristics along with their interactions on Oral Reading Fluency (ORF) to develop a theoretical framework that expands the SVR. Their model of reading, Complete View of Reading (CVRi) captures “the variation that exists within readers, as well as the variation among readers, across texts and time, to best understand how particular readers function when faced with comprehending specific texts for specific purposes” (2018, p. 275). This research highlights reading’s multi-component construct to be an essential consideration when designing targeted interventions for students in intervention frameworks.

Research supports the need for both preservice and in-service educators to receive training in the science of reading. Practitioners must be cognizant of various reader profiles since most middle and secondary teachers have no formal training in reading pedagogy. Understanding and choosing appropriate interventions for students with difficulties in different reading subskills is crucial to improving student outcomes in RTI frameworks (Miciak et al., 2014; Oslund et al., 2018).

**Conclusion**

It is necessary to evaluate intervention implementation, particularly when data are being used to make high-stakes decisions about student performance (Keller-Margulis, 2012). Change agents in successful RTI frameworks must be cognizant of the dynamic nature of evidence-based practice and continually consume information from the professional and research community (O’connor et al., 2012). Enhancing professional learning for adults is vital (Drago-Severson, 2016). With meaningful professional learning opportunities, teachers have the potential to adopt positive attitudes toward and become better equipped to infuse RTI into their classroom and
improve student outcomes (Fletcher, Greenwood, Grimley, & Parkhill, 2011; Sales et al., 2017; Swindlehurst et al., 2015).

**Summary**

As evidenced by previous research, challenges surrounding RTI implementation persist. Maintaining appropriate and consistent practices is difficult when the research about RTI implementation is still evolving (Silberglitt et al., 2016). Advancing two important goals of the ESSA, equity and excellence, requires attention to teaching and leadership in addition to accountability, standards, and assessment. Teachers and administrators require ongoing and meaningful professional development that addresses the knowledge and skills needed to engage with data effectively (Orland, 2015). Schools and districts must use assessment data to effectively diagnose and intervene to meet the needs of a wide-range of reading difficulties and reader profiles. It is also important for schools to assess RTI implementation to ensure consistent application of principles and identify possible areas for improvement.

Teachers often lack self-efficacy in their ability to engage in data-driven decision making which, according to Social Cognitive Theory (Bandura, 1997), can hinder the successful implementation of data-use for intervention matching (Walker et al., 2018). Since “teachers’ beliefs and capacity are at the heart of the connection between data and instructional change. Focusing capacity-building efforts on exploring teacher belief systems and expanding teachers’ toolbox of instructional strategies could provide significant leverage in implementing data-driven decision making” (Datnow & Hubbard, 2016, p.24). Given the high-stakes implications of RTI as a method to identify learning disabilities and raise student achievement, coupled with loose guidelines and evolving research-based guidelines, there is a need for additional research into the
sources that contribute to teacher self-efficacy and capacity to effect change within RTI frameworks.
Chapter III: Research Design and Methodology

Research Questions

How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) process?

What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI?

Qualitative Research Approach

Critical features of RTI, including data-based decision making, are not being implemented with fidelity. There is also a gap in previous research examining RTI implementation at the middle school level. The purpose of this qualitative study was to understand the sources and constraints to middle-school educator efficacy to enact change through the RTI process. An understanding of the sources and barriers to efficacy can assist school systems and schools of education in refining RTI implementation and practices and enhance equitable educational experiences for students.

The research question and goals of this study naturally led to a qualitative research tradition, being grounded in understanding and describing the experiences of participants. This approach is “focused less on the interpretations of the researcher and more on a description of the experiences of the participants” (Creswell, 2007, p. 59). This approach offered more fluidity in terms of participants, process, location, and pointed questions about nuanced aspects of RTI that needed to be explored directly.

This study was shaped by both interpretivist and constructivist traditions by exploring the way people make sense of their experiences and how the context of situations within broader
social environments impacts the way individuals construct understanding. Unlike research in a positivist tradition that focuses on determining an answer to a question or predetermined hypothesis, interpretivism seeks to understand a problem that takes into consideration the environment, interactions, experiences and perceptions of participants as important influences (Ponterotto, 2005). A constructivist approach acknowledges a view that reality is not passively imposed upon human beings, but actively constructed as part of lived experience and can vary based on the individual (Riegler, 2012). Given the goals of this research, a qualitative methodological approach was the most appropriate fit since this research tradition seeks to contribute to the knowledge of RTI, a complex social phenomenon (Creswell, 2013).

Those in positivist traditions criticize qualitative research, claiming qualitative methods lack rigor and generalizability. Kerlinger and Lee argue quantitative research can be limiting, “no operational definition can ever express the rich and diverse aspects of some variables” (1999, p. 43). Using a hermeneutical approach, interpretivism recognizes that multiple realities exist (Ponterotto, 2005) and that meaning is hidden and must be brought to consciousness through deep reflection typically achieved through interviews and analysis (Merriam, 1991). Therefore, a qualitative approach was used in this study to understand the experience of educators who live RTI daily. Problems exist in virtually every organization. Those impacted often lack the opportunity to explore the issue in a systematic way. The reflection encouraged by a qualitative research design, grounded in an interpretivist-constructivist approach, shaped this study’s design and research questions that sought to understand the supports and challenges of educators implementing RTI.

**Methodological Comparison**
Qualitative methodologies share common features including the protection of human subjects and the use of interviewing for data collection to provide in-depth descriptions. Qualitative scholar, John Creswell, outlines the nuances and differences across qualitative approaches. With regard to data collection, case and narrative studies use multiple forms of data to build in-depth cases or storied experiences, whereas phenomenology relies primarily on interviews as data. The unit of analysis also varies. In narrative and phenomenological research is the individual, with case study researchers examining groups of individuals participating in an event, activity or organization (2013). While case studies have broad disciplinary appeal, they are restricted to answering how and why questions (Yin, 2013). The use of a general qualitative approach for this study provided the opportunity to dig into rich data generated through qualitative interviews. Interviewing educators from multiple school districts and states enhanced the generalizability of the current research findings to other teachers.

Qualitative-generated theories are more grounded in reality than those of quantitative methods but stand criticism for validity and reliability with a lack of focus on statistical measures (Jencik, 2016). Through the triangulation of multiple data sources, the relevance of results is strengthened for additional populations (Noor, 2008). Therefore, in addition to semi-structured interviews, the use of coded contact-summary sheets, a comprehensive review of previous research, and use of a theoretical framework shaped this study’s research design and analysis processes.

Qualitative data analysis varies upon the methodology. Narrative research’s unstructured restorying and IPA’s focus on what was experienced were not a fit for the nuanced information this study sought to gather regarding educators’ experience with RTI. This study followed data analysis procedures for case study research, through providing extensive description, followed
by key issues and themes (Creswell, 2013). The only exclusion from typical case study analysis procedures in this study was the omission of discussion of context. The selection of a general qualitative approach in this study allowed for key issues to be explored directly.

Designing and implementing a rigorous qualitative study requires the identification of a set of issues (Stake, 1995) to guide the research process. These items can help place limits on the scope of the study and “come from the literature, personal/professional experience, theories, and/or generalizations based on empirical data” (Baxter & Jack, 2008, p.551). There were many issues of RTI to explore. To avoid answering a research question that was too broad or conducting a study with too many objectives, previous research was examined, and a comprehensive theoretical framework provided a rationale and guidance for developing interview and research questions this study aimed to answer:

How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) process?

What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI?

**Procedures**

Merriam’s (2009) step-by-step approach to research design was utilized in this study. These steps included: conducting a literature review; constructing a theoretical framework; identifying a research problem; crafting and sharpening research questions; and selecting the sample. Research questions and a full, semi-structured interview protocol (Appendix A) were developed in accordance with findings from previous literature and shaped by elements of Social Cognitive Theory (SCT) (Bandura, 1997), including tridadic reciprocity and self-efficacy theory.
These elements were outlined in an application to conduct research approved by Northeastern University’s Institutional Review Board (IRB) on December 20, 2019 (CPS19-11-09). Once IRB approval was attained, the process of recruitment, data collection and analysis began. The specific details for each of these phases are detailed in the following sections.

**Participants and Recruitment**

A criterion sample of K-12 educators who have experienced the implementation of intervention frameworks such as RTI in a middle school setting in the last year were the target population for this study. According to Creswell (2007), criterion sampling works well in approaches when all individuals studied represent people who have experienced the phenomenon. Recruitment of participants for this study included a representation of a variety of perspectives from multiple levels within school organizations. Integrating a variety of mental models was intentional with the aim of building a comprehensive understanding of the larger system within organizations (Senge, Hamilton, & Kania, 2015). Therefore, classroom teachers, instructional specialists and administrators were invited to participate as part of this study’s sample (Appendix B, Recruitment Announcement).

Maximum variation sampling allows for the documentation of diverse variations and can identify important common patterns (Creswell, 2007). This variation was realized in this study by including both veteran and early career teachers, educators across three different regions of the United States, as well as a combination of general education teachers and content specialists who have experienced intervention implementation in several settings and school systems.

Study participants were recruited to participate in semi-structured interviews through email recruitment. An email blast to the publicly-available email addresses of individuals within the researcher’s professional network was sent once IRB approval was attained. In order to
expand the scope of the researcher personal network, a snowball/chain approach (Creswell, 2007) was used. Individuals who received the recruitment email were also asked to forward to any person within their personal network who may fit the criteria and be interested to achieve information-richness.

Interested individuals first participated in a preliminary conversation to confirm they met the study’s sampling criteria. If so, individuals were provided additional details and information about the purpose and goals of the study and were asked to select a date and time for a formal interview, lasting approximately 60-90 minutes. Informed consent procedures (Appendix C) were emailed to each of the eight qualifying participants prior to their interview.

**Data Collection**

The information-rich data collected through individual interviews (Creswell, 2013) was the primary data collection source used in this study. The use of semi-structured and open-ended interview questions offered flexibility that led to the conversational style suggested by Rubin & Rubin (2006) for effective qualitative interviews. This style of questioning offered opportunities to ask clarifying and follow-up questions at different points, allowing for rich descriptions of each individual’s experience. To collect the level of description described by Creswell, a trustful, conversational partnership was created by the researcher conveying honest, genuine acceptance, from the start. The interview protocol used in this study was designed in a way that considered a gradual build of participants' comfort level. Throughout the process, participants were ensured there were no correct answers, but instead a genuine interest in their experiences. If participants were reluctant to respond to a sensitive question, they were presented a choice whether or not to answer and were given the chance to discuss it later in the interview or off the record.
A total of 8 audio-recorded interviews using semi-structured interview questions designed to elicit participants' understanding of RTI were conducted during January 2020, spanning 38-62 minutes in length. A researcher’s journal was used throughout the study, including during the interview process, to jot important key phrases or aspects that warranted follow-up. A verbatim transcription of each interview was generated within three days of each interview, through the use of Otter, an assistive technology application. Accuracy of the transcription was ensured through two rounds of listening to the recording and revising for inaccuracies by the speech-to-text technology. Recognizing the importance of organizing the large quantity of data derived through qualitative research, transcripts were kept in their original order (Seidman, 2006) by using pagination in Microsoft Word. The 8 interviews and the aforementioned process generated a total of 150 pages and over 62,636 words.

After generating individual transcripts, a ‘contact summary sheet’ (Miles & Huberman, 1994) was created for each participant in this study. This included an overview of each participant’s background information, field notes, and follow-up questions to be addressed. The contact summary sheet was valuable to the data collection process. Not only did they help avoid the potential loss of basic information but assisted in capturing “thoughtful impressions and reflections” and helped summarize time-limited data that provided “immediacy with a reflective overview” (p.52) of what went on. Once this process was completed for each participant, data collection was complete, and the process of data analysis commenced. Information about the decisions and processes for data-analysis in this study are detailed in the following section.

**Data Analysis**

Since the term data ‘reduction’ implies the weakening or loss of something, Miles, Huberman & Saldana’s process for ‘data condensing’ was utilized as data is made stronger
through their iterative process for data analysis (2014). In the initial phase of analysis, preliminary thoughts were recorded while preparing each participant’s transcript. These notes were useful in later processing of what the interview meant and highlighted any potential biases (Rubin & Rubin, 2012). Recognizing that analyzing qualitative data must be done inductively rather than deductively, each transcript was hand-coded with an open-mind, void of hypotheses, “seeking what emerges as important and of interest from the text” (Seidman, 2006, p. 119).

Highlighting recognizable, well-phrased, notable quotes helped indicate concepts to explore more systematically in later analysis stages or themes to test (Rubin & Rubin, 2012). Since it is impossible to separate generating and analyzing data (Seidman, 2006), the use of a contact summary sheet was appropriate to the data analysis process in this study. A summary of the main points and intriguing passages that pertained to each research question was added to each participant’s summary sheet, producing a total of 52 pages and 35,210 words. Transcripts and summary sheets were then coded by using brackets to mark interesting points, compelling passages and words to classify and develop themes for each participant.

When organizing segments into categories, labels were kept tentative, acknowledging the fact that locking in categories too early could lead to dead ends (Seidman, 2006). Code definitions were generated (Rubin & Rubin, 2012) to ensure consistency in the use of the code and that the code matched the original meaning given by participants. This was achieved by returning to the study’s conceptual framework to sort through and code data (Miles, Huberman & Saldana, 2014). To fully understand a study’s findings, they must be “compared and contrasted to what can be found in published literature in order to situate the new data into preexisting data” (Baxter & Jack, 2008, p. 556). The constructs of SCT and literature in Chapter 2 were then considered to situate, organize and code the data for cross-participant themes.
Aligned with a constructivist tradition, an inductive approach that examined each individual’s experience was used before producing general statements (Callary, Rathwell, & Young, 2015). Once each transcript and summary sheet was coded, the process of making thematic comparisons that looked across each participant’s narrative, themes that spanned across participants’ experiences were generated. The aforementioned process of multiple, iterative cycles of induction and deduction (Miles et al., 2014) helped ensure that data analysis was situated in existing literature and in alignment with the theoretical base guiding this study in order to achieve the level of rigor necessary for quality qualitative research.

Though several electronic qualitative analysis software programs exist, they are criticized for distancing the researcher from the data. As Seidman (2006) put it “there is no substitute for total immersion in the data” (p.130). This study took on a phenomenological approach and opted for hand-coding and analysis due to the level of immersion, thinking and reflection required in this paradigm.

**Criteria for Quality Qualitative Research**

**Ethical Considerations**

The aim of action-oriented science to discover the nature of lived experience requires a personal responsibility for ethical decision making (Kvale, 1996). Since researchers are often the main instrument for obtaining knowledge in qualitative studies, moral integrity is essential to quality research. Ethical considerations taken in this study included obtaining participants’ informed consent to participate in the study, securing confidentiality, and consideration of the possible consequences of the study for participants (AERA, 2000; Roberts, 2010). These considerations were part of a rigorous application procedure and review process approved by
Northeastern University’s Institutional Review Board (IRB) on December 20, 2019 (CPS19-11-09).

Informed consent, a basic ethical component of research, was assured for each participant in this study. Before giving consent to participate, individuals were provided a description of the researcher’s role, the purpose of the research, what would be asked of them, and the risks they might encounter through participating in the study. Considerations were made to ensure this information was provided in a truthful, understandable and appropriate manner to each research participant. Participants were provided with a copy of consent procedures before their scheduled interview. At the beginning of each interview, participants were provided with a copy of the consent form and were reminded of their rights and assurances including their right to suspend their participation in the study at any time, without any personal or professional repercussions. Each participant was afforded the opportunity to ask questions before providing consent. All participants acknowledged their rights and provided either verbal or written consent. A signed copy or verbal record of each participant’s consent will remain in a locked filing cabinet for five years after the study’s completion date.

Additional safeguards to ensure the integrity of the sensitive, confidential information obtained as a result of this study included the following. All hard-copy, paper files pertaining to this research will be stored in a locked file cabinet in the researcher’s personal residence for a period of 5 years. Electronic files will be stored on a secure, non-public server on a password-protected, MacBook. To ensure anonymity, this study utilized the use of pseudonyms for participants and their identifiable information and when possible, the combination of data so that individual responses are subsumed under aggregate data (Roberts, 2010).
The ethical principle of beneficence means that the risk of harm to a subject should be the least possible. The researcher was fully prepared to give participants the option to terminate an interview if unanticipated negative consequences occurred during the one-on-one interviews. During the course of 8 interviews conducted as part of this study, the need for discontinuing an interview did not arise. Any potential issues that could arise in the public sharing of this study’s findings will be considered and addressed with participants (Kimmel, 1988). Additional considerations used throughout this study to reduce harm and promote social justice were the intentional use of gender-neutral words; avoiding language that could reinforce stereotypes; not identifying people by race and avoiding unsupported assumptions about age or ethnic groups (Roberts, 2010).

**Credibility**

Researchers must have a compelling argument for their research and why readers should trust the findings requiring a detailed, explicated, and transparent process. The use of a theoretical framework (SCT) helped build a foundation for this research and guided the decisions and procedures that needed to be made in the research process (Roberts, 2010; Rocco & Plakhotnik, 2009). This study implemented the use of Social Cognitive Theory (SCT) to justify the research, inform the design, provide a tentative theory of the phenomenon under study, and identify potential threats to validity (Maxwell, 2004).

To safeguard against the framework limiting a true inductive approach, a research journal (Baxter & Jack, 2008) with thoughts, decisions, and discussions with other researchers was used throughout the research process. Initial field notes, journaling and the completion of a contact summary sheet after each interview, ensured the adaptability and be responsiveness to themes that emerged during the data collection and analysis (Stake, 1995; Yin, 2013).
The use of a research protocol enhanced this study’s reliability. The IRB-approved protocol guided data collection, the sources and interview instruments used, and the order in which data was collected (Yin, 2013). Once participants were found eligible to participate, they were each provided with the same information about the goals of the study, their role as a participant, the role of the researcher, the opportunity to ask questions, and were notified of their right to discontinue or refuse any question or part of the interview at any time. Each participant in this study gave either verbal or written consent to participant. The same interview protocol was used with each participant in this study. During data collection and analysis, a process of member checking was utilized, “where the researchers’ interpretations of the data are shared with the participants, and the participants have the opportunity to discuss and clarify the interpretation, and contribute new or additional perspectives on the issue under study” (Baxter & Jack, 2008, p.557). All participants received a transcription of their audio-recorded interview within three days following their interview and were given the chance to ensure transcript accuracy.

The data collected, retrieved and stored for this study, as suggested by qualitative scholars Miles and Huberman (1994) included raw materials (field notes, audio recordings); partially processed data (contact summary sheets, transcripts); coded data; coding schemes; data displays; step-by-step documentation of the research process and analysis, design, methodology and findings drafts; a chronological log/documentation of data collection and analysis; and an index of all supporting materials.

**Transferability**

Qualitative research has broad disciplinary appeal (Creswell, 2013) and is useful in probing an area of interest in-depth (Baxter & Jack, 2008). This research aimed to uncover
sources of efficacy concerning the strengths and challenges educators face in implementing RTI intervention frameworks. A qualitative research methodology allowed key stakeholders in RTI implementation, classroom teachers and instructional specialists, to express their experiences and have voices heard through this approach. The eight participants in this study were drawn across two New England states, one mid-Atlantic state and one Southeastern state. All of the educators recently implemented or were in the process of implementing RTI at the middle school level.

The sample of participants in this study allowed for the exploration of the issues that multiple states and school districts face in implementing RTI in different contexts. Of the eight participants, 3 have worked in multiple school districts where they experienced RTI and were able to speak about those contrasting experiences. Collectively, the eight participants represent experiences within 10 different middle schools. The school districts represent a variety of demographics and a range of socio-economic status. The sampling of teachers from multiple schools, states and districts adds confidence to the findings by enabling the examination of a range of similar and contrasting experiences (Miles & Huberman, 1994, p.29) and increases the transferability of this study’s findings to other settings.

Stake (1995) calls for research that is evidence-based that compels readers to action. An adaptation of Stake’s sequence for reporting results was used in this study: background details on the problem of practice and researcher; an overview of key issues; a summary of comparing and contrasting evidence; summary of findings. Realizing the level of detail necessary to communicate the holistic nature of qualitative research (Creswell, 2013), the results of this research are presented through rich description in a narrative style that includes compelling passages to enhance the visual data presented in charts and tables.
Even when teachers are allowed to ‘speak for themselves’ their words are subject to the thoughts and worldview of the researcher and with this, the knowledge of teachers about schools, children and schooling can be silenced (Rogers, Delaney & Babinski, 2004). Since interpretive paradigms are focused on understanding, multiple researchers may come up with different conclusions, which can be viewed as bias. To minimize bias, the researcher engaged in a process throughout the research process through a continuous examination of positionality to manage bias to enhance the credibility and transferability detailed in the following section.

**Self-reflexivity and Transparency**

Qualitative researchers serve as the primary point of data collection and analysis as they are directly involved in observing, interviewing, observing and analyzing documents (Merriam, 1991). The qualitative research tradition requires close, interpersonal contact in order to construct a true expression of the lived experience being researched. bell hooks compels educators to “confront biases that have shaped teaching practices in our society and to create new ways of knowing, different strategies for the sharing of knowledge” (1994, p.12). Since hermeneutical principles cannot be neatly applied to the educational experience (Gallagher, 1992), several potential biases were identified and considerations for limiting these biases were made before the research process began.

Researchers bring many dispositions to the table and despite objective intentions, if one neglects to assess their personal biases, the research will be flawed (Machi & McEvoy, 2016). Personal values of researchers can find their way at various stages of research including in making the decision a problem is worthy of investigating and defining the problem as well as preconceived interpretations of the causes and potential solutions (Kimmel, 1988). As a reading specialist, I have served as an active member of RTI teams since 2010. I have also been
responsible for the assessment and instruction of students identified for support through the RTI framework. Thus, I had to acknowledge a potential bias in that research problem was selected out of personal reasons and experiences since my own experience has included inconsistent RTI processes in schools. Through a comprehensive review of previously published scholarly literature, the problems with RTI that brought about this problem of practice presented to be systemic throughout K-12 education and demonstrated an unbiased need for further investigation.

Beyond the problem of practice and examining previous research, I had to acknowledge and put aside my personal experiences and biases throughout the entire process including the development of research questions, selecting and interacting with participants in the interview process, and data analysis. Since data can be manipulated in various ways that can undermine the accumulation of knowledge in a scientific discipline (Kimmel, 1988), I was cognizant to embody Kvale’s notion of qualified naïvete, an openness to new and unexpected phenomena through the research process (2007). Rather than having prepared categories or themes to analyze, obtaining descriptions that were as presuppositionless as possible was achieved through the use of existing literature and a theoretical framework to develop a carefully considered semi-structured interview protocol (Appendix A).

Self-awareness was crucial during these phases in considering the influence I had over participants. To reduce bias that could stem from personal experiences with RTI, interview questions were crafted using careful consideration for language that did not “color the interview in a direction that doesn’t fit the interviewee’s experience” (Josselson, 2013, p. 44). Interview and follow-up questions were also intentionally crafted as open-ended and connected to both existing literature and this study’s theoretical framework to limit the potential preconceived
understandings and experiences with RTI of the researcher. This safeguarded against potential bias and allowed participants to develop a narrative based on their own experiences.

Since we all come from different places, backgrounds and levels of education, I considered myself in relation to others (Milner, 2007). Under Milner’s framework, my title of reading ‘specialist’ and ‘researcher’ implies ‘all-knowing’ therefore, I had acknowledged that I could be perceived as a position with authority of knowledge by others. I recognized that my specialized coursework in literacy remediation and doctoral studies may be different than that of participants and was open and without judgement to the knowledge that others may or may not possess throughout the research process. Acknowledging that many participants have never been involved in educational research or knew what to expect of the process, each participant was reminded that the purpose of the research was to enhance and improve RTI systems, so that their deepest honesty about their experiences, including their potential shortcomings, was encouraged and necessary.

Gallagher discusses hermeneutical problems originating out of scientific communication (1992). In interacting with participants, the researcher acknowledged everyone will have different background knowledge and scaffolded material and used careful language that translated scientific information into a language of the social-life world accordingly. To achieve this, Rubin & Rubin (2012) suggestion to use ordinary, jargon-free language that interviewees can understand was utilized and allowed for greater scope in answers that elicited personal experiences and insights.

This also required a sensitivity to my own emotions and how my attitude might influence the questions, follow-up questions, and responses of interviewees. During each interview, I followed the suggestions of Rubin & Rubin (2012) and refrained from making strong statements
that reflect moral beliefs and maintained critical listening. Listening is an often-overlooked skill, “when you listen to others’ perspectives, you come to understand how your positionality exists in relation to others” (Takacs, 2002, p. 174). It was essential to acknowledge that my knowledge claims were not the personal truths of all and was cognizant to fully listen to the experiences of participants.

The potential implications of my dual roles as an educator and researcher in my personal school context were considered since such dual roles can sometimes result in ambiguities and conflict. Scholar-practitioners must build on the closeness they have to their contexts, while at the same time, create distance from it in order to see things critically and enable change to happen (Coughlin, 2013). To avoid such conflicts, the participant sample extended beyond my personal school context, and when interviewing colleagues, I was sure to build trust and maintained full transparency, confidentiality and disclosure.

Caruthers and Friend assert the importance of critical self-awareness as “an evolving process that must be continuously examined” (2014, p. 30). Given this need to examine self-awareness throughout the research process, a research journal was utilized to document logic and reasons for research decisions. Placing objectivity at the forefront of this research and the importance of reflecting on decision-making motivations assisted in minimizing biases and increasing the credibility of this research. As the researcher, a strong self-understanding and the ability to listen to, recognize, and affirm participants’ experiences was critical to eliciting richness in what participants shared.

**Limitations**

This study investigated RTI implementation in middle school contexts, specifically the sources that enhance or inhibit educators’ capacity to enact change through the framework. Thus, the
resulting findings are limited to the middle school sector of K-12 education and to the perspectives of 8 individuals that volunteered their experiences. The study’s theoretical framework, Social Cognitive Theory (SCT), also presents a limitation in that it is based on the dynamic interplay between person, behavior, and environment, but does not address or offer address whether one is more influential than another. Future studies would enhance the findings of this study by including additional middle school educators, across additional districts and states. Despite these limitations, there was valuable insight gained based on the experiences of the participating educators in this study. The following chapters include findings and conclusions that will hopefully serve as important considerations for refined middle school intervention practices in school contexts, attention to the needs of educators by teacher preparation programs, and other disciplines as they relate to implementation science.
Chapter IV: Findings

The purpose of this qualitative research study was to understand the experiences of middle school educators involved in RTI implementation through uncovering sources that have contributed to teacher efficacy as well as the barriers that persist for educators in this endeavor. This chapter begins with a summary of the study participants, data collection process, and is followed by a presentation and discussion of themes that emerged in the analysis of data in relation to the research questions that were developed for the purpose of this research study. This study aimed to address the following research questions:

How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) process?

What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI?

Summary of Participants and Data Collected

The participants in this study were middle-school level, public educators. In addition to being a certified middle school educator, another criteria for participation was experience implementing the RTI framework within the last year. Eight educators were interviewed. The sum of their experience in education represents a total of 12 different school districts, across four different states. Participants were offered flexible options for the interview; either in person or via telephone/video call. Two participants opted for video/phone interviews, while six chose in-person interviews. Participant’s Name, Role in RTI, total years in education/years in current position, total # of districts where they experienced RTI; location/region, and district pseudonym are displayed in Table 1.
Data was collected through an IRB approved, semi-structured interview protocol (Appendix A). The semi-structured nature of the questions was an intentional part of the study’s design. Allowing participants the opportunity to respond to open-ended questions allowed the researcher to develop ‘thick description’ from participants’ responses (Creswell, 2013). Within four days of each interview, a transcription of the audio-recorded interview was sent electronically to participants via email. Participants were given the opportunity to examine their interview transcript for accuracy and could request any inconsistencies to be revised or removed.

Table 1  
Overview of Participants

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Role in RTI</th>
<th>Years in Education/current position</th>
<th># of Districts</th>
<th>Location/Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>ELA classroom teacher</td>
<td>7</td>
<td>1</td>
<td>Northeast</td>
</tr>
<tr>
<td>B</td>
<td>ELA classroom teacher</td>
<td>7/1</td>
<td>1</td>
<td>Northeast</td>
</tr>
<tr>
<td>C</td>
<td>ELA classroom teacher</td>
<td>2</td>
<td>1</td>
<td>Mid-Atlantic</td>
</tr>
<tr>
<td>D</td>
<td>ELA classroom teacher</td>
<td>6/4</td>
<td>2</td>
<td>Northeast</td>
</tr>
<tr>
<td>E</td>
<td>Reading Interventionist &amp; RTI Coordinator</td>
<td>21/6</td>
<td>3</td>
<td>Northeast</td>
</tr>
<tr>
<td>F</td>
<td>Reading Interventionist &amp; RTI Coordinator</td>
<td>18/6</td>
<td>1</td>
<td>Southeast</td>
</tr>
<tr>
<td>G</td>
<td>Reading Interventionist</td>
<td>18/4</td>
<td>1</td>
<td>Northeast</td>
</tr>
<tr>
<td>H</td>
<td>ELA classroom teacher</td>
<td>4</td>
<td>2</td>
<td>Northeast</td>
</tr>
</tbody>
</table>

Participant Summaries

Teacher A has been teaching at the same middle school for seven years. The amount of time this teacher has spent in the same school offered perspective into historical changes with RTI that have occurred in the school since beginning their career with their direct involvement in RTI as a general education, English Language Arts (ELA) teacher.

Teacher B has been teaching in the same school district for seven years. Prior to this school year, Teacher B was teaching middle school language arts; however, this year, is teaching
the same grade, but in an elementary setting due to school consolidation. This participant offered insight into the historical changes of RTI that have occurred throughout their seven-year tenure in their district as well as the perspective of experiencing RTI within a different setting.

Teacher C is a second-year, middle school language arts teacher in a Title I school. This participant discovered their passion for teaching while substitute teaching for extra income after graduating with a bachelor’s degree in an area outside of education. Teacher C offered the perspective of an early-career teacher and provided insight on the impact of certain supports on their experiences implementing RTI.

Teacher D has been teaching middle-school English Language Arts for six years. Their most recent experience has been at the same school for the last four years. Teacher D’s first two years teaching were spent in a different school system, a former state-turnaround school, where there was extreme pressure, teacher turnover and a focus on data ‘to check off a box’. Teacher D provided insight in contrasting two very different experiences in the two districts.

Teacher E has been teaching for a total of 21 years. For the past seven years, Teacher E has been a middle school reading specialist. This is the first year where they concurrently serve in the role of their school’s Tier 3 coordinator. Prior to this, Teacher E was an elementary classroom teacher and reading specialist in two other school districts. This participant offered insight in having experienced RTI both as a reading specialist and a classroom teacher at both the elementary and middle school level.

Teacher F has been teaching for 18 years at the middle school level. Their most recent six years have been in the capacity of RTI interventionist; working with small groups of students and providing remedial instruction. In the last two years, Teacher F has also served as their school’s RTI manager. Before this, they taught family and consumer sciences. Teacher F finds
more job satisfaction by being able to help students through their interventionist role. This participant offered perspectives on classroom teacher resistance to RTI, as well as a personal experience with Dyslexia.

Teacher G began their 18-year career in education in their current district as an elementary-level reading specialist. After 14 years at the elementary level, Teacher G transferred to their current teaching assignment of middle school reading specialist. Teacher G offered insight into how RTI has changed over the course of their career and in contrasting elementary and middle school RTI programming.

Teacher H has been teaching middle school ELA for four years. This current school year is their first year in a new district. Teacher H offered the perspective of an early-career teacher who has experienced RTI differently in two different middle schools. Their current teaching assignment sharply contrasts their previous school system with regard to organization and priorities.

**Data Analysis**

Once transcripts of individual interviews were generated, the initial stages of analysis began by reducing data to a contact summary sheet (Miles & Huberman, 1994) to not lose first impressions and to document noteworthy or interesting highlights from each interview. Individual transcripts and contact summary sheets were coded for initial themes among individual participants. All participants shared experiences that included the role of instructional leaders, school leadership and school structures that contribute or constrain RTI implementation. Each participant shared positive beliefs about the potential for RTI, and all participants had needs and areas for growth within the process, regardless of the number of years of experience, role in RTI, or position. Another commonality was the fact that all participants were involved
with using data from a school-wide, computerized, universal screening/benchmark assessment. These universal screening assessments are among four of the most widely used universal assessments used throughout K-12 education in the United States: FastBridge Learning, I-Ready, Renaissance’s STAR 360, and NWEA’s MAP (Measures of Academic Progress. All participants were public, K-12 educators and made references to state testing and associated accountability.

Once initial coding took place, significant passages and information relevant to each of these commonalities expressed across individuals was added to participants’ contact summary sheets. A second round of coding took place using only these significance passages. Miles, Huberman, and Saldana’s inductive approach to coding and summarizing data was used to organize the data into three main classifications from the eight interviews: categories/themes; causes/explanations; and relationships among people (2014). Using the lens of coding among people in a similar role, second-round coding of the significance passages began with the data from the three instructional specialists in this study. Interestingly, all three specialists, from three different schools, in three different states, all shared that they felt the need to ‘fight’ for students in some way and how general education teachers held misconceptions or resistance to RTI. This was a theme that was not present during individual coding and provided a lens as teachers’ significance passages were examined.

As classroom teachers’ significance passages were analyzed, a code for resistance and misconceptions was created to triangulate what the specialists shared. Interestingly, instances of misconceptions and/or aspects of their experience that led to resistance were present in each of the classroom teachers’ interviews. Patterns started to emerge as the data was examined for aspects that led, or may have led, to feelings of resistance amongst five general education
teachers in this study. Generally, these were surrounding misconceptions around RTI in general as well as with data use, pressure due to accountability, and a lack of a shared vision and support.

Miles, Huberman and Saldana (2014) suggest contrasting experiences offer deeper analysis. Given that almost all participants experienced some type of contrasting experience as discussed in their interview, a third round of coding to examine these experiences and turning points. Since participants who experienced RTI at the elementary level described a significantly different process at this level, nuances to middle school RTI implementation were examined and coded in each interview. Every participant either worked in other districts, roles, or buildings, or experienced a revision of RTI at some point in their career and was deemed a worthwhile concept to explore for insight. As analysis continued, each contrasting experience shed light on numerous constraints and enablers to RTI. With this round of coding, patterns of need emerged amongst, general education, early-career teachers and specialists.

**Findings**

The aforementioned multiple-round process and in-depth analysis of 8 transcripts yielded 4 themes and 10 sub-themes that assisted in providing answers to two research questions this study aimed to answer: How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) process? and What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI? A summary of these themes and sub-themes are displayed in Figure I. Theme 1: RTI is 'Messier' at the Middle School Level (Subthemes: Schedule; Middle School Design); Theme 2: Data Use (Subthemes: 'Data for Data's Sake', ‘It Gets Kind of Foggy’ and 'Deep Dive' into the Student); Theme 3: RTI & SLD Identification: 'A Vicious Circle' (Subthemes: “Stuck in RTI”
A presentation and discussion of these four themes and their subthemes that emerged through data analysis in relation to the research questions developed for this research study are discussed in the sections that follow. Details and supporting quotes are also included as they helped shape and give meaning to the thematic findings.

**RTI is Messier at the Middle School Level**

The messiness and nuances to implementing middle school RTI was a theme that emerged through data analysis. It specifically was spawned as a result of two participants’ sharply contrasting experiences with RTI at the elementary and middle-school levels. They each shared powerful and parallel statements regarding the contrasting processes experienced in their respective school systems. Teacher E felt RTI at the elementary level was, “really well done. …it's messier at the high school/ at the middle school level, there doesn't seem to be like...the
process is, it's just kind of wonky…. it's not as well-oiled as it should be”. When Teacher G transferred to the middle school from the elementary level, they felt they “had to learn the RTI process over…. I think that the elementary school understands it better...where the middle school, it gets kind of foggy.”

These powerful, contrasting statements initiated an additional round of coding for themes that all participants shared that were unique to middle school RTI implementation. While not all participants have experienced at RTI at differing levels, many spoke about subthemes related to middle school RTI, the impact of the schedule and the content-driven nature and design of middle schools.

**The Schedule.** The impact of the schedule on RTI implementation emerged in different ways across both the teachers and specialists that were interviewed. Teacher E shared,

> I have to be honest … at the secondary level, the schedule drives everything… that I think is the biggest obstacle… this kid could exit, or this kid over here really needs it. … but we can't with the scheduling.

Teacher A described how their school’s schedule impacts them,

> Sometimes I feel like I'm not good at actually implementing some RTI just because of the way the schedule works... even though I have a time that's supposed to be designated for RTI, it doesn't necessarily get to work out that way…due to scheduling mishaps…. it's just not as ideal on a day to day level as it could be, it's not as flexible as we would really need it to be…if we could get that extra time scheduled in a better manner than we’d be able to really implement good RTI.

Two participants described how the schedule negatively impacts when they are able to provide students with intervention, during the students’ elective time. “It's not the best or ideal at all because the kids…(they’re)missing their elective and they don't want to,” (Teacher G). Teacher F described how her students perceive their intervention class to be the “dreaded” reading elective.
Several participants shared how the schedule impacts opportunities to collaborate. Teacher E described their time working in an elementary setting where, “teachers had opportunities to come and present at regular meetings about students” whereas this is not present in their current middle school. Teacher F echoed a similar experience… “because of the way our school schedule is set up...there's no way to get classroom teachers in”. In asking for training with assessment measures they are expected to collect for RTI, Teacher B shared, “due to the fact that we have no common planning time, it's almost impossible to get any support”.

**Middle School Design.** In addition to the impact of the schedule, the content-based nature of middle school design emerged as impactful to implementing RTI in the middle school setting. Teacher H, upon graduating with a bachelor’s degree in Secondary English, admitted, “I had no idea what it (RTI) was...and I didn't really even know the difference between that and special education”. Similarly, Teacher C shared, “I know my content, because that's what my degree is in... so I know my content, but delivering it to the children, tailoring it to those that aren't quite there yet, or tailoring it for those to making it more rigorous...” and went on to describe that it was not until their master’s degree program in reading they felt prepared to do both.

Teacher G, a reading specialist, contrasted their experiences at the elementary level,

I think that the elementary school understands it better…and they're teaching reading... In the middle school, just the reading specialists do the interventions, no one else...in elementary school, it's different; the classroom teachers and reading teachers…do the interventions.

Teacher E described how at the elementary level “it was easier to say this is where we see this child struggling; decoding. So, for the next six weeks, I’m going to work on strategies with that…. it's not like that at the middle school level”.
As a specialist, Teacher G sees a “weakness throughout the school with Tier 1 instruction. I don't see a lot of teachers, able to take small groups and really focus in on them”.

Teacher A, a classroom teacher, highlighted a similar difficulty faced in implementing RTI in the 45 minutes they have with students:

I feel like I have so much to do, that I feel like I can't always get to all the individual or small group RTI stuff at tier one level that I need … just trying to feel like I can actually find a way to make it work without feeling like I'm torn in 20 million ways….In 45 minutes to get to do warm ups, to get to do attendance, to get to do a lesson, to get to do practice, to check in with up to 24 students…. trying to get everybody engaged, involved as possible…at some point, it just feels like you just can't quite do everything …it just feels like there's just not enough time.

**Conclusion**

The nature of middle school design poses challenges to implementing intervention frameworks at the middle school level. Fixed bell schedules impact when students are able to attend intervention and are less fluid and flexible than that of elementary settings. Students sometimes stay in intervention longer than needed due to the scheduling or cannot get scheduled due to other requirements. In addition, educators with secondary backgrounds are expected to implement RTI and may never have been trained to do so in the content and subject-area focus of secondary education teacher training.

The design of traditional, middle school settings including the structure of the daily schedule, as well as the knowledge and training by certificated educators at this level, add complexities to effective implementation of intervention frameworks.

**Data Use**

One of the main pillars of intervention frameworks such as RTI is the use of data. Spawning out of education policies such as No Child Left Behind (NCLB) and ESSA, public schools face expectations and accountability ratings that create high-stakes environments.
Participants responded to several of questions surrounding data-use. Three subthemes emerged throughout the data analysis regarding the use of data: ‘Data For Data’s Sake’, It Gets Kind of “Foggy”, and the need for a ‘Deep Dive’ into students’ needs.

‘Data for Data’s Sake’. Frequency/word counts for “pressure”, “numbers” and “data” were among the highest across all interviews that led to the determination of the subtheme ‘Data for Data’s Sake’. Teacher G described their school administrators to be “really interested in the numbers…numbers and testing… we want to be a five-star school…. we're a three-star school … so that pressure this year is….”. Teacher G described how in RTI meetings, “there's a lot of questions and a lot of pressure on the teacher like why they are doing this…why this is happening and why does the data look so bad… it's a lot of pressure”. Teacher D recalled a persisting feeling and culture in a former school district where,

People are always out to get you and to find like a gotcha moment, based on data… a very punitive feeling … as my first like year or two of trying to learn to become a teacher and feeling like you are under Damocles (sword) at all times.

Under this pressure, Teacher D recalled, “it was not uncommon that you had teachers crying, and the turnover”. Part of Teacher D’s defining memory of data meetings in their former district is “using our time, the wrong way and then criticizing everybody for it”. Teachers in this school were required to attend weekly data meetings, often discussing data outside of their content area. Teacher D felt these data team meetings were more about “administrators covering their own interests” and “worrying about standardized test scores…. And how they were being judged by the state, instead of actually worrying if the kid’s getting what they need”. Teacher C shared a similar experience, describing their school administrators as “numbers people”.

When I say numbers, I mean where the kids are and where they want them to be…they’re not… oh this is what little Johnny needs because he’s struggling …it’s just like Johnny’s a one, he’s not a two yet, we need to get him to a two.
Before Teacher G’s district adopted their universal screening assessment, they reported numerous assessments were considered to decide entry or exit from intervention, but, “I feel like now the computer-based assessment is... determining if they qualify or not, they're not always listening to the teacher or data, or other assessments, they really want that computer based, that number...they're looking for numbers”. Teacher B described pressure to show up at RTI meetings with data,

Teachers feel an extreme pressure to just generate data, generate data, generate data, that it's not as valuable as it could be...there's not a lot of conversation around what's happening in the classroom. It's really data on a piece of paper...very number driven. If a student is performing well on a standardized assessment, whether it's a district assessment or ...state test, then the teachers anecdotal evidence in the classroom or day to day observations, or classwork...in my experience, are generally not valued as highly as that standardized assessment... if the kid is performing well on a standardized assessment that seems to be acceptable as the kid is doing okay.

Teacher B described an example of a student who has daily struggles with executive functions, but scores okay on assessments. The participant summed up the response they received from their school’s RTI team as “his scores are high, his scores are great, and that was basically the end of conversation”. In Teacher H’s former school, data from their schoolwide universal screener,

really wasn't explained....when I would ask people about it, it was kind of... fluffy, like I don't think people really knew what it meant...they're like hey here's data, but ...how are you using this to help the student... what do you do in your curriculum to help with that?

‘It Gets Kind of Foggy’. A second sub-theme, It Gets Kind of ‘Foggy’ was generated as a result of every participant discussing something to do with behavior, work completion, or effort-related factors and the need to sift out the root causes of students’ difficulties and needs.

A pillar of intervention frameworks such as RTI includes the use of universal screening. All of the participants in this study shared their experiences with their respective schools’ use of a universal screening assessment commonly given three times a year for all students and more
often for students receiving intervention. As a classroom teacher, Teacher H reflected on universal screening data,

It’s great because it can give you an overall, but it also stinks at the same time because it's not showing you specifically what they need help with … it doesn't help with the little things… I see that they're low, or I said they're high, but it doesn't tell me really why.

Across participants, there was a shared difficulty in their individual school contexts discerning effort, behavior, and work completion over specific reading or academic impairment. Teacher H noted the impact of behavior and motivation on universal benchmark scores that do not match a student’s classroom performance:

I think it's more so a motivation and attention thing because if I'm with them one-on-one or they're really focused and they're not with their friends, they do fairly well… so it's a that's more of a behavior that's affecting it not anything to deal with do any kind of reading discrepancy.

Teacher G emphasized how in “middle school, it gets kind of foggy with the behaviors of the student…and what's really needed” and described how RTI meetings can get “heated”,

I don't think they (teachers) understand RTI and the process very well…if a student is not doing well, they want to just put them in RTI and we have to decipher if it's effort, or behavior, or a reading problem…we get a lot of pushback…grades can be data, but then we'd see it's just, he's not doing his homework that's why he's failing…and that's kind of a behavior and effort thing and it's not a reading issue…so it gets pretty heated.

Before Teacher A’s school recently revised their RTI process, they described how prior RTI concerns were “more of a work completion issue where students just weren't doing the work… and we couldn't figure out, are they not doing the work because they don't understand…or are they just being work avoided. Teacher E also described how students are referred to RTI because they are failing a class,

So, then we would investigate… well they passed every test in the class…they're not doing their homework, or the assignments; that's why they're failing your class; it has nothing to do with reading… that's a behavioral thing.
‘Deep Dive’ into the Student. A final sub-theme resulted through analyzing participant’s needs with relation to contrasting experiences or experiences that went beyond ‘data for data’s sake’. Teacher B summed up this need for a deep dive into students’ needs; “it feels like data for data sake, rather than getting a holistic picture of how the student is performing”. Many participants acknowledged the need to look beyond “data on a piece of paper” to looking at students at a holistic level being crucial to their success with middle level students. Teacher H contrasted their former negative experiences with RTI to their current school by describing a student-centered versus test-centered philosophy, “they just they really dive deep into the student, like the student is priority. It doesn't matter really what the tests say, I mean it does, but ... what does this kid need.... let’s dig in deeper”. Teacher E emphasized this holistic picture and the importance of making connections with students. In preparing for RTI meetings, they try to get as much of a “global picture” on a student by “talking to the dean, gathering information on students’ home life...as a team come up with something to help the student and we look to see if they’re connected to anyone in the school”. Echoing these experiences, Teacher A shared how some of the teachers on their team have had their students in previous years, “so, they just have some extra background knowledge that sometimes is helpful”.

Teacher G’s school recently implemented a separate behavior RTI team in addition to their existing reading and math team that has “cut down a lot on our students”. In an attempt to address holistic factors, Teacher C’s school implemented an attendance homeroom intervention because “we had a problem with kids coming to school…and when you're not there you don't learn, you don't learn”. Teacher C spoke about the need to individualize for students and be cognizant of “whatever stressors they have at home, and everything else that's going on, you have to approach them in a manner…where you're meeting the kids on their level. … you need
to be able to recognize that”. Further exemplifying the need for a holistic approach to working with students, Teacher D acknowledged the need to build strong relationships with students, “that gives you more to work with …helping them address that in a way that hopefully removes some barriers or some anxieties”.

**Conclusion**

Many school administrators emphasize data for accountability purposes and focus heavily on the ‘numbers’. There are detrimental effects to focusing on data in the wrong ways that do not lead to meaningful classroom use, including burnout and teacher turnover. There is also uncertainty across schools around when a student should be referred for intervention and the need to carefully extrapolate the root cause of students’ difficulties. This includes analyzing the use ‘grades’ as data within schools as well as the consideration of work completion, behavior and effort. Finally, the educators in this study expressed a strong value in a holistic approach to looking at students’ needs; including the importance of making connections with students and considering students’ social-emotional needs that impact learning.

**SPED and RTI; ‘A Vicious Circle’**

Many states use RTI as a pathway to the identification of learning disabilities. Contention in this process emerged as a theme across participants. Many described experiences where they needed to ‘fight’ for students or discussed blurred lines in terms of time in RTI. Some of the terms that generated this theme were ‘fight’, ‘making progress’ as well as impactful statements such as “the district is afraid of that word”. Sub-themes emerged with regard to “the vicious circle” as described by one participant, students being “stuck in RTI” and the need to “fight” for students. The data generated from this theme and subsequent sub-themes speaks directly to the
research Question: What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI?

“Stuck in RTI”. Many participants shared instances of frustration or unclarity surrounding the amount of time a student should spend in intervention and with the measures that are being used to make such determinations. For every participant, their school’s multiple-choice, computerized, universal screening assessment tool is commonly used to make such decisions. Students who do not perform well on the universal screening assessment in Teacher E’s school are put into an intervention class. However,

There’s no like every six weeks, change….it used to be kids were in it for a year...(now) we do look at kids mid-year….What became difficult…is, so the kid’s making progress with this intervention… some kids were just stuck in RTI for like two years.

Teacher F shared a similar experience:

I have some students that have been helping since they were in sixth grade and they're now in eighth grade… They're making progress that is very, slow. And because they are making progress, they keep them in, and we try different interventions and things to keep it/them making progress.

This issue was echoed by many participants. Classroom teacher D indicated feeling frustrated with the formality of the RTI process potentially delaying the process for a student to receive additional support:

It can be frustrating to feel like there’s so much formality and paperwork between that process. …like you recognize a need and need to... just want to feel like trusted as an educator…we should act on that need now, instead of like data, data, data, data, data.

Despite making progress students in small group instruction on a specific skill, when students exit back to whole-group instruction Teacher E has observed some students continue to struggle, “so they’d really needed a referral to special education, but they couldn’t get that, because they were showing progress on RTI. So, it was like a vicious circle”.
“Fight” for Students. Many participants recalled a time they felt they needed to ‘fight’ for students because they did not feel a student was getting what they needed through RTI.

Teacher C recalled being in a meeting where they had to advocate for a student, who was struggling and in need of more support. “According to his universal screener scores, he is fine; he's proficient enough...it's all computerized... he's just clicking, he's reading and he's clicking. Yeah, he can do that, but this child cannot write.” Despite some team members’ reports indicating this student was meeting their goals, Teacher C spoke out and presented work samples that supported their concern which resulted in more testing and support for the student.

Teacher F shared an account of a personal experience involving their own child. “I knew there was a problem. Because he didn’t show discrepancy between his state test, and his IQ, he was ineligible for special education accommodations…I knew that he was having problems, and they wouldn't listen to me”. Frustrated, they reached out to their state university’s dyslexia center, where an underlying dyslexia diagnosis was made when the child was in 8th grade; If I hadn't fought, he would have been one of those kids who fell through the cracks… that's really when I started wanting to do more… I really care about these kids, I really want to see them succeed of...seeing them having the problems that my, my son had. And I don't want them to have the same outcomes that he was having until I kept fighting for him and I want, I want to see them succeed...I feel like that...I can help them with this RTI process, I can help them to see that yes, they can do it, it may be harder for them and may, they may need to work harder at it, but that they can succeed too. I've got one now that I'm fighting for. There's something we're missing...they think, he's…just lazy and that he doesn't want to try, that there's no effort put forth there...

As reading specialist, Teacher G, shared their school recently-revised RTI protocol includes less-rigorous exit criteria for students in RTI. Unlike previous years, students with IEPs were put on reading specialists’ caseloads that seemed to spawn out of a lack of growth by this sub-group on the state standardized assessment. The number of students added to specialists’ caseloads was not met with additional staffing and students who had RTI plans are being exited
from RTI but are still in need of support under the less rigorous exit criteria. Teacher G described a student with an RTI plan who recently exited:

Now he doesn't have my support... and I tried to fight, saying (the student) needs help...even though (they met the new exit criteria)...so the parent is going for outside testing, just because they think they see something and I agree...they're trying to keep the numbers in special ed very low...it is a fight to get a student tested.

Teacher G has referred students to the special education process who subsequently qualified but, “I've never had a student labeled dyslexic...our system is scared of that word...we kind of shy away from that word”. Despite suspecting it in some students,

I have not commented...we're not allowed to diagnose as a reading specialist...we can just suggest...so I'm really careful with that...I don't want to say it...and then it comes back and it's not that, and then I freak the parents out...it's just makes me look bad.

**Conclusion**

Intervention Frameworks such as RTI were designed to provide high-quality instruction and serve as a way for students to receive intervention with the goal of sifting out a curriculum or skills gap over an actual learning disability. The data and findings from this study suggest intervention frameworks may be delaying referrals to special education due to a lack of clear answers with how long students should spend in intervention, how much progress is considered enough to exit, along with the measures that are being used to make such determinations. Each participant in this study felt the need in some way, to ‘fight’ for students because they did not feel a student’s needs were being met through RTI.

**Supports**

The final theme that emerged was the various supports that participants described that led to turning points in their RTI implementation or needs that exist. Most participants experienced something similar to Teacher D’s experience in a former school, “there was this, like, floaty idea of intervention, and that didn't really mean anything other than look at data...and nothing really
ever came of that data”. Many participants talked about turning points in their understanding of data use which was the first subtheme, “Switching Gears; Supports in Actionable Data Use”. This emerged out of numerous participants being able to contrast their experiences either from elementary to middle school or experiences with RTI in multiple districts or school contexts. A second sub-theme, “Contextual Supports” was derived from the general contextual supports that participants spoke of that assist them regularly with RTI. A final sub-theme included the areas participants felt additional training and direction was needed.

Switching Gears; Supports in Actionable Data Use. This section will delve into meaningful applications of data and turning points in participants experiences with data use. Teacher A described the evolution of RTI data use in their 7-year tenure in their district. At first, it “was much more observational”. There was a shift with the district-wide implementation of a universal screening assessment; it was a “way to kind of switch gears on it's not just grades, but let's look at the skills base of it...and once everybody's mind got wrapped around that, it kind of really changed”. Initially, using the universal assessment was frustrating; and recalled a common feeling among staff; “how are we even going to use this?”. However, with ongoing use of the assessment, Teacher A described: “the teachers were really seeing what it could do for us” and attributed this to “working together with the other content people, cross content…our administrators also would work on it….instructional coaches went to additional trainings… have us look at the reports and what the reports were good for”.

Teacher B echoed a similar experience with the sustained use of their school’s universal screener, “at first it was very complicated and very overwhelming and very confusing…it took really extensive training and … years of practice to become very comfortable with it.” Teacher B attributed their capacity to use the universal screening data to the fact that,
we were given the time by administration, specifically to work on our understanding of administering the test and evaluating the results and looking at resources to support students…It was over time and it was looking at it, as a whole staff at staff meetings and then in smaller groups by area of specialty… And then, sitting down with assistant principals during meetings where we would set our student learning objectives for year, and we'd look at that data... it became very familiar.

Teacher H reflected on previous feelings of unclarity in using universal screening data and how a subsequently earned master’s degree in reading was a turning point in using such data:

How are you using this to help the student...what do you do in your curriculum to help with that? I didn’t ask those questions being a new teacher, it's just kind of, I'm going to do as I've told, because I have no idea what I'm doing…versus going into the reading program, it helped me to really break down, like understand what was going on.

Teacher H was able to speak of a more meaningful experience in their current district, “we look at all the different types of data that it can pull… comparing two students or seeing how one student is growing”.

Teacher E expressed frustration with a mandatory assessment that was a priority in their district for a number of years... “I was extremely frustrated by it...all it told me was how quickly kids could read words...for me, especially at the middle school level, was not an effective measurement”. This participant had become so frustrated, that they spoke out against the use of the assessment to the school committee. “I felt horrible making the kids, even take it…I went and I did a ton of research...in the end, with the change in administration the new people came in and were like oh my god, get rid of this... now.” A similar trend regarding the relevancy of assessments emerged when Teacher B reflected on a time they felt successful or unsuccessful in using data; “when I'm using tools and assessments I'm not familiar with… I feel very uncomfortable.... I'm not really sure that what I'm evaluating matches the skills and strategies that I'm teaching in class.” In contrast, Teacher B has felt successful, “when… I feel like I'm
understanding the assessment tools, and I feel like I know how to translate that into teaching in my classroom, and I see student improvement”.

Teacher D, contrasted their experiences with RTI meetings in a former district, “you come, you share out data, discuss that data, but then what do you do with it?... at some point, it has to be about real application of that data and meaningful use of it”. Teacher D finds RTI to be “much more meaningful” in their current district and shared a number of reasons for this feeling:

RTI has been, more emphasized and rolled out… the meetings take place with other language arts teachers… and there's actual student objectives… things are done for a purpose…. a structural difference between how meetings look in the two districts, that it makes it easier to bring something to that meeting and use it in a way that matters. (Now) it's more of acting proactively instead of reactively … now I feel like it's like figuring things out and moving forward…. There are actual professionals that I trust and can count on like their opinion to work with, and collaborate, and get feedback...

**Contextual Supports.** There were many commonalities across participants in the supports available to them in their respective schools that are helpful to RTI implementation including; opportunities to collaborate, instructional coaches, and consistency. Teacher A shared benefitting from PLC (Professional Learning Community) groups; a content coach / specialist, “I have used her often in the past because I sometimes feel like I’m not good at that RTI kind of thing”. In addition, common planning time to meet with their grade level team as well as their same grade level content area counterpart. Teacher A experienced formalized protocols, ongoing collaboration with colleagues to use data and plan curriculum experiences that meet the needs of students to be useful to their implementation of RTI. The revision of forms that all teachers were trained in how to use, quarterly meetings with an instructional coach to help with documenting student progress and goal setting has assisted Teacher A making it “easier to document and really make it quantitative… to be able to see is this actually impacting in a realistic way...That
paperwork focus actually helped us focus...what things should we be doing in RTI... and how should we be documenting and thinking about RTI”.

Individually, Teacher C seemed to have the most positive feelings of support. They described how their district is “really big” on professional development with many resources available to teachers such as online classes and a monthly PD calendar sent to teachers weekly and “if there’s something outside of what the district offers, they will find a way to get us there”. Teacher C attributes a lot of their success to the supports of their “go-tos”; their ELA department chair, bi-monthly ELA department meetings, a resource teacher; and assistant principal, “they’re like so on it, that I do feel really supported”. Additionally, the purposeful pairing of this teacher with another teacher, a ‘planning partner’ is beneficial to this second year teacher.

My department chair thought that we would work wonderfully together… she said when/with my ideas and the way I approach teaching and the same with him, she felt like we would be a good fit together….he’s really good when it comes to... RTI and sharing things for the kids...I love him as a planning partner…we plan...discuss the curriculum for the week…struggling students, problem-solve together.

Regular and scheduled RTI meetings helps Teacher D “stay with a process” and “catch things and adjust as needed, instead of like waiting, half the year and then catching up…It’s the idea to respond, relatively quickly as needed to meet those needs.” Their school’s online digital RTI documents have helped Teacher D stay organized, know which students are in different tiers and offers easy accessibility to students’ previous data and goals. Teacher D’s go-tos include reading specialists, the school’s instructional coach, and school administrators.

The fact that I could name /three/ people that I would trust and could go to in this situation, I think speaks to the district’s like concern and giving the sort of the import that it deserves. “I feel like there are multiple resources of people in different roles from administration to fellow teachers… this range of support…and I think that's part of why my confidence and comfort level with RTI has grown over these past couple of years.
Teacher D also spoke of autonomy afforded to teachers with regard to the fluid nature of daily, built in common planning time with each day of the rotation being allotted to meet with various stakeholders.

Administrators afford flexibility as needs arise…It's a sense of trust …professional courtesy from administrators that I feel like wasn't present before...this goes back to like a school wanting to meet your needs instead of like just no needs that all....it’s what lets you actually respond to needs that arise….Teaching school was nice, but until you're actually teaching in a school, it doesn't mean much. So, the reality of RTI, versus the paperwork and looking at a pyramid with three tiers on it, was very different…I think I'm definitely moving in the right direction and actually feel support and purpose.

Similar structural supports and the idea of the autonomy were echoed by Teacher G who finds common planning time with specialists and consultants as well as the ability to schedule their own intervention groups to contribute to their success with RTI, “we know who needs phonics, we know who needs….we group them by intervention.”

Teacher H contrasts their prior school system where everything, Was just so scattered...Now everything has a home…There's structure here and there's been the same administration … there's set structures, there’s set rules… Everyone kind of has a place, they know what they're supposed to do with their position, where...my other district, it was kind of everyone had to be everywhere, there was nothing that was set in stone and put straight so I think that's what hindered it.

Teacher H’s go-tos include specialists, interventionists, and team teachers. They also described daily common planning time to be beneficial to their ability to implement RTI.

Everything is allotted; you have a specific block to meet with people, every week. You just have time to meet with the people that you know you'll need to meet…There's more of a protocol and who I should go to….it is definitely more organized here and it's definitely beneficial for the students here.

Teacher F’s go-tos include other RTI managers in their school district; a special education colleague, school psychologist, district-level RTI coordinator, as well as another interventionist, a former ELA teacher who held the RTI manager position at a different school, who “feels the same way I do about things; we want to help the kids and we can help them more
in this position than we can in other positions”. When Teacher F was approached by their school administration regarding who they felt would be a good fit for the position, “they actually listened to me and put her in with me. I was kind of shocked”.

**More Supported and Capable.** While participants shared aspects that were helpful to their success in implementing intervention frameworks, many participants confirmed there were also needs for professional learning and consistency to refine their use of RTI. Teacher B stated this need well,

> In theory, it's excellent that… we're constantly staying on top of kids, and not letting anyone slide through the cracks … I wish that, in practice, teachers felt more comfortable, more supported, and more capable of participating in the process.

Across participants, there were points of unclarity for teachers and specialists alike. Participants all shared varying structure and protocol within their individual schools and how RTI has changed over time. Teacher A highlighted, “RTI has been evolving so much that it’s sometimes really hard to keep up…we still have … misunderstandings or discrepancies on how we’re understanding it as a staff, just because it’s done differently in so many different places”.

Likewise, Teacher G referred to their school’s RTI procedures as “new again this year”. Teacher B emphasized a lack of cohesive expectations across their district:

> I think it varies greatly school to school, administrator to administrator. I think understanding varies teacher to teacher…what we call tier two to three or three to two…I honestly am still very confused about those terms; we throw them around a lot….and I think the expectation is that teachers just know what these words mean… I'm still not 100% clear.

RTI is changing the way things are done at Teacher F’s school school due to newly-pas state dyslexia legislation requiring RTI as the pathway to SPED identification:

> It's been met with some resistance at first and, well, there are still some complications… things that they have to work around and sometimes they're not always happy to work around...a lot of people; they think that RTI is a waste of time… I get that a lot from the others.
Teacher C spoke of the need for a schoolwide PD for all teachers. As a second-year teacher they recognize how some teachers get “stuck in the rut of this is my curriculum, this is how I'm going to teach it” and how PD can help all teachers understand students’ needs;

Their brains work different because they're all different little people. … whatever stressors they have at home, and everything else that’s going on, you have to approach them in a manner…where you're meeting the kids on their level.

A number of participants described the lacking professional development provided upon their respective districts adoption of a new universal screening assessment. “We kind of taught ourselves during CPT,” (Teacher G). Teacher C and their planning partner, second- and first-year teachers, recently asked their department head for training to understand their universal screening scores, “what are they showing us? how do you use them?” Despite being “in charge” of the universal screening and assessment as RTI manger, Teacher F shared this was only the second year the school has been using it, “so there's a lot of information and I'm not sure about”. The training for using this assessment included “watching the videos” on the assessment platform, with teachers being expected to do this “on their own time” resulting in resentment toward RTI amongst teachers.

At the start of the school year, Teacher B expressed frustration in being asked to administer, interpret and use assessments they were not provided adequate training in using.

Which is…very stressful because I was handed materials and forms, and a lot of acronyms that I did not understand…the expectation was that I knew how to do this, I was put in front of a PowerPoint presentation for about 20 minutes, and told that I was trained... I’ve made some errors because I was kind of flying by the seat of my pants trying to figure out, without any real direction, what was expected of me and, and it's, you know, professionally it's a little embarrassing to show up at a meeting, looking like you're not prepared, but if you don't know, you don't know….I don't feel that these assessments are testing what I'm teaching… … it’s very difficult…the expectation that I can drill down to a specific need….I feel like I'm being asked to do work outside of my level of expertise.
Teacher E shared their process for referring students to RTI is not being followed and as their school’s Tier 3 meeting coordinator, “I wish I had been able to sit in on some of those meetings with teams” when the instructional coach trained teachers on the process for referring. “I was never a part of that conversation”. Teacher E feels their building administrators do not have a clear vision for RTI. “They leave that up to the instructional coach, they don't like have much to do with it, I don't think they get it that way”. Teacher E confided, “it's tricky because I've tried to say some things but… (school administrator) is not following the proper channels, but he's also my boss”. Teacher E described how Tier 2 coordinators “had extensive training…so, you would think tier 3 we would have even more”. This notion of matching professional learning intensity was echoed by Teacher B.

I would have preferred to have either have been properly trained in the tools that I'm using to assess students. …We do generate so much data and we meet, so regularly. I think the training should parallel the intensity of the, of the process itself. I think that teachers would feel much better supported and much more effective.

As their school’s RTI manager and interventionist, Teacher F admitted, “I feel like I need more training myself. …part of the reason why I'm going through for this degree... I feel like that I'm… just kind of been thrown out to the lions... I don't feel like I get the support that I need.”

Teacher F feels that for their administrators, “RTI at the bottom of the list”. Despite advocating for a half day of release time to examine Winter benchmark data and student placement, the answer they received was “no” and “you’re just going to do the best you can”. With regard to PD, administrators “want specialists to go through some of the same training as classroom teachers on initiatives they push that out there. I cannot use this, it is standard-based and we are skills-based”. With regard to skills-based needs, another interventionist, Teacher G described the need for training in a specialized program such as Orton-Gillingham. Currently, Teacher G, pulls from all different programs. “We have asked, we have received the answer,"
no…if we do want to go to a training... we would have to take our own personal time and money to do that”.

Teacher H contrasted RTI in their former district to their current. Formerly, the process was “scattered”.

There wasn't much communication between the actual ELA teachers and the RTI teachers…it was in limbo... and with regard to administrator turnover... we had different principals...every year...that district moves that principals every few years, too...there wasn't really anything solid, and I think that's my, that might be why a lot of it was kind of all over the place because there wasn't a firm foundation.... there's always so many new ideas, which is great but also at the same time it's chaotic. Now meetings are more efficient.

With regard to needs, Teacher H advocated:

I want to know more materials ...I’d like to know more …it’s just the person that I am…observe a class and see what they do, maybe I was doing what they were doing, and I just thought I wasn't.

Conclusion

The data derived from subtheme one and two directly speaks to the research question: How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) process? The sustained and ongoing use of assessment tools led participants to more refined use and confidence in using data to impact learning. Various structural supports appear to have impacted the educators’ in this study’s efficacy with RTI implementation. These include protocols, roles and routines, the opportunity for meaningful, common collaborative planning time; and instructional specialists.

The data derived from the third sub-theme spoke directly to the research question: What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI? Despite sources that enabled participant’s success with aspects of RTI
implementation, each participant expressed further needs to refine and improve their practices. The fact that RTI has evolved in many places with changes in administrators, there is a need for schoolwide vision, protocol and roles to maximize the potential of intervention frameworks such as RTI. Teachers and specialists alike need ongoing professional learning experiences and access to high-quality, evidence-based instructional materials that will enhance their ability to support all students.

**Summary of Findings**

This study was a general qualitative study, consisting of eight semi-structured interviews of middle school classroom teachers and specialists. Four major themes emerged as a result of this study. The first theme, ‘RTI is Messier at the Middle School Level’, emerged through the contrasting experiences of participants at different levels and schools. Participants highlighted various nuances and challenges of implementing intervention frameworks at the middle school level including the impact of the schedule and content focus of educators at this level. The second theme, ‘Data Use’, surfaced as participants’ shared their experiences with the detrimental effects to focusing on data in ways that did not lead to meaningful use, the need to carefully extrapolate the root cause of a student’s difficulties and call for a holistic approach to students’ needs in intervention frameworks.

The data collected in this study suggests contention regarding the use of intervention frameworks as a pathway to the identification of learning disabilities under IDEA and led to a third theme, ‘RTI & SLD Identification: 'A Vicious Circle'. Participants shared frustration over delayed referrals, unclear answers about what constitutes progress, and described instances of needing to ‘fight’ for students. Data collected in this study included numerous supports that improved participants’ abilities to implement RTI as well as areas of need leading to the fourth
and final theme of ‘supports’. Sustained, ongoing opportunities for meaningful, common
collaborative planning time and instructional specialists have been essential to the educators in
this study. The data also suggested the importance of and need for a schoolwide vision, clear
protocols and roles, personalized professional development along with high-quality, evidence-
based instructional materials to enhance the capabilities of educators in intervention frameworks.
Chapter V: Discussion and Implications for Practice

Revisiting the Problem of Practice

Response to Intervention (RTI) produced a renewed focus on evidence-based practice and use of data for instructional decision-making to improve student learning and as a pathway to identify specific learning disabilities. More than a decade after its inception, previous research indicates inherent complexities and challenges that persist across educational contexts in implementing a strong RTI process (Balu et al., 2015; Fuchs & Fuchs, 2017; Maier et al., 2016; Nichols et al., 2017). The purpose of this qualitative research study was to understand the experiences of middle school educators involved in RTI implementation through uncovering sources that have contributed to teacher efficacy as well as the barriers that persist for educators in this endeavor. Social Cognitive Theory (SCT) provided a robust, theoretical lens to explore how educators experience their strengths and challenges with RTI implementation given their environment, personal factors, and past experiences as they adapt their behavior to anticipate student needs.

A variety of perspectives were considered in this research including; middle-school classroom teachers and instructional specialists that represented a range of early-career and veteran teachers. This study’s data and findings are representative of a variety levels and experiences within school districts while remaining aligned to SCT, which posits teacher efficacy can impact student achievement, teacher performance, and the entire school organization as a whole (Taylor, 2013). The following sections discuss the findings of this study with relation to the theoretical framework and previous literature. Then, conclusions related to the findings and recommendations for stakeholders in the variety of sectors of education to
which the findings apply will be presented. This study’s limitations and suggestions for further research are also considered.

**Review of Study Methodology**

This study aimed to address teacher efficacy in intervention frameworks through a general qualitative exploration of the sources that have contributed to middle school educators’ capacities to make instructional improvements in the RTI framework. Two research questions framed this research:

1.) How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) process?

2.) What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI?

The research questions and goals of this study naturally led to a qualitative research tradition, being grounded in understanding and describing the experiences of participants. A general qualitative approach offered more fluidity in terms of participants, process, location, and pointed questions about nuanced aspects of RTI that needed to be explored directly. Given the goals of this research and acknowledging that multiple realities exist (Ponterotto, 2005), a qualitative methodological approach was most appropriate with this research tradition’s aim to contribute to the knowledge of a complex social phenomenon (Creswell, 2013) brought to consciousness through deep reflection achieved through interviews and analysis (Merriam, 1991) of educators who experience RTI daily.

In order to explore the research questions, this research utilized semi-structured, individual interviews sessions with eight middle school educators. Using educators that
represented multiple sites, states, certifications and years of experience allowed the researcher to explore differences and similarities across participants. The semi-structured interview format allowed for conversations to be structured, while providing the opportunity for rich description of participant’s nuanced experiences. Concluding each interview, the audio-recording was transcribed and reviewed. This process helped determine if any follow-up questions were necessary and potential themes that could be further explored across participants. Once all interviews were concluded, transcripts were again analyzed for themes that transcended across participants.

Semi-structured interviews provided rich description and insight into eight middle-school educators experiences with RTI, an intervention framework commonly used in public, K-12 education. Social Cognitive Theory was the theoretical frame. Using the research questions and theoretical lens, four themes emerged through a multi-step, comprehensive analysis (see Chapter 4).

- RTI is ‘messier’ at the middle school level.
- Data use in intervention frameworks involves layers of complexity.
- As a pathway to the identification of learning disabilities, RTI can be a ‘vicious circle’.
- Supports are needed to sustain and maximize the potential of RTI.

**Discussion of Findings in Relation to the Theoretical Framework**

Since teaching takes place “within social and organizational contexts” (Piety, 2019, p.414), Social Cognitive Theory (SCT) provided an appropriate and robust theoretical lens to explore how educators experience RTI implementation given their environment, personal factors, and past experiences as they adapt their behavior to anticipate student needs. Since prior teacher
efficacy research was lacking in attention to the sources of teacher efficacy (Klassen et al., 2011), the use of SCT was useful to examine how educators develop the understanding, knowledge and skills as they implement RTI. SCT posits teacher efficacy can impact student achievement, teacher performance, and the entire school organization as a whole (Taylor, 2013) and therefore important to study in relation to educator efficacy in intervention frameworks such as RTI.

**RTI is ‘Messier’ at the Middle School Level**

Capacity studies are “important to understanding enabling/constraining conditions” (Piety, 2019, p. 404). Examining constraining conditions in this study led to a theme surrounding the “messiness” of RTI at the middle school level. This theme emerged from the data in relation to research question two: What are the perceived needs of middle school educators that would lead to increased self-efficacy in implementing RTI? Participants who experienced RTI at multiple levels shared: “It's messier.... it's not as well-oiled as it should be” (Teacher E). “The elementary school understands it better...where the middle school, it gets kind of foggy” (Teacher G). Concepts across participants that were unique to middle school included the impact of the schedule, and the content-driven nature and design of middle schools.

A central concept of Social Cognitive Theory is that learning is influenced by reciprocal triadic relations among personal, environmental, and behavioral factors (Bandura, 1986). A school’s environment is important to understanding intervention implementation because it helps “describe what is taking place and also highlights complex factors contributing to the learning outcomes” (Wijekumar et al., 2019, p.6). The impact of the schedule is an element of the environment constraining educator efficacy to implement intervention frameworks. Participants shared similar constraining challenges related to the schedule. The nature of fixed, bell
schedules at the middle-school level impacts student availability for intervention and is less fluid and flexible than that of other settings. This has led to numerous instances where students stay in intervention longer than needed, not getting intervention due to schedule conflicts, or are scheduled during times that results in a student missing something else, leading to resistance. Participants shared how the knowledge and training of educators at the middle school level adds a layer of complexity in implementing intervention frameworks. Educators with secondary backgrounds are expected to implement RTI and may never have been trained to do so in the content and subject-area focus of secondary education teacher training. Teacher H, upon graduating with a bachelor’s degree in Secondary English, admitted, “I had no idea what it (RTI) was”.

Data use in intervention frameworks involves layers of complexity. Previous capacity studies highlight the challenges of data use within the “complex social settings of educational institutions” (Piety, 2019, p. 404). Teachers often lack self-efficacy to engage in data-driven decision making; according to Social Cognitive Theory, this can hinder the successful implementation of data-use in intervention frameworks (Walker et al., 2018). This led to coding for instances throughout the data for reported challenges in data use. Many participants described negative effects of focusing on data use in the wrong way that did not lead to meaningful classroom use. Some of these phrases included, “data for data’s sake”; ‘data on a piece of paper’, and ‘pressure’.

Participants described various turning points in their implementation of RTI and data use. Most participants experienced something similar to Teacher D in their former school; a “floaty idea of intervention, and that didn't really mean anything other than look at data…and nothing really ever came of that data”. In contrasting their experience in a previous district, Teacher H’s
feelings of efficacy have greatly improved and value that their current school; “they just they really dive deep into the student, like the student is priority. It doesn’t matter really what the tests say, I mean it does, but...what does this kid need...let’s dig in deeper”.

Many participants acknowledged the value of taking a more holistic approach to examining students’ needs, including the importance of making connections with students and considering social-emotional needs that impact learning. For example, Teacher C spoke about the need to individualize and the need to be cognizant of “whatever stressors they have at home, and everything else that's going on, you have to approach them in a manner...where you're meeting the kids on their level...you need to be able to recognize that”. According to SCT, enactive experiences provide educators with enhanced feelings of self-efficacy. The teachers in this study all reported instances of feeling successful with instances where they were able to help a student grow in their self-confidence and/or their literacy abilities through a holistic effort to support students.

As a pathway to the identification of learning disabilities, RTI can be a ‘vicious circle’. Sociostructural practices including educational laws such as IDEA or funding opportunities such as Title I, “impose constraints and provide enabling resources and opportunity structures for personal development and functioning” (Bandura, 2001, p.15). Intervention frameworks were designed to provide high-quality instruction and serve as a way for students to receive intervention with the goal of sifting out a curriculum or skills gap over an actual learning disability. The data collected in this study suggests intervention frameworks may be delaying referrals to special education due to a lack of clear guidance under IDEA and state RTI procedures regarding with how long students should spend in intervention, how much progress is enough, along with the measures that are being used to make such determinations. As Teacher F
put it, “They're making progress that is very, slow. And because they are making progress, they keep them in”. Despite making progress students in small group instruction on a specific skill, when students exit back to whole-group instruction Teacher E has observed some students continue to struggle, “so they’d really needed a referral to special education, but they couldn't get that, because they were showing progress on RTI. So, it was like a vicious circle”.

Many participants recalled a time they felt they needed to ‘fight’ for students because they did not feel RTI was meeting a student’s needs. Teacher G described a student who exited intervention but still needs support; “the parent is going for outside testing …they're trying to keep the numbers in special ed very low…it is a fight to get a student tested”. Teacher F shared a personal experience involving their own child; “because he didn’t show discrepancy between his state test, and his IQ, he was ineligible for special education…I knew that he was having problems, and they wouldn't listen to me”. After seeking the support of a local university’s dyslexia center, it was determined the child had dyslexia. “If I hadn't fought, he would have been one of those kids who fell through the cracks”. This experience, and many like it across participants in this study, provided a positive enactive experience which SCT posits can lead to increased educator efficacy.

Teacher self-efficacy refers to teachers’ beliefs in their ability to generate desired student outcomes (Goddard & Kim, 2018, p.7). Across participants, there was a lack of self-efficacy in the identification of reading exceptionalities such as dyslexia. Teacher G, a reading specialist, shared they have referred students to the special education process who subsequently qualified, “but I've never had a student labeled dyslexic… our system is scared of that word...we kind of shy away from that word”. Despite suspecting it in some students, “I have not commented... we're not allowed to diagnose as a reading specialist…we can just suggest … so I'm really
careful with that…I don't want to say it...and then it comes back and it's not that, and then I freak the parents out...it's just makes me look bad”.

**Supports are needed to sustain and maximize the potential of RTI.** SCT posits facilitation of the tools, resources, or environmental changes in order to perform behaviors can enable or empower individuals to engage in a behavior. This drove coding for data related to research question one: How do middle school educators define the sources that have contributed to their self-efficacy in implementing the knowledge and skills necessary for effective intervention through the Response to Intervention (RTI) process? All participants echoed similar sources that led to their feelings of success that led to the theme of ‘supports’ including: clearly defined protocols, roles and routines; the opportunity for meaningful, the opportunity for meaningful, common collaborative planning time, and instructional specialists.

Various turning points in implementing RTI emerged out of participants contrasting experiences in different schools, districts or levels. Recent SCT research indicated improved teaching efficacy beliefs via positive enactive experiences through reported collaboration and implementation of differentiated instruction (Goddard & Kim, 2018). Participants in this study valued and found collaboration to be essential to their efficacy to implement RTI. Teacher D highlighted this by sharing how RTI is “much more meaningful” in their current district since “it's more of acting proactively instead of reactively …now I feel like it's like figuring things out and moving forward…. there are actual professionals that I trust and can count on like their opinion to work with, and collaborate, and get feedback.” Despite the sources that enabled success with some aspects of RTI implementation, each participant expressed further needs to refine and improve their practice.
Discussion of Findings in Relation to the Literature

RTI is ‘Messier’ at the Middle School Level

Previous researchers have uncovered nuanced challenges with RTI implementation in secondary school settings (Fuchs & Fuchs, 2010; Miciak et al., 2014; O’Reilly et al., 2012). One of the issues echoed across the participants in this study was the impact of the nature of block, bell-schedules at the middle school level. Some students stay in intervention longer than needed or are restricted from entering intervention due to the schedule. “At the secondary level, the schedule drives everything… that I think is the biggest obstacle (Teacher E). Another issue emerged concerning educators with secondary education training who are expected to implement RTI and may never have been trained to do so in the content and subject area focus of secondary-education teacher training. As a specialist, Teacher G observes a “weakness throughout the school with Tier 1 instruction. I don't see a lot of teachers, able to take small groups and really focus in on them”.

Despite comprehensive primary-grade screening and interventions, future reading problems can still emerge (Miciak et al., 2014). Previous research suggests that among upper elementary and middle school students with reading disabilities, a considerable proportion are late-emerging cases whose weaknesses were not identifiable during the primary grades (Catts et al., 2012; Leach, Scarborough & Rescorla, 2003; Lipka et al., 2006; Scarborough, 2005). For example, in the Connecticut Longitudinal Study, of all fifth graders identified with reading disabilities, 42% were late-emerging cases (i.e., who met the classification criterion in fifth grade but were normally achieving readers in third grade) (Shaywitz et al., 1992). The findings of this study surrounding the content-area nuances of RTI at the middle level have important implications underscored by previous research regarding the importance of educators being able
to identify the features of late-emerging reading disorders and how to provide specific data-based individualization.

As a pathway to the identification of learning disabilities, RTI can be a ‘vicious circle’. Intervention Frameworks such as RTI were designed to provide high-quality instruction and serve as a way for students to receive intervention with the goal of sifting out a curriculum or skills gap over an actual learning disability. One of the most challenging aspects of RTI implementation is the tension between RTI and the child find obligation of school districts under the Individuals with Disabilities Education Act (IDEA) (Zirkel, 2018). This was a finding in this study with RTI being described by participants as a ‘vicious circle’ concerning the identification of potential learning difficulties. Teacher E reported that for some students, despite making progress students in RTI on a specific skill, when exited back to whole-group instruction, they continue to struggle, “so they’d really needed a referral to special education, but they couldn't get that, because they were showing progress in RTI. So, it was like a vicious circle”. In addition, Zirkel (2017) argues universal screening and progress monitoring measures within RTI are not legally equivalent to a comprehensive evaluation. The participants in this study acknowledged a heavy focus and emphasis on universal screening scores to make RTI decisions in their individual contexts.

There is prevailing confusion attributed to a lack of clear guidance and varying interpretations of the federal and state policies evidenced by the findings of this study as well as previous research. Implementation issues, such as the length of each tier, benchmarks for moving tiers, (Ardoin et al., 2013; Hudson & McKenzie, 2016; Klingbeil et al., 2016; Silbergliit et al., 2016) and structure of the interventions are a matter of “professional discretion rather than statutory, regulatory, or case law” (Zirkel, 2018, p.381). The findings of this study suggest
intervention frameworks may be delaying referrals to special education. Many interventionists in this study have worked with students for multiple years in RTI. Likewise, classroom teachers shared how the process “can be frustrating to feel like there's so much formality and paperwork between that process. …like you recognize a need and…we should act on that need now, instead of like data, data, data, data, data” (Teacher D).

**Data use in intervention frameworks involves layers of complexity.** Current education policies such as the (Every Student Succeeds Act (ESSA, 2015) and its predecessor, No Child Left Behind (NCLB, 2002) spurred a culture of data collection and decision-making in educational contexts (Grapin et al., 2019; Orland, 2015; Piety, 2019). Data use and interpretation has proven to be a difficult aspect of multi-tiered intervention systems (Snowling & Hulme, 2013; Mandinach et al., 2012) complicated by many decision-makers involved, complex processes of data use, variation within and across contexts as well as data from high-states assessment being used to make important decisions at the student, teacher, grade, school, district, and state level (Datnow & Park, 2018). The findings of this study indicated educators face similar difficulties surrounding a heavy focus on data for accountability purposes and difficulty considering root causes of students’ difficulties.

Collecting data to comply with external demands versus adapting instruction and ‘teaching to the test’ are examples of data use that results from a strong focus on accountability instead of improvement (Datnow & Park, 2018). In this study, participants shared experiences where a focus on accountability in their settings created pressure and resistance when data did not translate to meaningful application. Across participants, there were negative feelings and effects of the focus on data for accountability that did not lead to actionable classroom use, including burnout, pressure and teacher turnover. Teacher B described, “teachers feel an extreme
pressure to just generate data, generate data, generate data, it's not as valuable as it could be...there's not a lot of conversation around what's happening in the classroom. It's really data on a piece of paper… if the kid is performing well on a standardized assessment that seems to be acceptable as the kid is doing okay”. Previous research and literature has indicated data use in education often focuses on summative assessment data to improve student outcomes (Bocala & Boudett, 2015). Schildkamp (2019) posits additional sources of evidence, available across a wide range of indicators, should be utilized more fully to support their school and student improvement goals. This supports a theme that emerged in this study as participants expressed the need to take a more holistic approach when looking at students’ needs.

There were noted inconsistencies and misconceptions across participants and school contexts in this study surrounding when a student should be referred for intervention and the need to carefully extrapolate the root cause of students’ difficulties. This includes analyzing the use ‘grades’ as data within schools as well as the consideration of work completion, behavior and effort. Teacher G emphasized, “it gets kind of foggy with the behaviors of the student…and what's really needed” and described “heated” RTI meetings at their school, “I don't think they (teachers) understand RTI and the process very well…if a student is not doing well, they want to just put them in RTI and we have to decipher if it's effort, or behavior, or a reading problem”. This theme is supported by a meta-analysis of 57 studies that addressed teachers’ use of data revealing that most teachers were in the process of learning how to use data, with their use of data being “limited and inconsistent” (Sun et al., 2016, p.17). Part of the difficulty lies in the fact data use requires “integration with content knowledge and pedagogical content knowledge” (Mandinach & Gummer, 2016, p. 78).
Data-use processes and teacher beliefs about data use do not happen in isolation and are influenced by system, organization, team and individual factors (Datnow & Hubbard, 2016; Schildkamp, 2019). This supports this study’s findings as participants described the role many of these factors had in shaping the experiences that led individuals to effective data use. Ultimately, the sustained use of assessments, alongside the opportunities to collaborate with a variety of stakeholders with this data, led participants to more refined use and confidence in using data to impact learning.

**Supports are needed to sustain and maximize the potential of RTI.** All of the participants in this study shared various contextual supports that assisted them with RTI that derived from responses to two interview questions: (1) What tools /training/ resources/school structures have been made available to you to assist you in RTI/DBDM? (2) If you need help with RTI, who do you go to? There were many commonalities across participants as they described the supports available to them in their respective schools that have been helpful to their RTI implementation including: fluid, meaningful opportunities to collaborate (Goddard & Kim, 2018; Guskey, 2009), instructional coaches (Castillo et al., 2017), and consistency.

The fact that RTI has evolved in many places with changes in administrators, participants reported the benefits or need for a schoolwide vision, and clear and consistent protocols and roles to maximize the potential of RTI. Previous research found RTI paperwork is perceived as a barrier to successful RTI implementation (Castro-Villarreal et al., 2014). However, this contradicts several participants in this study who reported that forms improved their RTI understanding of RTI. The revised forms in Teacher A’s district “made it easier to document and really make it quantitative… to be able to see is this actually impacting in a realistic way… that paperwork focus actually helped us focus. What things should we be doing in RTI… and how
should we be documenting it and thinking about RTI”. An important note to this is that the teacher also reported all staff members in their school received training in using the forms through the use of case examples and weekly opportunities to complete forms in consultation with an instructional specialist or content-area coach.

Despite the sources that enabled success with aspects of RTI implementation, each participant in this study expressed further needs to refine and improve their practice. Similar to the participants in this study, previous research has indicated that teachers’ perceived barriers to implementation include inadequate teacher training and a lack of professional development (Castro-Villarreal et al., 2014; Sales et al., 2017). Ongoing, personalized professional development supports are often a critical need for teachers, specialists and administrators alike (Eun, 2018; Guskey, 2016; Noltemeyer et al., 2014). The participants in this study also indicated a need for high-quality, evidence-based instructional materials to enhance their ability to support all students.

Conclusion

The goals of this study were to understand the sources that have contributed to educator self-efficacy in implementing the knowledge and skills necessary for effective intervention through the RTI process as well as the barriers and needs that would lead to increased self-efficacy for educators implementing RTI at the middle school level. A general qualitative research design was used to collect data from eight middle school educators through the use of semi-structured, individual interviews. A comprehensive review of previous research and the use of Social Cognitive Theory (SCT) as a theoretical lens aided an iterative analysis process where individual themes as well as cross-participant themes were generated. Four findings resulted from this study; (1) RTI is messier at the middle school level; (2) Data use in intervention
frameworks involves layers of complexity, (3) as a pathway to the identification of learning disabilities, RTI can be a ‘vicious circle’ and (4) Supports are needed to sustain and maximize the potential of RTI.

SCT’s central construct of reciprocal triadic relations among personal, environmental, and behavioral factors (Bandura, 1986) posits the functioning of one component depends upon the functioning of the other and, in turn, behaviors influence both individual and the environment (Bembenutty et al., 2015). The impact of the schedule and the content-based design of secondary teacher training are aspects of the middle-school environment that constrain educator efficacy to implement RTI to its potential. The findings of this study surrounding the content-area nuances of RTI at the middle level have important implications underscored by previous research regarding the importance of educators being able to identify the features of late-emerging reading disorders and how to provide specific data-based individualization.

Intervention frameworks require the use of actionable data (Piety, 2019) a process that is “notoriously complex and difficult” (Walker et al., 2018, p.488). The educators in this study faced similar difficulties surrounding a heavy focus on data for accountability purposes and difficulty discerning students’ difficulties. Participants valued a more holistic approach to students’ needs; including looking beyond standardized test scores and considering students’ social-emotional needs. In accordance with the findings in this study and social cognitive theory, taking the pressure out of high-stakes data use and turning to tangible classroom data-use can lead to student success and greater teacher efficacy for data use in intervention frameworks.

As a pathway to the identification of learning disabilities under IDEIA, the findings of this study suggest there are inherent challenges and complications in using intervention frameworks such as RTI. The participants in this study reported numerous complications
including delayed referrals to special education due to a lack of clear guidance around how long students should spend in intervention, how much progress is enough, as well as concerns with the measures that are being used to make such determinations.

Bandura’s SCT research indicated a performance incentive that leads to self-efficacy is strong school leadership that provides adequate resources and continuous support of the use of innovative instruction in the classroom (1997). Numerous environmental supports that impacted efficacy for the participants in this study included clearly defined protocols, roles and routines and ongoing opportunities for meaningful, common collaborative planning time with colleagues and instructional specialists. However, teachers and specialists alike shared the need for additional supports including ongoing professional learning experiences and access to high-quality, evidence-based instructional materials to enhance their efficacious behavior in implementing intervention frameworks such as RTI.

**Significance of the Study**

Though more than a decade has passed since the inception of Response to Intervention (RTI) in school settings, fundamental complexities in implementing a strong RTI process exist (Balu et al., 2015; Nichols et al., 2017; O’connor et al., 2012; Piety, 2019). At its core, RTI aims to improve educational outcomes for students but educators face misconceptions and challenges implementing its components to fidelity (Maier et al., 2016; McKenna, et al., 2014; McKenna & Parenti, 2017). The documented lack of implementation consistency across the United States, coupled with the fact that multiple states use RTI as the criteria for special education identification, allows this study’s findings to serve as a tool to promote equity for students of all backgrounds.
This study analyzed eight participants’ experiences with RTI at the middle school level. Many participants had experiences implementing RTI in multiple schools or levels (middle-school and elementary school). These comparative experiences offered rich data and insight into educator efficacy in different school contexts. Since participants held numerous roles (classroom teachers, instructional specialists), analyzing the experience of each sub-group provided lenses for coding that resulted in strong cross-participant themes.

The findings of this study surrounding the content-area nuances of RTI at the middle level have important implications underscored by previous research regarding the importance of educators being able to identify the features of late-emerging reading disorders and how to provide specific data-based individualization. This is crucial given RTI’s serves as a pathway to identifying potential learning disabilities under IDEA. The findings in this study also suggest teachers have negative feelings of resistance and pressure from high-stakes data use. Efforts to switch gears to tangible and actionable classroom data-use can lead to greater teacher efficacy to use to data to increase student learning in intervention frameworks. As RTI is ever-evolving, educators indicated clearly defined protocols, ongoing opportunities for meaningful collaboration with colleagues and specialists, as well as personalized professional learning experiences and access to evidence-based instructional materials are needed to enhance implementation of intervention frameworks such as RTI.

The findings of this study and how they are situated within previous research can assist in informing the professional practices of K-12 education stakeholders as well as stakeholders in higher education who may be charged with shaping and improving teacher education programs. Given the high-stakes implications of RTI as a method to identify learning disabilities and raise student achievement, coupled with loose guidelines and evolving guidelines, this study’s
findings serve as a tool for social justice in enhancing educational experiences for students in K-12 education and provide insight to shape education policy in using RTI for SLD/Dyslexia identification. Since prior teacher efficacy research was lacking in attention to the sources of teacher efficacy (Klassen & Tze, 2014), the use of SCT was useful to examine how educators develop the understanding, knowledge and skills as they implement RTI in this study.

**Recommendations for Practice**

The RTI framework emerged as a way to assist educators to “better identify needs, remediate, and expeditiously intervene to support students who are performing below grade level peers and who are at-risk for a learning disability,” (Nichols, Castro-Villarreal & Ramirez, 2017, p.3). The findings of this study have implications for K-12 education contexts, higher education schools of education and at the state and federal policy level. K-12 contexts can use the findings of this study to refine their RTI practices and policies. Postsecondary schools of education can use the results to improve the preparation of educators at the middle school level to be better equipped to use data in intervention frameworks to achieve the goals of RTI. At the state and federal policy level, the findings of this study can shape best practices with the use of intervention frameworks for the identification of potential learning disabilities. There are four implications for practice: the need to establish routines and practices that address the nuances of middle-level education; provisions to improve RTI as an equity tool under IDEA; the need to address the complexities of data use and sustaining and maximizing RTI’s potential through ongoing supports.

**Addressing Nuances of Middle School Intervention Practices**

For RTI to be effective, contextual characteristics (Guskey, 2009) of middle schools must be taken into consideration. Schools must consider how time and staff resources are arranged and
will require adjustments in schedules (O’connor et al., 2012). It is essential time for interventions are built within the school’s schedule. In order for teachers to have the time to consult with other educators, this structure needs to be built within the schedule of the school day. Grade level, content-specific and instructional specialists need to have common planning time that is regular and consistent with a clear agenda and administrative support.

Since it is often believed that academic deficits are well established by middle and high school (Fuchs et al., 2010; Nelson et al., 2017; Scarborough, 2005). It is important for practitioners to be cognizant of the complex processes inherent in proficient reading and to understand the factors that underlie the reading profiles of adolescent readers in order to design effective interventions (Oslund et al., 2018; Scarborough, 2005). Educators in an RTI framework must be provided targeted professional learning experiences that target the nature of differing reading profiles to administer and analyze assessment data to determine the most appropriate and effective intervention plan (Kilpatrick, 2015; Gillis, 2017).

Middle school RTI stakeholders should also consider the fact that aggregate effects for middle school interventions are generally smaller than the effect sizes of similarly designed elementary-level interventions (Fuchs et al., 2010; Lipsey et al., 2012; Miciak et al., 2014). It is also important for schools to understand that students with pervasive skill deficits, may respond more slowly and will require more individualized and intensive instruction at this level (Gillis, 2017, p. 45).

**Improving RTI as a Tool for Equity under IDEIA.** RTI’s potential to increase equity in education can be accomplished through a purposeful uniting of general and special education teachers in K-12 contexts who can combine their areas of expertise to serve students’ needs. Previous research indicates RTI was primarily a general education endeavor (Gomez-Navarro,
Therefore “it is important to establish and maintain effective prevention, surveillance, and treatment systems involving professionals from various disciplines trained to minimize the risk and maximize the protective factors for Specific Learning disabilities” (Grigorenko et al., 2019, p.1). Teacher education programs should also take heed of this need and prepare both general and special education teacher candidates to foster a collaborative approach in working in K-12 contexts.

Due to RTI serving as a pathway to the identification of possible learning disabilities, it is important to have specialists and educators who are aware of the features of late-emerging reading disorders and how to provide effective intervention. It is also suggested that administrators and teachers receive training to understand their responsibilities under IDIEA (Hudson & Mckenzie, 2016). In order to identify and provide appropriate instruction, assessments for students identified at risk must be administered with fidelity to determine the specific nature of reading difficulties (Kilpatrick, 2015; Gillis, 2017). Data should be accurate and valid and requires practitioners receive training on administration and scoring of measures (Shapiro et al., 2012; Sharp et al., 2016). “The high-stakes nature of the decisions made for students receiving intensive interventions requires the most exacting assessment practices and scrutiny of evidence for the procedures, measures, and interpretations of the resulting data” (Klingbeil et al., 2016, p. 344). Zirkel (2018) cautions against RTI delaying a special education evaluation; schools should not require the completion of the RTI process as a precondition of conducting an IDEA evaluation.

**Addressing the Complexities of Data Use in Education.** Educators are faced with critical choices regarding data use that can profoundly affect students’ educational experiences and trajectories (Datnow & Park, 2018). Therefore, data literacy is an essential skill in
collaborative problem-solving efforts such as RTI (Bocala & Boudett, 2015; Shapiro et al., 2012). School leaders should set the tone for data use among teachers, focusing them away from accountability and towards continuous improvement. Building capacity for data use “must be decoupled from external accountability demands and involve a variety of information on student learning” (Datnow & Hubbard, 2016, p. 7). Leadership teams should encourage a culture of data use that includes a variety of assessments including curriculum-based measures, portfolios, student work qualitative observations. Triangulating and drawing on a wide range of data allows for a fuller portrait of student strengths and needs (Datnow & Park, 2018), “rather than having an over-reliance on assessment data in its narrowest sense” (Schildkamp, 2019, p.261).

Since an inadequate response to intervention can be the result of a mismatch between practice and student need (McKenna et al., 2014; McKenna & Parenti, 2017), understanding and choosing appropriate interventions for students is crucial to improving student outcomes (Miciak et al., 2014; Oslund et al., 2018). K-12 school contexts must ensure reading subskills are accounted for to gain a more complete view of a student’s literacy abilities wherein students are matched to targeted interventions. A comprehensive assessment system that includes diagnostic and formative assessment that accounts for a wide range of reading skills at the middle-school level can assist in improving the accuracy of screening measure and quality of data-based individualization (Kilpatrick, 2015; Shapiro et al, 2012; Nelson et al., 2016). School-based RTI teams must also account for other causes of student difficulties and discern behavior, work completion, or effort from academic need. Educators should be guided and supported to identify appropriate academic or behavioral goals for students as part of an effective problem-solving process (Prasse et al., 2012).
**Sustaining and Maximizing RTI’s potential.** School leaders are crucial to the school improvement process (Guskey, 2009; Maier et al., 2016; Schildkamp, 2019) and must seek balance between initiatives and goals of other stakeholders with a school’s unique culture, values and mission. The fact that RTI has evolved in many places, a lack of federal and state guidelines schools should carefully review and establish implementation guidelines to provide consistency and ensure implementation fidelity.

School leaders must also select evidence-based practices to solve academic challenges and ensure that professional development is targeted to meet the needs of teachers (Wijekumar et al., 2019). Implementing RTI with fidelity requires educators and school leaders build their capacity with knowledge of multiple tiers of instruction, intervention matched to student need and ongoing assessment (Bellibas & Liu, 2018; Castillo et al., 2017; Freeman et al., 2017; Piety, 2019). Understanding contextual and individual needs is important to designing professional development (Drago-Severson, 2016). School leaders must determine levels of need and create an action plan that builds slowly on existing knowledge and beliefs (Datnow & Hubbard, 2016; Johnson et al., 2012). Well-designed and implemented professional learning is an essential component of a comprehensive system of teaching and learning that supports students to develop the knowledge, skills, and competencies needed to thrive in the 21st century (Darling-Hammond et al., 2017).

Ongoing, personalized professional learning experiences and job-embedded opportunities to apply and practice what is learned is pivotal to improving educator efficacy in RTI (Schildkamp & Poortman, 2018). Since data use does not happen in isolation and is influenced by systematic and individual factors (Schildkamp, 2019), regular and ongoing consultation with other educators can help facilitate learning by using meaningful data to foster application of
knowledge (Castillo et al., 2017, p. 3). Coaching is a job-embedded support that can assist efforts in improving instruction through RTI. In addition, shared teaching via co-teaching, modeling or observation is effective in building pedagogical and reflective practices (Sales et al., 2017). School leaders must afford opportunities for such collaborations through creating funding for positions and time for ongoing practice such as shared teaching and common planning time. With well-designed and meaningful professional learning opportunities, teachers have the potential to adopt positive attitudes toward and become better equipped to infuse RTI into their classroom and improve instruction that supports students to develop the knowledge, skills, and competencies needed to thrive in the 21st century (Darling-Hammond et al., 2017; Fletcher et al., 2011; Sales et al., 2017; Swindlehurst et al., 2015).

Limitations

Although it is argued that qualitative research lacks generalizability, the study serves to impact educators beyond study participants as previous literature highlights a lack of RTI implementation fidelity (Maier et al., 2016; Snowling & Hulme, 2013; Mandinach et al., 2012). The findings of this study provide insight into the sources that lead to middle school educator efficacy as well as the needs that persist in implementing RTI effectively. The participants included 8 educators; 2 reading specialists and 6 ELA classroom teachers. These educators represent five different middle schools across four different states, with a total of 65 years of combined experience in education. While it was useful to hear perspective across a variety of settings, this number also poses limits to the findings of this study. A larger sample size could improve the generalizability of the results.

Using semi-structured interviews in this study allowed the researcher to engage in authentic conversations, with many strong feelings and emotions shared in response to interview
questions. All of the participants indicated positive feelings and beliefs toward the potential that RTI offers. Since participants were not paid to participate in this study and instead volunteered their time, it is expected the findings in this study might not represent educators that do not share the same beliefs or motivations as the participants in this study.

Finally, the use of this study’s theoretical framework, SCT, can be viewed as limiting by some scholars who believe feelings of efficacy are situational and are not transferable beyond the context in which they are developed (Bandura, 1997; Pajares, 1996). Though this study did not aim to produce generalizable results, it was able to bring to light structures and strategies that have contributed to developing teacher efficacy (Hawkman, Chval, & Kingsley, 2018).

Validity

Assurances to ensure the validity of this study’s results included checking of the researcher’s biases by maintaining objectivity (Caruthers & Friend, 2014; Coughlin, 2013). The purposeful selection of a research design that included semi-structured interviews was used to gain rich description of new knowledge. This required the researcher’s keen listening, focusing on the participants and not interjecting comments or personal experiences (Rubin & Rubin, 2012; Takacs, 2002). Maintaining this focus allowed for a deeper understanding and openness to phenomenon.

Ethical considerations taken in this study include obtaining participants’ informed consent to participate, securing confidentiality, and considering the possible consequences of the study for participants (AERA, 2000; Kvale, 1996, Roberts, 2010). These considerations and recruitment procedures were part of a rigorous application approved by Northeastern University’s Institutional Review Board (IRB) in December of 2019. The design of this study included an individual interview session with the researcher. This allowed participants to be
completely open with what they were sharing, as confidentiality was promised to the greatest extent possible. A scripted introduction explaining the purpose of the research, confidentiality, and the importance of honesty was discussed prior to each interview. There were some instances participants felt wary to share, especially when discussing their administrators. Confidentiality was assured, along with the reassurance that a copy of the interview transcript would be provided and that anything participants did not want shared could be taken out.

The researcher’s experience as a reading specialist and in middle-school RTI posed a threat to validity during analysis. After each interview, the audio recordings of each session were transcribed and a contact summary sheet (Miles & Huberman, 1994) for each participant was created that included pertinent notes collected in the researcher’s journal throughout the process. This was achieved by returning to the study’s conceptual framework to sort through and code data (Miles et al., 2014) with an open-mind, void of hypotheses, “seeking what emerges as important and of interest from the text” (Seidman, 2006, p. 119). Transcripts and summary sheets were coded for interesting points, compelling passages, and words to classify and develop themes for each participant. To ensure the consistent use of codes, code definitions were generated (Rubin & Rubin, 2012) to ensure the code matched the original meaning given by participants. This multi-step process of generating individual participant themes before producing general statements (Callary et al., 2015) helped to guarantee that cross-participant themes found in this study were based on transcripts and interviews, and not of those experiences of the researcher.

To fully understand a study’s findings, they must be “compared and contrasted to what can be found in published literature in order to situate the new data into preexisting data” (Baxter & Jack, 2008, p. 556). The process of multiple, iterative cycles of induction and deduction
(Miles et al., 2014) helped to ensure that data analysis was situated in the existing literature and in alignment with the theoretical base guiding this study to achieve the level of rigor necessary for quality qualitative research.

**Future Research**

Though this study touched upon the enabling and constraining factors in educator data use, to maximize the full potential of data in education, more insight is needed the best ways to use data to improve the quality of schools (Schildkamp, 2019; Datnow & Hubbard, 2016). In addition, a comprehensive meta-analysis indicated teachers use to identify weaknesses and gaps in students’ skills, rather than to innovate instruction by providing precise instruction to high performing students (Sun et al., 2016, p.28) Future data use and RTI studies should examine how schools use data to differentiate to students who need enrichment versus intervention.

The literature and research regarding legal dimensions of RTI and SLD identification is limited (Zirkel, 2018). Additional studies can focus on the factors and protocols such as the time in intervention and assessments and interventions used by schools to enter and exit students to and from RTI to Special Education. Also, with a recent proliferation in Dyslexia legislation being passed throughout the country, it would be useful for research on teacher and specialist efficacy to identify and remediate SLD-Dyslexia and examining the lived experiences of the students and parents of students with late-emerging reading difficulties.

Data use studies often look for measurable impact in a relatively short period of time. There is a need for more longitudinal study of data use in education (Piety, 2019, p.414). Since many participants in this study indicated improved efficacy over time in their use of their school’s universal screener, additional research examining data use over time, particularly at the middle school level, could shape data use research and practices.
Conclusion

Leveraging the potential of intervention frameworks such as RTI requires sustained commitment and systematic professional development. Careful planning and consideration of contextual characteristics unique to middle schools can lead to improvements in intervention frameworks and student achievement. Establishing school-wide norms and protocols and a systematic process to analyze problems encultured in the habits of mind for using data effectively are critical steps for school teams to consider. As a pathway to the identification of learning disabilities under IDEIA, RTI stakeholders with a strong understanding of the science of reading and late-emerging reading difficulties that can manifest beyond elementary school are in a better position to use targeted assessments and provide data-based individualization. Professional development for all RTI stakeholders including classroom teachers, school leaders and instructional specialists must be targeted, ongoing, and relevant. In an environment where teachers are already overloaded, an inefficient system is likely to increase teacher frustration and lessen the likelihood of effective RTI implementation (Castro-Villareal et al., 2014).
References


Every Student Succeeds Act (ESSA) of 2015, Public Law No. 114-95, S.1177, 114th Congress.


Individuals with Disabilities Education Improvement Act of 2004 (IDEIA), *Public Law 108–446*, 108th Congress.


Appendix A
Interview Protocol, Script and Questions

Thank you for being available to speak/meet with me today. You have been selected to participate in this research study because you have been identified as someone who has a great deal to share about your experiences implementing RTI/MTSS. This research project focuses on the experiences of educators implementing RTI at the middle school level. Specifically, it will explore your understanding of RTI/MTSS, factors that have contributed to your strengths and you will also have a chance to identify the challenges you face in implementing the Response to Intervention (RTI) /Multitiered Systems of Support framework. As I mentioned in our intake meeting, I am in the final phase of my doctoral studies at Northeastern University, and I am interested in shaping the learning and supports that schools and schools of education provide educators with the hope of maximizing RTI systems to benefit students.

I want to remind you that all participants in this study will remain anonymous, and that your participation is completely voluntary. If you don’t mind, I would like to review these consent forms with you before we begin. [Review, sign, collect Consent Forms (Appendix C); provide participants with a copy for their records.] Thank you. Because your responses are important and I want to make sure to capture everything you say, I would like to audio tape our conversation today so I can focus on our conversation. Is that okay? Also, I may have a professional transcriptionist transcribe the interview. The transcriptionist will receive the audio labeled by a pseudonym, meaning they will never know your name to maintain confidentiality. Once the audio recording is transcribed, I will provide you a copy for your review. Is that okay?

I have planned for this interview to last approximately 60-90 minutes. During this time, I have several questions that I will ask. In order to stay within the timeframe and elicit your
experiences, there may be times where I push the conversation ahead or probe you to go deeper in your explanations. Do you have any questions before we start? Awesome. Let’s begin.

**Interview Protocol Questions**

*Note- this is a semi-structured interview. Participants may or may not be asked some of these questions directly, depending upon if the participant addresses the content in their narrative. Some of the questions below will serve as probes and follow up questions if more depth is needed.

*I am now going to ask you questions focused on the topic of the study, your experiences with RTI.*

**Background/Context/General Knowledge of RTI**

What is your current position? How many years have you been in this role? Have you taught elsewhere else, any other level or in any other role?

How would you describe your role as classroom teacher/interventionist/administrator/ etc. in the RTI process to someone outside of education, say a parent?

Over the course of your career, how would you describe your experience with RTI? Has it changed or remained the same? Has RTI changed the way ‘things are done’ in your class/school?

**Data Use and DBDM**

Does your school have an RTI team? Do you take part in RTI meetings? What is your role as a team member?

What schoolwide assessments/screenings are used/considered in decision making for students?

What types of classroom data do teachers use to make decisions for RTI / intervention?

Can you tell me about the process used to identify and/or exit students from T2/T3 reading intervention?
How are decisions made in instances of discrepant data? Say, a student who scores well on a universal screener, but noticeably struggles with day-to-day learning? Are additional diagnostic assessments available to determine students’ needs? If so, describe the tools and your level of comfort administering and interpreting results? Is qualitative data such as observations taken into consideration?

Can you tell me about a time you felt successful in using data to plan for student intervention?...

Have you ever felt frustrated or unsuccessful in using data to plan for intervention? Describe the situation.

**PD, Structures and Vision**

What tools /training/ resources/school structures have been made available to you to assist you in RTI/DBDM? If you need help with RTI, who do you go to?

What professional training/learning has been provided to assist you in implementing RTI? Did you learn and utilize RTI or MTSS in your teacher preparation program?

How would you describe school or district administrators’ vision for RTI? Is your role in RTI clearly defined by district administrators? Do you think all staff are ‘on the same page’ when it comes to RTI?

**Reflection; Strengths/Needs**

In thinking about all of questions you answered and had the chance to reflect upon, what are your greatest strengths in implementing RTI? What makes you feel this way?

What would you say are the top 2 aspects of RTI you/your team needs help with? How might you feel better supported implementing RTI?

*Thank you, that concludes the questions for this interview. If there is a need to ask any follow-up questions for clarification, would it be okay for me to contact you? Would you prefer email or*
telephone? Sometime in the coming week, I will email you a transcript of our time today. Can you please confirm the email address you would like for me to email the transcripts to? You should review the transcript and check for accuracy.

Thank you again for sharing your insight and experiences with us. As you have been made aware, you will remain anonymous in the publishing of the findings. Once this research study is complete, hopefully 3-6 months from now, would you like to receive an electronic copy of the document? Also as promised, is a token of my appreciation for your time, a $20 gift card to the coffee shop of your choice. Please enjoy and thank you once again for your time and dedication to this project.
Appendix B
Recruitment Documents

WANTED!

Middle School Educators
(teachers, counselors, administrators, etc)

Are you a middle school educator who has implemented RTI/PBIS/MTSS in the past year?

Your participation is needed!

We are conducting a research study and looking for educators to share their experiences implementing these frameworks in K-12 education.

Eligibility: To be eligible you must have participated in RTI/MTSS/PBIS at the middle school level within the last year. ***

Time Commitment:
Approximately 2 hours

Location:
Flexible options available, including the use of Facetime/Skype/Google Hangouts for your convenience

Contact Information:
Stephanie Petricone, M.Ed, Student-Researcher and Doctoral Candidate
Email: petricone.s@husky.neu.edu Call/Text: (401) 862-7877

Dr. Sara Ewell, Ph.D, Principal Investigator and Dissertation Chair
sewell@northeastern.edu

Northeastern University
Boston, Massachusetts

*** Selection for the study is not guaranteed and will be determined during a brief 5-10 minute call/meeting.
*Participants will not be paid for their time but will receive a $20 gift card as a thank you from the student-researcher.
Appendix C
Consent Forms

Northeastern University
Graduate School of Education
College of Professional Studies
Informed Consent Form

Principal Investigator: Dr. Sara Ewell, Ph.D

Student Researcher: Stephanie Petricone

Title of Project: Enhancing Teacher Foresight: A Qualitative Exploration into Educator Capacity to Proactively Solve Students’ Academic Challenges in the Response to Intervention (RTI) Framework

Sponsor: none

Informed Consent to Participate in a Research Study

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

Key Information

- Your consent is being sought for your voluntary participation in a research project about your experience implementing RTI/MTSS. The purpose of the research is to gain understanding about the sources that contribute to teacher capacity to implement aspects of RTI/MTSS effectively while also understanding the barriers that persist for educators in doing so.
• The anticipated amount of time of your participation will be a maximum of 2 hours in total.

• There are no foreseeable risks to your participation. The potential benefits include an opportunity to reflect and share out your experience with RTI/MTSS implementation which has the potential to provide key information that can lead to improvements for other schools, schools of education and/or professional development providers that can lead to improved student outcomes through refined RTI/MTSS processes.

**Why am I being asked to take part in this research study?** We are asking for your participation because you have been involved in the implementation of RTI/MTSS at the middle school level within the last year.

**Why is this research study being done?** The purpose of this research is to develop an understanding about the sources that lead to educator success in implementing RTI/MTSS and understand the barriers that may exist in doing so.

**What will I be asked to do?** If you decide to take part in this study, we will ask you to participate in a series of interviews in which you will have the opportunity to answer questions about your experiences implementing RTI/MTSS? The procedures that you will be asked to complete will be:

- Participate in intake meeting (~10 min)
- Understand your rights as a participant and acknowledge/consent to participate
- Participate in interview with student-researcher (~60-90 minutes)
- Review transcript of interview and inform student-researcher of any inconsistencies in what was communicated versus what was transcribed within 10 business days
Where will this take place and how much of my time will it take? You will be interviewed either via Skype/Google Hangouts or in person at a place that is convenient for you. The initial meeting to determine eligibility will take approximately 10 minutes. The interview will last 60-90 minutes.

Will there be any risk or discomfort to me? There is no foreseeable risk or discomfort by participating in this study. Full confidentiality measures will be taken to ensure your identity is not identifiable.

Will I benefit by being in this research? While there will be no direct benefit to you for taking part in the study, the information gathered may help improve RTI/MTSS systems for school systems, schools of education and professional development providers. Improved RTI/MTSS systems can aid in providing equitable experiences for students who need the support provided by RTI/MTSS the most.

Who will see the information about me? Your participation in this study will be confidential. Only the researchers on this study will see the information about you. Pseudonyms will be used for all participants, with only initials used to label audio recordings. No reports, publications, or individuals will use information that can identify you in any way.

Limits: There are very few instances where confidentiality cannot be maintained. Though not related to RTI directly, if child abuse in any form is reported, the researcher must directly notify the corresponding state’s Department of Children and Families. In rare instances, authorized people may request to see research information about you and others in this study. This is done only to be sure that the research is done properly. We would only permit people who are authorized by organizations such as the Northeastern University Institutional Review Board (IRB) to see this information.
Future Use of Data or Biospecimens –Per 46.116 (9)(i), your de-identified information and/or biospecimens could be used for future research without additional informed consent.

If I do not want to take part in the study, what choices do I have? You are in no way required to participate in this study. If you do not want to participate, do not sign or return this form.

What will happen if I suffer any harm from this research? The nature of this study does not pose possibility for research-related injury. No special arrangements will be made for compensation or for payment for treatment solely because of my participation in this research.

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.

Who can I contact if I have questions or problems? If you have any questions about this study, please feel free to contact Stephanie Petricone (petricone.s@husky.neu.edu) the Student Researcher mainly responsible for the research. You can also contact the Principal Investigator, Dr. Sara Ewell at s.ewell@northeastern.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, Mail Stop: 560-177, 360 Huntington Avenue, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu. You may call anonymously if you wish.

Will I be paid for my participation? You will not be paid for participating in the study. Each participant will receive a $20 gift to the coffee shop of their choice from the student researcher after the interview has taken place.

Will it cost me anything to participate? If meeting off-site, costs that may be incurred include parking and transportation to the off-site location.
**Is there anything else I need to know?** You must be a state certified educator, at least 21 years of age to participate. You must have been involved in RTI/MTSS at the middle school level within the last year from the date of the advertised study.

**This study has been reviewed and approved by the Northeastern University Institutional Review Board (# IRB CPS19-11-09).**

I agree to take part in this research

____________________________________________  ______________________

Signature of person agreeing to take part        Date

____________________________________________

Printed name of person above

____________________________________________  ______________________

Signature of person who explained the study to the participant above and obtained consent        Date

________________________

Printed name of person above

☐  I agree to be contacted for follow up or for future research studies

____________________________________________

Contact Information (email or phone)