RESPONSE TO INTERVENTION: EXAMINING TEACHER PERCEIVED
SELF-EFFICACY WHEN PRESCRIBING AND IMPLEMENTING ACADEMIC
AND BEHAVIOR INTERVENTIONS

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Abstract

Response to Intervention: Examining Teacher Perceived Self-Efficacy When Prescribing and Implementing Academic and Behavioral Interventions
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Educational legislators nationwide are advocating for the correlation of student achievement with teacher evaluation. Districts have adopted Response to Intervention as a way to prescribe, implement, and progress monitor interventions to enhance academics and decrease negative behaviors. What happens when teachers are not comfortable with incorporating new mandated processes? Professional development and readiness play an important role of self-efficacy. In this explanatory sequential study, the focus was to determine if there was a relationship between teacher perceived self-efficacy when prescribing, implementing, and progress monitoring academic and behavioral interventions while incorporating Response to Intervention (RtI) in a Pennsylvania urban public elementary school. The cross-sectional based *Perception of RtI Skills Survey* and open-ended individual interviews were used to examine the following research questions: Is there a relationship between teacher self-efficacy and prescribing and implementing academic and behavioral interventions while implementing Response to Intervention (RtI)? Is there a correlation between teacher’s year of experience in education and their current position, teacher education, and perceived self-efficacy when using the RtI model? What teacher knowledge and tools are needed for successful incorporation of RtI?
Seventeen general and special education teachers completed both phases of the study. Four major themes emerged from the study: understanding the teacher’s role in prescribing and implementing behavioral interventions, managing Response to Intervention academic and behavior interventions in the general and special education classroom with fidelity, and understanding how to identify and use academic and behavior resources, and using technology to progress monitor.

The study’s results concluded teachers are not secure in using diagnostic tools and interventions for behavior. The consistent review of monitoring tools could help to ensure teachers understand how to progress monitor and input data in the Online Teacher Accountability System. There are four recommendations for promoting positive teacher self-perceived efficacy when using RtI. The data supports a critical need for understanding the multifaceted tiers for academic and behavior interventions, the identification of universal screenings and interventions at all tiers for each grade level, support in progress monitoring when using technology, and ongoing program evaluation to refine professional development to target school-based needs.

Keywords: Response to Intervention, teacher perceived self-efficacy, academic interventions, behavioral interventions
The Dissertation Committee of Drexel University certifies that this is an approved version of the following dissertation:

RESPONSE TO INTERVENTION: EXAMINING TEACHER PERCEIVED SELF-EFFICACY WHEN PRESCRIBING AND IMPLEMENTING ACADEMIC AND BEHAVIOR INTERVENTIONS

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Dedication

This paper is dedicated to any educator that has taught a child to be great.

And as we let our own light shine,
We unconsciously give other people permission to do the same.
As we’re liberated from our own fear,
Our presence automatically liberates others.
Marianne Williamson
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God, thank you for loving me unconditionally no matter my flaws. To my grandparents, Ralph T. and Rosa W. Wallace, thank you for being my angels. I miss you both so much but I know you are with me endlessly. To my parents, Robert M. and Virginia G. Wallace, you have loved me all my life. Thank you for your example, inspiration, and hope. I could not ask for better parents. To my son Ryan Christian Williams, thank you for coming into my life and being the best thing that has ever happened to me! I did this for you. You are my life and I love you so much. To my cousin, Shirley A. Griffin, you are my sister. We went from playing with dolls to having families of our own. Throughout it all, we continue to laugh. I love you, cousin. To my cohort members, Dr. Tarae Waddell-Terry and Dr. Brijette Sena, thank you for listening to me, supporting me, and helping me endure this process. We will forever be friends. To my dissertation committee, Dr. Lori Severino, Dr. Kristine S. Lewis-Grant, and Dr. Martin Sharp, thank you for believing in me, guiding me, and challenging me. I hope to one day emulate your dedication, passion, and contribution to research and the world of education.
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CHAPTER 1: INTRODUCTION TO THE RESEARCH

Introduction to the Problem

As the educational paradigm continues to shift, teachers endure educational legislation imposing reforms to drive academic instruction, and promote positive social emotional behavior. These mandates are perceived as ways to prepare 21st century learners (Darling-Hammond, 2010; Sansoti, & Noltemeyer, 2008; Zhao, 2009). However, students who live primarily in low socioeconomic areas continue to struggle academically and behaviorally. Scholars discerned that “with the advent of legislation requiring more proactive strategies to identify and serve students with academic and social behavior concerns, schools may be unprepared and ill-advised as to how to best implement such practices” (Fairbanks, Guardino, Lathrop, & Sugai, 2007, p. 288). The lack of preparation occurs in both academic and behavioral data.

According to the National Assessment of Educational Progress (NAEP) 2013, an assessment that evaluated reading and math skills of fourth and eighth grade students, reported that nationally only 41% of fourth grade students were reading at proficient levels or above and 34% of fourth grade students were at or above proficiency in math. Thirty-four percent of eighth grade students scored at proficient levels or above in reading. In Pennsylvania, forty-four percent of fourth grade students performed at or above proficiency in mathematics and 40% performed at or above proficiency in reading while 42% of eighth grade students performed at or above proficiency in both reading and in mathematics. Although scores in Pennsylvania were slightly above the national average, more than half of the students are performing below grade level. Furthermore,
the level of students scoring at the basic and below basic levels is more evident in large, urban impoverished schools.

To combat the issue of waiting until students show signs of academic struggle, many school districts nationwide diverted from using the IQ-Discrepancy model to identify students with disabilities and adopted Response to Intervention (RtI). The IQ-Discrepancy model was designed to work with students who displayed academic need. Scholars agreed that the IQ-Discrepancy model provided limited information and that the “waiting to fail” (Berkeley, Bender, Peaster, & Saunter, 2009, p. 85) model needed to be replaced (Cahill, 2007; Fuchs & Fuchs, 2006; Mesmer, & Mesmer, 2008). Response to Intervention is a multileveled process that provides services and interventions to all students by using universal screening that helps educators prescribe and progress monitor academic and behavior interventions (Brown-Chidsey, & Steege, 2005; Greenfield, Rinaldi, Proctor, & Cardarelli, 2010).

Social behavior is often a concern in urban, impoverished areas wherein suspensions are three times higher for African American students compared to their Caucasian counterparts (Editoral Board, 2014). While researchers concluded that African American students are disciplined at a higher rate, how equipped are practitioners’ to use diagnose, prescribe, and progress monitor behavior when using RtI? Researchers concluded, “many schools lack the expertise to define and use practices and systems that meet the needs of their students with both efficiency and effectiveness” (Fairbanks et al., 2007, p. 288).

While there are educators that are successful with the implementation of the RtI model, some educators struggle to incorporate these mandated educational reform
programs proven to increase student academic and behavioral outcomes (Goodman & Webb, 2006; Zhao, 2009). Perhaps the difference in results are in practitioners’ educational attainment, their years of experience in education, years in their current position, and perceived self-efficacy. An early definition described perceived self-efficacy as “an integrative theoretical framework to explain and predict psychological changes achieved by different models of treatment” (Bandura, 1977, p. 191). The magnification of Bandura’s theory has grown through continuing research conducted concerning teacher perceived self-efficacy (Tschannen-Moran & McMaster, 2009). Other scholars expanded upon Bandura’s definition. Tschannen-Moran and McMaster (2009) described teacher perceived self-efficacy as, “the teacher’s perceived capability to impart knowledge and influence student behavior, even that of unmotivated or challenging students” (p. 228). In a study examining concurrent validity between teacher efficacy and perceptions of RtI outcomes, the definition of teacher efficacy was, “the belief that teachers develop regarding their influence upon student learning and behavioral outcomes” (Nunn, Jantz, & Butikofer, 2009, p. 215).

Scholars were interested in the topic of perceived self-efficacy, particularly in education, because of the interest in learning how teacher’s beliefs in their own abilities affect student achievement and success (Tschannen-Moran & McMaster, 2009; Nunn, et al., 2009). With student performance aligned to teacher accountability, ways educators view their effectiveness will continue to be paramount for educational reform (Darling-Hammond, 2010; Lewis & Young, 2013; Nunn et al., 2009; Zhao, 2009).
Statement of the Problem

The problem was the lack of research concerning teacher perceived self-efficacy when using RtI in impoverished, urban districts. Teacher perceived self-efficacy affects student motivation (Tschannen-Moran & McMaster, 2009). Teacher perceptions of educational reform initiatives affect how teachers motivate their students (Goodman & Webb, 2006; Greenfield, et al., 2010). The problem was also that educators were often expected to integrate these initiatives without thorough professional development or program evaluation to monitor implementation (Russ-Eft, & Preskill, 2005; Sparks & Hirsh, 2000). Castillo et al. (2010) argued that implementation of new practices are most successful when “educators understand the need for the practice and perceive that they either have the skills to implement the practice or will receive support to develop the required skills” (p. 84). Rinaldi, Averill, and Stuart (2011) found that reform approaches were ineffective because educators were no longer the driving force in educational practices. The opinions and expertise of educators were rare within the research literature. Gaps existed between teacher training and educational reform because of the resistance teachers had to new legislation (Tucker & Sornson, 2007).

The resistance may come from negative teacher perceived self-efficacy. Researchers found that teachers who are uncomfortable with new initiatives are individuals who did not receive meaningful, ongoing professional development opportunities (Castillo et al., 2010; Sparks & Hirsh, 2000). A priority should be for district leadership to promote teacher input, become concerned with how comfortable educators are with instructional practices, and equip teachers with the knowledge necessary to assimilate.
Districts nationwide adopted RtI as an initiative to address academic and behavior achievement. All students regardless of ability are involved in the process. Response to Intervention is used as a proactive approach by screening, prescribing, implementing, and progress monitoring academic and behavioral components (Brown-Chidsey & Steege, 2005; Little, 2012; Stecker, Fuchs, & Fuchs, 2008). Teachers use diagnostic tools to prescribe the appropriate instruction according to the students’ academic and behavioral strengths and deficits. The students are placed in tiers according to these diagnostic results (Brown-Chidsey & Steege, 2005; Daly, Martens, Barnett, Witt, & Olson, 2007; Sansosti & Noltemeyer, 2008). Teachers assign interventions according to students’ needs. The length of interventions is contingent upon student response to the interventions. Nonresponders may continue to use the intervention even though there is little to no response (Klingner & Edwards, 2006; Vaughn et al., 2012).

Policy makers and school leaders must examine the reasons students are nonresponders. Teacher perceived self-efficacy when using RtI could be an issue. The lack of teacher training or knowledge about RtI has an impact on how motivated teachers are when using it (Greenfield, et al., 2010; Nunn et al., 2009; Sparks & Hirsh, 2000). This could happen because of the practitioners’ lack of knowledge regarding how to diagnose students effectively. If teachers are unequipped to universally screen, prescribe, implement and progress monitor academic and behavioral goals, they are less likely to use the RtI with fidelity (Nunn et al., 2009; Vaughn et al., 2012).

Meaningful, ongoing professional development, support from leadership, and access to resources will increase teacher perceived self-efficacy and teachers will be more likely to implement RtI with fidelity (Castillo et al., 2010). Legislators and district
reformers must ask: How comfortable are teachers to prescribe and implement RtI interventions? How do teachers perceive their RtI skill set and effectiveness in using it? What professional development opportunities were provided before and during the process? How can leadership support teachers to help enhance positive perceived self-efficacy?

**Purpose and Significance of the Problem**

The purpose of this study was to explore educators’ beliefs about individual RtI skill sets. While teachers faced embedding and adopting initiatives to enhance instructional practices, fidelity and success is dependent and contingent upon teacher perceived self-efficacy. Teachers require proper training, and assuming that teachers are knowledgeable about RtI is a disservice to students and staff. As teacher performance has become aligned to student outcomes, the need to help teachers develop proficient skills about prescribing and implementing RtI may be lost in the pressure of students performing well on statewide assessments. Teachers who are unsuccessful with RtI may lack motivation because of the limited knowledge of the program and how to implement RtI. Teachers must have a full understanding of how to incorporate reform programs with commitment. This study acknowledged the importance of investigating teacher perceived self-efficacy and development. The research examined teacher experience in education, their years in their current position, and their educational attainment, particularly when embracing new models, specifically RtI.
**Research Questions**

The questions investigated in this study were as follows:

**RQ1:** Is there a relationship between teacher perceived self-efficacy and prescribing and implementing academic and behavioral interventions while implementing Response to Intervention (RtI)?

**RQ2:** Is there a correlation between teacher years of experience, teacher years in their current position, teacher education level, and perceived self-efficacy when using the RtI model?

**RQ3:** What teacher knowledge and tools are needed for practitioners’ to incorporate RtI successfully?

Seventeen general and special education teachers answered questions from the *Perceptions of RtI Skills Survey* and qualitative, individual interviews.

**Conceptual Framework**

Theories of motivation are applicable when looking at perception. As noted in Figure 1, the extrinsic and intrinsic motivators effect teacher development. Bandura’s *Social Cognitive Theory (SCT)* has helped expand upon teacher perceived self-efficacy in education. Bandura (1997) defined self-efficacy as “beliefs in one’s capabilities to organize and execute the course of action required to manage prospective situations” (p. 2). Task avoidance negates failure. Previous studies have concluded teacher self-efficacy has an effect on perception of RtI (Greenfield et al., 2010; Nunn et al., 2009). If teachers believe they are inadequate when using the RtI process, it affects the way in which instructional practices are implemented, interventions are derived and carried out, and the way in which the process is viewed (Bandura, 1977; Bandura, 2011).
Definition of Terms

*Comprehensive Student Assistance Program (CSAP)*: A three-tiered, collaborative process by which schools identify barriers to learning and remove them by accessing internal (school-based) and external (community-based) resources.

*Core Instruction*: The general education teacher provides “high quality, scientifically-based instruction for all students” (Walker & Daves, 2010, p. 41).

*Elementary*: Prekindergarten to eighth grade

*Evidence-Based Interventions*: Evidence-Based Interventions are substantiated through research practices

*Fidelity*: Persistence, consistency, and knowledge of the intervention used to increase student achievement (Tucker & Sornson, 2007).

*Interventions*: The academic and behavioral differentiation and modification used to boost student achievement (Brown-Chidsey & Steege, 2005).
**Multi-Tiered**: Multileveled structure that is typically three tiers. Levels of instruction and interventions vary as students move across the tiers (Fuchs & Fuchs, 2006).

**Perceived Self-Efficacy**: Beliefs in one’s capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1997).

**Progress Monitoring**: The system of assessing students’ academic and behavioral progress toward goals (Stecker, Fuchs & Fuchs, 2008).

**Response to Intervention and Response to Instruction and Intervention (RtI and RtII)** are systematic and data-based methods for identifying, defining, and resolving students’ academic and behavior difficulties (Brown-Chidsey & Steege, 2005, p. 3).

**Student Success**: The rates in which students are able to move to Tier I.

**Assumptions, Limitations, and Delimitations**

Several assumptions were made regarding this study. The first assumption was that teachers were prescribing and implementing RtI interventions. Second, teachers were aware of their knowledge level of RtI. The third assumption was that teachers were candid when providing their responses. The researcher acknowledged some limitations during the study. Because educators were sharing perceptions of their RtI skill sets, the case was bound to one setting and was action-oriented. A small sample size was used to obtain data. While the sample population was small, the data was significant in that it informed teacher perceived self-efficacy in academic and behavioral practices.
Summary

This study focused on examining teacher perceived self-efficacy as teachers are mandated to implement RtI. Bandura’s Social Cognitive Theory (SCT) was useful for the investigation concerning the importance of extrinsic and intrinsic motivators in self-efficacy. Some study findings considered teacher self-perceived efficacy as helpful for motivating students and a plethora of information was available about the success of RtI. However, as teacher effectiveness became aligned to student outcomes, new research must include the exploration of if factors such as years of experience in education, years in their current position, education level, and perceived self-efficacy have any correlation with student success. The purpose of this study was to determine educators’ beliefs of RtI and individual perceptions of teachers’ RtI skill sets. By looking at these perceptions, policy makers, the district, administrators, and teachers could focus on how to support staff in the understanding and fidelity of using RtI. This would further develop policies and impact how initiatives are presented, professional development resources are offered and implemented, and help foster positive teacher efficacy.
CHAPTER 2: THE LITERATURE REVIEW

Introduction

Since the launch of the Education for All Handicapped Children Act (Public Law 94-142) in 1975, African American students were referred for special education at a much higher rate than were their Caucasian peers (Ciofi & Ryan, 2011; Klingner & Edwards, 2006). While researchers cogently brought this issue of referral disparity to the forefront, the proportion of African American students referred for special education remained relatively unchanged (Hoover, 2012). Scholars suggested that over identification and the lack of cultural competence were some of the main barriers to decreasing the number of minorities in special education. In reply to the problem, educational reformers searched for initiatives to use in the general education classrooms to address academic and behavior needs. Many school districts implemented Response to Intervention (RtI) as a process of relief. While educational reformers identified RtI as a way to solve academic and behavior issues, debates eluded the far more important issue regarding how to put policy into practice. Teachers are change agents but the question is: Are teachers fully equipped to implement new initiatives? The literature continued to reveal the RtI process but limited research existed regarding teacher perceived self-efficacy using RtI in large, urban school districts with limited resources for students living in impoverished circumstances.

This literature review encompasses using RtI for academic and behavioral student outcomes and teacher perceived self-efficacy. The literature review is an examination of the background of special education legislation, the overrepresentation of African American students in special education, the fruition of RtI, and the current use of RtI
when prescribing, implementing, and progress monitoring academic and behavioral interventions. Literature about teacher resistance and perceptions concluded that the more comfortable educators’ were with new initiatives, the higher the teacher perceived efficacy. While some research findings posited the length of service affected teacher efficacy, there continues to be debate regarding if teachers with more years of service had higher perceived self-efficacy when incorporating a new strategy.

Researchers and scholars found RtI is most successful when educators understand and embrace it as educational reform. Also noted was that differentiating instruction, using responsive, effective interventions with fidelity, and teacher experience and knowledge effect implementation. Each of these components has an effect on teacher perceived self-efficacy, teacher resistance, and perception. Educators must understand and become comfortable about how to identify student needs, the measures used to incorporate academic and behavior interventions, and how to progress monitor to adapt instruction and interventions, particularly in urban environments where resources may be limited.

Many of these concerns were revealed in the literature, noting a need for teachers to be more involved in educational legislation and the lack of involvement often caused a decrease in efficacy. Throughout this investigation, the literature review revealed the points of consensus, the areas of debate, and the gaps in knowledge about RtI and its effectiveness.

**Conceptual Framework**

The challenges of urban education continue to blossom. With limited means and increased responsibility, teachers encompass accountability for the academic and
behavioral practices of students in their classroom. In this process, teachers expect extrinsic supports that will affect intrinsic levels. Listening to practitioners who are in the classroom and engage students daily is important for making teacher and school specific decisions about the implementation of RtI. The researcher was interested in understanding teacher knowledge and perceived self-efficacy when using the RtI process.

Albert Bandura developed the Social Cognitive Theory (SCT), which forms the conceptual framework for this study. The theory was designed in 1986 to recognize the personal, environmental, and behavioral factors in bidirectional, causal, and reciprocal relationships. Cognitive, behavioral, and contextual factors support one’s ongoing functioning (Bandura, 2001; Denier, Wolters, & Benzon, 2014). In context, teacher perceived self-efficacy is shaped by the support from their environment whether from leadership or other colleagues. At the same time, efficacy is affected by the teacher’s thoughts and beliefs of RtI.

The chapter contains three main themes, and the literature review addresses:

1. The historical background of Response to Intervention (RtI),

2. Implications for urban schools and how teacher perceived self-efficacy influences prescribing, implementing and process monitoring in the RtI process, and

3. The effect teacher resistance has on effectiveness and fidelity.

The first theme describes special education legislation that originated to ensure students with disabilities received an appropriate education, the factor of over identification particularly among African American students and the birth of RtI through legislation. The second theme examines studies that explain the academic and behavior components of RtI and its implications of implementation. Finally, because teacher buy
in is imperative in any initiative, teacher resistance is a focus of the literature review. Researched together in a critical review, these three themes could broaden the understanding of teacher perceived self-efficacy when prescribing, implementing, and progress monitoring during the RtI process.

Figure 2. Response to Intervention (Adapted to Bandura’s Social Cognitive Theory)

**Response to Intervention**

**Background**

In 1975, the Education for All Handicapped Children Act (EAHCA), later changed to the Individual Disabilities Education Act (IDEA) in 2004, was enacted to ensure students with disabilities received special education and special education related services (Munk & Dempsey, 2010). When the United States Congress passed the Education for All Handicapped Children Act (EAHCA), also known as Public Law 94-142, the goal was for all students to receive a quality education regardless of their needs (Munk &
The purpose of Public Law 94-142 was to ensure students with disabilities received a free appropriate public education (FAPE) in the least restrictive environment (LRE). To meet student needs, Individual Education Plans (IEPs) were executed to produce an individualized approach that would include parents in decision-making and give students with disabilities the opportunity to participate in general education classes (Munk & Dempsey, 2010; Westling & Fox, 2009). The increasing number of students referred to special education prompted educational policy makers to use a multileveled approach designed to provide students with interventions according to their needs (Berkeley, Bender, Peaster, & Saunders, 2009).

In 2004, during reauthorization, the Individual Disabilities Education Act (IDEA), known as the Individual Disabilities Education Improvement Act (IDEIA), was updated to include RtI. The law was also amended to include services for younger children with disabilities and the demand for more accountability with providing special education and its related services increased (Munk & Dempsey, 2010).

Brown-Chidsey and Steege (2005) defined RtI as a “systematic and data-based method for identifying, defining, and resolving students’ academic and/or behavior difficulties” (p. 3). Sansoti and Noltemeyer (2008) identified RtI as reform bred from IDEIA that received attention as an alternative delivery of instruction and interventions to help decrease the number of students referred to special education. The logic was to use a systems thinking approach with implementation; stating that the system and the individual involved in the system must change. Individual Disabilities Education Improvement Act (IDEIA) became more explicit about allowing RtI to be used as a
preventive model rather than the use of the Intelligence Quotient (IQ) discrepancy method (Fuchs & Fuchs, 2006; Walker & Daves, 2010). The IQ Discrepancy model is used to assess differences between general intelligence and achievement. Assessments such as the Weschler Intelligence Scale for Children (WISC), Version IV are used to measure intelligence while the Woodcock-Johnson Achievement Test is used to measure achievement (Brown-Chidsey & Steege, 2005). The issue with using the IQ Discrepancy model is that primary students often struggle for years without support or any type of intervention implemented. Some research findings supported RtI as a successful prevention-oriented model in both general and special education (Allington, 2009; Cahill, 2007; Ciofi, & Ryan 2010; Fuchs & Fuchs, 2006).

Response to Intervention can be implemented in various formats that may differ in the levels of support but ultimately the framework is the same (Klingner & Edwards, 2006). The problem-solving method involves conferring with parents and the instructional team to prescribe evidence-based interventions, implement and progress monitoring the intervention, redesign or adjust the intervention, and finally use a comprehensive evaluation to examine if special education and its related services are needed for nonresponsive students (Berkeley, et al., 2009; Brown-Chidsey & Steege, 2005; Fuchs & Fuchs, 2006). The problem-solving method differs from child to child while the standard treatment protocol involves using evidence-based interventions for a group of students or individuals (Berekeley et al., 2009; Fuchs & Fuchs, 2006). The intervention is used for a fixed duration. If students are unresponsive, intervention frequency, intensity, and duration may be are alternated or the intervention may be replaced. Nonresponders are evaluated for special education services. The goal is to use
diagnostic screenings to place, prescribe, and implement appropriate interventions (Brown-Chidsey & Steege, 2005).

Response to Intervention was created as a solution for the many problems experienced when using the IQ-Discrepancy model to identify learning disabilities, which is the second model for identification (Brown-Chidsey & Steege, 2005; Mesmer & Mesmer, 2008). In 1977, the U. S. Department of Education defined a learning disability as “a severe discrepancy between achievement and intellectual ability” (p. G1082). While the IQ-Discrepancy model was widely used as a method of identifying learning disabilities, the approach was often viewed as theoretical (Fuchs & Fuchs, 2006; Willson, 1987). Brown-Chidsey and Steege (2005), found “…IQ scores are not the best indicators of ability” (p. 21) particularly when looking at reading skill (Brown-Chidsey & Steege, 2005). The IQ-Discrepancy model is also considered a reactive approach. The teacher must be able to identify the student is struggling academically or behaviorally before interventions are prescribed and implemented (Brown-Chidsey & Steege, 2005; Fuchs & Fuchs, 2006; Henley, Ramsey, & Algozzine, 2009; Mesmer & Mesmer, 2008). The IQ-Discrepancy method often left students unidentified and at risk until upper grades when “the discrepancy becomes significant enough to warrant eligibility” (Berkeley et al., 2009, p. 85). Scholars agreed with the urgency to be proactive instead of using this waiting to fail method (Mesmer & Mesmer, 2008; Fuchs & Fuchs, 2006).

Under the IQ Discrepancy model, the number of economically disadvantaged, minority male students identified as learning disabled also proved to be an issue in states and districts across the country (Mesmer & Mesmer, 2008; Allington & Walmsley, 2007). Goodman and Webb (2006) analyzed and reported the possibility of teacher bias
in 66 special education referrals during a 3-year period. The purpose of the survey was to examine the data from general education teachers for special education referrals. Approximately 86% of students referred were economically disadvantaged. This could be because the IQ-Discrepancy method varies nationwide by the way “it is computed, its size, and which IQ and achievement tests are used” (Fuchs & Fuchs, 2006, p. 41). Scholars agreed that special education referrals must be revisited in urban areas, particularly with high minority populations, to ensure student placement is sound (Daly et al., 2007; Greenfield et al., 2010; Rinaldi, Averill, & Stuart, 2011). Sorrells, Rieth, and Sindelar (2008) contended, “educators must be able to accurately distinguish between differences and disabilities when dealing with these students to ensure they are being properly educated” (p. 41).

Ciolfi and Ryan (2010) identified legislation used by Congress to ameliorate the problem of the over identification of African Americans in special education. First, early intervening services (EIS), which offered intensive academic and behavioral support to at risk students, were implemented (Cahill, 2007; Walker & Daves, 2010). As RtI continued to be instrumental as a way to decrease the overrepresentation of African American males, research concluded there was still an overabundance of black males in special education (Cartledge, Gardner, & Ford, 2009; Ciolfi, & Ryan 2010; Kearns, Ford, & Linney, 2005). Scholars discovered teachers were more likely to refer minority student (particularly African American males) for special education services, but less likely to refer them for gifted education services (Brown, 2012; Cartledge et al., 2009). In 2006, the U.S. Department of Education reported that while African American students made up only 17% of the overall population, they represented 37% of the
suspension rate (cited by Ciolfi & Ryan, 2010). A gap in knowledge existed regarding addressing the causes for the continued high numbers of African American males in special education when districts incorporated RtI. Researchers must identify if overrepresentation continues to occur because of budget issues, the lack of cultural sensitive and responsive interventions, or teacher fidelity and efficacy (Klingner & Edwards, 2006).

Researchers agreed RtI was a proactive approach to decrease the number of low performing students, both academic and behavioral (Allington, 2009; Cahill, 2007; Ciolfi, & Ryan 2010; Fuchs & Fuchs, 2006). As the paradigm shifts and reactive approaches are eradicated, RtI will continue to be significant (Brown-Chidsey & Steege, 2005; Sansoti, & Noltemeyer, 2008). However, the significance will depend upon implementation and fidelity (Berkeley et al., 2009; Daly et al., 2007). Fidelity is the persistence, consistency, and knowledge of the intervention used to increase student achievement (Tucker & Sornson, 2007). The way in which a teacher implements RtI is critical to the success of the instructional and behavioral program. Educators must be cognizant of laws, procedural compliance changes, and the tiered approach used to determine student placement for success student achievement (Ciolfi & Ryan, 2010; Walker & Daves, 2010).

**Tiers.** Response to Intervention (RtI) is a multi-tiered process that uses diagnostic tools to identify struggling students with the goal of limiting academic and behavioral difficulties (Henley et al., 2009). The goal is to provide interventions as a preventive measure. Universal screeners are used to determine student tier placement. This is typically done three times a year (fall, winter, and spring). Different versions of
RtI uses two to four tiers of instruction but three tiers is most typical (Berkeley et al., 2009; Fuchs, Mock, Morgan, & Young, 2003; Fuchs & Fuchs, 2006; Stecker et al., 2008). Tier I is referred to as preventive, Tier II as secondary or selected, and Tier III as tertiary or targeted. The framework consists of using a core program during Tier I, prescribing small group interventions to students who struggle during Tier II, and more individualized interventions at Tier III (Brown-Chidsey & Steege, 2005; Ciolfi & Ryan, 2010). The diagram is often represented using a triangle. The most common diagram has Tier I at the bottom, Tier II in the middle, and Tier III at the top.

Figure 3. Tiers of Support for RtI.

**Academic.** Tier I (Preventive) is where all general education students receive high quality, core instruction (Brown-Chidsey, & Steege, 2005). High quality instruction is the implementation of core evidence-based instruction (Wanzek & Cavanaugh, 2012). Regular progress monitoring is conducted. Students in this tier are meeting required benchmarks and should include 80% of the student population.
Tier II (secondary) is where general education students are considered in need of additional supplemental supports. Intensive small-group evidence-based interventions are prescribed according to student needs in or outside the classroom (Fuchs & Fuchs, 2006). Regular progress monitoring is conducted. This tier includes 10% to 15% of the student population.

Tier III (tertiary) is where general education students receive specialized instruction and assessment. Regular progress monitoring is conducted, and if the student is a nonresponder, a “comprehensive evaluation for special education using the problem-solving model” is conducted (Brown-Chidsey, & Steege, 2005, p. 146).

**Behavior.** The RtI behavioral framework was adopted to address behavior problems. Researchers found that using “more intensive but efficient interventions” (p. 306) proved successful to unresponsive general education practices (Fairbanks et al., 2007). However, the information regarding the RtI behavioral framework is limited (Hawken, Vincent, & Schumann, 2008). Commonalities and differences between the academic and behavioral model existed. Both models generally are three-tiered, measure student achievement and performance through identifying needs through universal screening; however, screeners used for behavior may be the number of discipline referrals received which could be linked to teacher bias (Goodman & Webb, 2006; Hawken et al., 2008). Students are assigned to a tier of intervention. Tier I is the generalized core behavioral instruction educator’s use with students to ensure they understand and obey classroom and school-wide expectations. The expectation is that 80% to 90% of the student population will be on Tier I (Pavri, 2010). For students who do not respond to social behavior expectations, they are moved to Tier II.
Tier II generally comprises 10% to 20% of the student population (Pavri, 2010). Just as with the academic model, interventions are used to increase student outcomes. A specific skill is targeted to provide supplemental behavioral supports to a group of students. Fairbanks, et al. (2007) gave the example of using check in and check out (CICO) and behavior education programs (BEPs). Check in and check out is when a student or teacher charts behavior to monitor the frequency, intensity, and duration. While using targeted behavioral interventions is congruent with the academic model, “measuring students’ responsiveness and establishing criteria for transitioning between levels of support” (p. 217) are often different between Tier I and Tier II in the academic and behavioral structure (Hawken et al., 2008). Educators must use decision-making processes to determine whether students should transition to tier II of the behavior model, but this is difficult because the criterion are not evident as within the academic framework.

Tier III is a more individual approach. This tier should include 1% to 5% of the student population (Pavri, 2010). Specific skills are addressed using time-intensive interventions. Functional Behavior Assessments (FBAs) may be created to determine concerns by collecting the frequency, intensity, and duration of problem behaviors. Students who continue to be nonresponders may be referred for outside agency support or special education (Fairbanks et al., 2007; Hawken et al., 2008). The question remains how well RtI works in impoverished, urban areas where academic and behavioral student performance is low.
Response to Intervention and Academics

Educators are under tremendous scrutiny. The Act 82 law was designed to increase accountability by using various data sources as 50% of performance ratings for teachers (Pennsylvania Department of Education, 2014). Student achievement is the ultimate goal of RtI. Response to Intervention was revealed as transformational programming that identifies current similarities and processes used in current classroom decision-making for instruction and assessment (Little, 2012). High quality instruction and evidence-based curriculum are pivotal for increasing student outcomes (Allington, 2009; Brown-Chidsey & Steege, 2005). While scholars agreed using high quality instruction is essential, a debate continued whether curriculum programs are effective and culturally responsive (Allington, 2009; Brown-Chidsey & Steege, 2005; Ciolfi & Ryan, 2010; Kearns et al., 2005; Klingner, & Edwards, 2006). One issue under debate concerned whether teachers were equipped to differentiate instructional practices to meet student needs (Allington, 2009; Ciolfi & Ryan, 2010; Spear-Swerling & Cheeseman, 2012). The goal of RtI as a diagnostic tool, in theory, is to help educators distinguish from students who have disabilities and students who are receiving poor instruction (Sansosti & Noltemeyer, 2008). Researchers found struggling students thrived in classrooms that differentiated instruction by using various curricula (Allington, 2009; Allington & Johnston, 2002; Keene, 2002; Langer, 2001).

To plan curricula, teachers use diagnostic tools to determine the level of instruction needed for each student. Universal screeners are administered to place each student in a tier of instruction (Brown-Chidsey & Steege, 2005). A review of the data revealed that using universal screeners as decision-making tools drive instruction
(Allington, 2009; Berkeley et al., 2009; Brown-Chidsey & Steege, 2005; Fuchs & Fuchs, 2006). Typically, students are screened at least three times per year (Wanzek & Cavanaugh, 2012). Researchers found that while universal screening is vital in differentiation, emphasis is typically placed on reading, and younger students (Allington, 2009; Berkeley et al., 2009, Brown-Chidsey & Steege, 2005; Lembke, Hampton, & Beyers, 2012; Reeves, Bishop, & Filce, 2010; Vaughn et al., 2012). Very few studies focused on mathematics or other content areas.

The goal of tier II is to help students return to tier I but scholars questioned if returning students was beneficial since they would receive no additional help (Ciolfi & Ryan, 2010). The debate also ensued surrounding the frequency, intensity, and duration of interventions (Brown-Chidsey & Steege, 2005; Daly et al., 2007). Teachers are expected to be knowledgeable about the types of evidence-based interventions available, the rigor, and time needed to help students respond. Although teachers are responsible for prescribing and implementing interventions, a question still existed about how to address nonresponders and if students are not responding because of academic need or lack of teacher knowledge (Klingner & Edwards, 2006; Vaughn et. al., 2012). Several reasons could explain why students may not be responding to interventions. Teacher’s choice of the intervention, the lack of culturally responsive interventions, the frequency, intensity, and duration of the intervention or poor instruction are noted concerns (Allington, 2009; Brown-Chidsey & Steege, 2005; Ciolfi & Ryan, 2010; Daly et al., 2007).

Once a student is a nonresponder, the teacher has the discretion to either continue the intervention, but adjust the frequency, intensity, and duration of the intervention, use
another intervention to address the same deficit, or transition the student to tier III (Brown-Chidsey, & Steege, 2005; Little 2012).

**Response to Intervention and Behavior**

Managing behavior is an important component of instruction. The teacher must create a positive classroom culture that includes behavioral management systems (Myers, Simonsen, & Sugai, 2011; Scheuermann & Hall, 2008). This philosophy is based upon Positive Behavior Supports (PBS). The U.S. Office of Special Education Programs Technical Assistance Center on Positive Behavioral Interventions and Supports defined PBS as:

> A general term that refers to application of positive behavioral interventions and systems to achieve socially important behavior change…Positive behavioral support is not a new intervention package, nor a new theory of behavior, but an application of a behaviorally-based systems approach to enhancing the capacity of school, families, and communities to design effective environments that improve the fit or link between research-validated practices and the environments in which teaching and learning occur. Attention is focused on creating and sustaining school environments that improve lifestyle results for all children and youth by making problem behavior less effective, efficient, and relevant, and desired behavior more functional. In addition, the use of culturally appropriate interventions is emphasized. (Scheuermann & Hall, 2008, p. 4)

Scholars noted the need for cultural responsiveness. The number of African American males receiving disciplinary referrals, suspension rates, and mental health referral supersede those of their Caucasian classmates. African American males are more likely to be suspended than any other cultural group (Ciolfi & Ryan, 2010). While the suspension rate has increased for all subgroups since 1973, numbers for African American males drastically increased. In 2006, the rate was over 15% with the rate increasing to 28% for African American male middle school students. This was compared to the overall 11% suspension rate for middle school students. (Ciolfi & Ryan,
Response to Intervention Effectiveness in Urban Areas

Response to Intervention was noted as a method that increases student outcomes (Brown-Chidsey, & Steege, 2005; Fuchs, & Fuchs, 2006). As research continues to examine the success of RtI, it is important to include that of urban, public districts. With academic and behavioral deficits as a focal point of legislation, educators are pressured to create effective learning environments. Some scholars stated that as accountability rises, teacher input declined (Averill, Rinaldi, & Stuart, 2011). Shirley and Hargreaves (2006) argued teachers “are no longer the drivers of reform, but the driven” (p. 2). Teachers are mandated to implement new initiatives yet their perspectives in planning, professional development, and incorporation are often scarce in research literature (Darling-Hammond, 2009). Furthermore, teachers may not be equipped with the proper knowledge or instructional tools to implement initiatives with fidelity. Averill and Stuart (2011) conducted a 3-year longitudinal study that examined RtI as reform in an urban elementary school. Teachers were asked their concerns about implementation the RtI problem-solving model. The most common obstacles foreseen were planning time, collaboration, assessment, and progress monitoring. The study concluded that RtI was integrated successfully when teachers received instructional support using collaboration, professional development, and shared responsibility for prescribing, implementing, and progress monitoring.

School-wide interventions and the use of RtI collaboration teams to create, monitor, and differentiate according to students’ needs helped with the success rate of using RtI (Daly et al., 2007; Greenfield et al., 2010). Suggestions for establishing RtI
teams, periods of implementation for each tier, professional development, common planning time, and school-wide interventions were noted (Fuchs & Fuchs, 2006). While scholars agreed that collaboration is essential to establishing and implementing data-driven goals, having the time to effectively plan with team members, such as other teachers and paraprofessionals, has proved to be cumbersome in many urban districts (Brown-Chidsey & Steege, 2005). Scheduling issues could cause teachers to make instructional decisions in isolation. Research findings supported that fidelity and collaboration are essential; however, it is unclear how teachers should proceed with using RtI when resources such as professional development opportunities, instructional tools, and personnel are limited (Sparks & Hirsh, 2000).

**Teacher Perceptions and Resistance**

As the educational paradigm changes, teacher perceptions, and resistance to new initiatives may not be as transparent. The literature was prevalent regarding teacher perceptions and resistance to educational reform; however, researchers must examine the reasons for teacher resistance. Zimmerman (2006) argued that teacher resistance was linked to teacher perceived self-efficacy. Teacher acceptance is higher when there is a positive culture and teachers feel they are viable stakeholders that help in decision-making. Knight (2009) contended that teachers are less motivated to implement new initiatives if they find the initiatives may have minimal effect on student outcomes. The literature findings substantiated that school-wide commitment, instructional support, and ongoing professional development for staff using RtI is essential for success (Greenfield et al., 2010). Teachers must be trained to use research-based interventions to drive instruction. The lack of ongoing, meaningful professional development causes teacher
resistance. Sprague, Pennefather, Marquez, Yeaton, and Marquez (2011) explained that professional development is often inconsistent and infrequent. Many district have sporadic, one-day teacher training. For seasoned teachers, incorporating a strong professional development plan is necessary. Seasoned teachers tend to be more resistant to change (Bergstrom, 2008; Klassen, & Chiu, 2010; Myers et al., 2011). To overcome resistance, school administrators must determine why teachers oppose changes by learning teachers’ attitudes, perceptions, and perceived self-efficacy (Zimmerman, 2006).

**Perceived Self-Efficacy**

Research findings chronicled the importance of teacher perceived self-efficacy, particularly in instructional practices and classroom management (Goddard, Hoy & Hoy, 2000; Nunn et al., 2009; Tschannen-Moran & McMaster, 2009). Teachers with higher self-efficacy are more successful in motivating their students (Castillo et al., 2010). Teachers with high self-efficacy are also more likely to accept initiatives that will increase student learning (Tschannen-Moran, Hoy, & Hoy, 1998). The development of teacher perceived self-efficacy is paramount when implementing a new strategy. According to Tschannen-Moran and McMaster (2009), teacher development goes through stages: verbal persuasion, vicarious experience, mastery experience, physiological and affective states, and analysis of the teacher’s task. Verbal input from others during the verbal persuasion phase is imperative. The vicarious experience is when teachers observe other successfully performing the new action. Mastery experiences, noted, as “the most influential source of efficacy information” (Tschannen-Moran & McMaster, 2009, p. 230) is whether the teacher is able to master or buy in to the particular initiative. Physiological and affective states rely on how a person thinks
and feels about the new strategy. These thoughts and feelings have an effect on perceived self-efficacy. Finally, Tschannen-Moran and McMaster (2009) noted the final stage of development as the analysis of the teaching task. In assessing their beliefs, teachers take personal competence and the assessment of the new strategy to reflect upon strengths and weaknesses.

Teacher perceived self-efficacy is the ability to create a positive learning environment for all students by motivating student behaviors. This is a challenge because the teachers must be motivated to be a motivator. Klassen and Chiu (2010) confirmed that continuous motivation is a difficult task, particularly when the motivator is not motivated. They found that elementary teachers of younger children had higher levels of motivation; whereas, their colleagues that taught higher grades tended to have lower motivation. Motivation is also difficult because of the different personalities in the environment (Tschannen-Moran & McMaster, 2009). This does not only apply to student personalities. While there is substantial information about individual efficacy, limited studies were conducted to measure collective teacher efficacy (Goddard et al., 2000). Researchers must look at the system, as a whole, to understand further the effect that motivation has on teacher perceived self-efficacy. Goddard et al. (2000) conducted a study about collective teacher efficacy and socioeconomic status. Researchers investigated which factor had more influence on student achievement. The findings revealed that collective teacher efficacy has a greater effect on student achievement than student socioeconomic status.

Nunn et al. (2009) examined teacher efficacy and if there was a correlation between perceptions of RtI and its outcomes. Nunn et al. (2009) found teachers with increased
self-efficacy were associated with better student achievement, planning, collaborative
approaches, and decision-making. Efficacy was associated with perceptions of improved
outcomes of interventions collaboration opportunities, and data driven decisions. The
findings from a case study conducted by Myers et al. (2011) revealed that giving teachers
performance feedback on their use of motivators and praise resulted in improved teacher
behavior. Teachers became more confident in the delivery of instruction and positive
student behavior increased.

**Perceived Self-Efficacy and Teacher Experience**

Teachers have an immense effect on student achievement. The way teachers
perceive educational reform and their skill set is integral to their success. An argument
continues regarding whether teachers’ years of experience effect instructional practices.
A study by Klassen, and Chiu (2010), determined that years of experience does effect
efficacy. Klassen and Chiu (2010) found literature that indicated teacher self-efficacy
increases with years of experience; however, teachers in this study tended to show a
decline in teacher self-efficacy. Huberman (1989) noted that teachers go through phases
during their professional career. For the first 3 years, teachers are practicing survival and
discovery as they try to understand instructional practices, classroom management, and
their place as an educator. Between 4 and 6 years, teachers who stay in the profession
stabilize and become more comfortable with their own educational practices. Midyear
career teachers with between 7 and 18 years of experience reevaluate practices and
reforms while later year teachers, with between 19 and 30 years’ experience a gradual
loss in energy and enthusiasm, but have a greater sense of confidence and self-acceptance
(Klassen & Chiu, 2010). Finally, teachers with between 31 and 40 years of experience
feel either a sense of serenity or bitterness. This can be equated to the experiences encountered during a teacher’s career.

Summary

Response to Intervention is effective when staff development, instructional support, and positive behavior programs are used. To be instrumental with addressing student needs and increase achievement, teachers must have access to high-quality curricula that promote culturally responsive interventions (Cahill, 2007; Darling-Hammond, 2000; Stecker et al., 2008). This may be difficult to achieve because reformers are working against resistance and perception. The goal of implementation is to assist educators in creating a systematic approach for universal screening, data collection, and school-wide delivery. Few studies explained the common barriers and factors that promote and predict success, and the tools needed to create and sustain an effective RtI program in impoverished districts. A barrier to RtI is that evidence-based interventions that were promoted may not be available wherein teachers are required to implement interventions to increase student achievement. If these interventions are offered, teachers may not be receiving ongoing professional development and instructional support to ensure the correct interventions are used, and when nonresponders are identified, teachers are aware of when to use other interventions, and what interventions are appropriate.

Teachers must have time to collaborate with other instructional staff to delineate the levels of RtI and the types of evidence-based interventions that could be used in urban settings. For educational policy, it would be important to examine RtI and the role the educator plays in its implementation. Practitioners must conduct studies in urban settings with limited resources to examine the types of interventions used, their frequency,
intensity, duration, and teacher knowledge in interpreting data to drive instruction. The implications for future leadership practices allows the design of professional development to ensure teachers are familiar with the three tiers of RtI and are incorporating measurable goals that meet the academic and behavioral needs of identified students. Staff members must be encouraged to collaborate and communicate to discuss student goals and progress. Staff members must also learn the roles and responsibilities of each person involved with student progress. By staff members having knowledge of their responsibilities, there will be support for all participants including students. Chapter 3 explores the methodology used to research teacher perceived self-efficacy of RtI when prescribing and using interventions and monitoring progress.
CHAPTER 3: RESEARCH METHODOLOGY

Introduction

Teacher accountability continues to be linked to student achievement (Darling-Hammond, 2000; Lewis & Young, 2013). While research findings verified that Response to Intervention (RtI) is a successful model used to increase positive student outcomes in different educational settings (Allington, 2009; Brown-Chidsey, 2005; Fuchs & Fuchs, 2006), teacher results vary (Fuchs & Fuch, 2006; Klingner & Edwards, 2006). Are practitioners’ equipped to prescribe and implement academic and behavior interventions? To answer the previous question the following research questions guided this study:

RQ1: Is there a relationship between teacher perceived self-efficacy and prescribing and implementing academic and behavioral interventions in a Response to Intervention (RtI) model?

RQ2: Is there a correlation between teacher years of experience, teacher years in their current position, teacher educational attainment, and perceived self-efficacy when prescribing and implementing academic and behavior interventions?

RQ3: What teacher knowledge and tools are needed for teachers to incorporate RtI successfully?

Examining teacher perceived self-efficacy is imperative when using RtI. The purpose of this study was to determine the effect teacher years of experience in education, teacher years in their current position, teacher education attainment have on their perceived self-efficacy when prescribing and implementing academic and behavior interventions when using RtI.
This study followed an explanatory sequential mixed methodology that blended a quantitative cross-sectional survey design and a qualitative case study approach. Creswell (2012) said mixed methods are “a procedure for collecting, analyzing, and ‘mixing’ both quantitative and qualitative methods in a single study” (p. 535). The explanatory sequential method was ideal in this study because of the use of both quantitative and qualitative data to explain teacher perceived self-efficacy when prescribing and implementing academic and behavior interventions. The quantitative cross-sectional survey was used to gather teachers’ present views about their academic, behavior, and data manipulation and technology skill set as these related to RtI. The qualitative case study was used to explain further the data collected during the quantitative phase. The purpose for using a single instrumental case study approach was to gather a detailed description of an urban school’s general and special education teachers’ implementation and further analysis the use of RtI data to identify commonalities while using the process (Bloomberg & Volpe, 2012). Finally, the study followed an action-oriented approach. The researcher is a member of the organization that was studied and was concerned about teacher knowledge of RtI. The action-oriented approach was used to provide school-specific resources and professional development for practitioners. Literature findings contended that conducting action-oriented research is paramount in creating meaningful opportunities for practitioners (Creswell, 2012; Ravid, 2011). Using program evaluation extensively is important for meeting the needs of the organization. The mixed method research approach worked together in “merging, integrating, linking and embedding the two “strands” (Creswell, 2012, p. 535).
The goal of the study was to investigate general and special education teachers’ current level of knowledge of RtI when prescribing and implementing academic and behavioral interventions. This also entailed the teachers using data manipulation and technology in the process. The researcher also wanted to determine if teacher years of experience in education, years in their current position, and their educational attainment had a correlation with their use of RtI. During Phase 1 of the study, 17 educators completed a 27-question *Perception of RtI Skills Survey* (Appendix B). The survey asked participants to describe their perceived skill set when prescribing, implementing, making decisions, using technology regarding academic and behavior content. In Phase 2 of the study, all 17 teachers agreed and participated in a 15-question individual interview that further examined their perceived self-efficacy.

To respond to the research questions, it was imperative to evaluate teacher knowledge and perceptions of self-efficacy in the classroom when using RtI for prescribing and implementing academic and behavior interventions. The purpose of this explanatory sequential study was to determine the effects of teacher educational attainment, years of experience in education, years of experience in their current position and teacher perceived self-efficacy on the implementation of RtI. This study was conducted in a sequential process with quantitative data collected first and qualitative data collected thereafter. The goal of the study was to identify and to determine general and special education teacher’s skill set in implementation of RtI. This section reveals the overall methodology of the study. The research design and rationale, site and population, research methods, and ethical considerations are explained and thoroughly examined.
Research Design and Rationale

This study used a mixed methods design. Mixed methods design is “a procedure for collecting, analyzing, and “mixing” both quantitative and qualitative methods in a single study or a series of studies to understand a research problem” (Creswell, 2012, p. 535). The explanatory sequential or sequential explanatory approach was used (Creswell, 2012; Ivankova, Creswell, & Stick, 2006). This type of research design uses the quantitative data collection first, than relies on qualitative data to define results further (Creswell, 2012; Ivankova et al., 2006). For the purpose of congruence, both terms will be used interchangeably. The explanatory sequential design was ideal to provide information about the problem because it used qualitative data to gain more knowledge to “refine extend, or explain” the quantitative findings (Creswell, 2012; Ivankova et al., 2006; Johnson & Onwuegbuzie, 2004). Ivankova et al. (2006) corroborated the advantages of using an explanatory sequential design, stressing that it gives more opportunities to explore quantitative results.

The blended methodology used a cross-sectional survey design with qualitative case study research. Pearson’s product moment correlation coefficient was used to determine if there were relationships between teacher years of experience in education, teacher years in their current position, teacher educational level, and teacher self-efficacy when examining RtI self-perceived skills (Castillo et al., 2010; Ravid, 2011). Qualitative single instrumental case study research was used to triangulate data and further discover the knowledge and skills needed for teachers to incorporate RtI successfully. Yin (2008) defined the qualitative case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context” (p. 18). The purpose of using a
case study was to explore a bounded system of in-depth data collection using multiple sources (Merriam, 2009). An interview protocol was created to understand quantitative findings better. By using both quantitative and qualitative data, the hope of the researcher was to “provide a better understanding of the research problem and question” (Creswell, 2012, p. 535).

**Site and Population**

**Population Description**

The population of this study involved general and special education teachers from one urban school district. A single instrumental case study of one elementary school was conducted to obtain an in-depth understanding of RtI (Merriam, 2009). Using a sample size from one school allowed for a deeper investigation of teachers’ knowledge and comfort with prescribing and implementing RtI interventions. A purposeful, representative sample of kindergarten through eighth grade teachers from the school was invited to complete the online *Perception of RtI Skills Survey* using SurveyMonkey®. The original survey was revised to include demographic information: teacher years of experience in education, years in their current position, and educational attainment. This was done because those factors were instrumental in the study. Convenience sampling was used to gather data. This method of sampling targeted available and willing participants at the institution under study (Creswell, 2007).

Twenty-eight teachers, 24 general education, and four special education teachers were invited to participate in Phase 1 of the study. Seventeen teachers, 15 general education and two special education teachers, returned the informed consent form for a 61% response rate. Educators teaching kindergarten through eighth grade reading or
math were chosen because they were mandated to use RtI. The researcher invited all general and special education teachers to participate in the survey by using e-mail information from the staff Listerv. A copy of the informed consent letter was included so potential participants could read about the study. A hard copy was also given to all general and special education teachers. The number of participants to a survey affects the reliability and validity of the study findings. To be statistically significant, there must be at least a 50% return rate (Ravid, 2011). The qualitative individual interviews, Phase 2, were completed after the surveys. Participants were asked at the end of the survey if they were willing to participate in an interview. Interviewees were chosen by willingness to participate, number of years of experience in education, teacher experience in their current position, their educational attainment, and teacher perceived self-efficacy. The sample size was limited because of the number of educators willing to participate in the study. The 17 participants that completed the Perceptions of RtI Skills Survey also participated in the individual interviews.

Site Description

One urban public elementary school located in Pennsylvania was chosen for this study. Elementary school is defined as an institution educating students from pre-kindergarten through eighth grade. The community is considered low income. In 2009, the median income for residents was $28,007. This also contributed to the high crime rate in the area. About 1 in 15 people were a victim of some type of crime, while 1 in 60 people were a victim of a violent crime. The crime index was 42% higher than other surrounding areas (Philadelphia Crime Rates & Statistic, 2010).
According to the school district’s website, this school had 576 students with racial demographics of 92.7% African American, 3.2% Latino, 0.8% White, 0% Asian, 1% American Indian, and 0.2% Pacific Islander. While 14% of the student population was classified as receiving special education and its related services, none of the students was identified as gifted. Since the school was in such an impoverished area, 97% of students were considered economically disadvantaged, but 100% of students received free breakfast and lunch services. This school was chosen for several reasons. While there were several RtI pilot schools in years past, the 2012-2013 school year was the first year teachers in this school district were mandated to use RtI. The researcher conducted backyard research using convenience sampling (Creswell, 2007; Johnson & Onwuegbuzie, 2004). This type of sampling proved valuable in accessibility to participants and decreased travel time.

**Site Access**

The first task in securing site access to the urban public elementary school was to consult with the principal and ask if there was interest in participating in the conduction of the study. Once the principal gave permission, the researcher had to defend the research proposal to the dissertation committee to ensure there were no ethical concerns and the research was viable. The researcher submitted a proposal to the school district’s Office of Research and Evaluation to gain access to the Listserv. The researcher completed a research proposal application using the mandated template provided by the school district. There were also letters of support included in the application from the researcher’s chairperson and the principal of the selected elementary school. Once permissions were obtained from the school district, the researcher submitted the
appropriate documentation to Drexel University’s Institutional Review Board (IRB) for approval.

Approval was received from both institutions by January 29, 2014. Because of time constraints and the objective of completing the study by March 2014, the researcher sent an invitation to participate using the elementary school’s Listerv immediately after approval. Participants received a thorough, detailed explanation about the study through the letter of informed consent. Participants were assured anonymity and the strictest of confidentiality. Building a sense of trust and a rapport with participants bettered the chance of receiving rich data (Creswell, 2007). The participants received assurance they could discontinue participation in the study at any time. The findings were divulged to the principal, teachers, the school district, and other stakeholders to inform practices while prescribing and implementing RtI. The hope was that the study would assist with creating resources and tools to help increase teacher success and student outcomes.

**Research Methods**

The following research methods assisted with the collection and analysis of the quantitative and qualitative data:

- Electronically-based *Perceptions of RtI Skills Survey*
- In-depth face-to-face interviews
Description of Methods Used

Quantitative

Instrument descriptions. The Perceptions of RtI Skills Survey (Appendix B) was created by the Florida PS/RtI Statewide Project staff (Castillo et al., 2010). Permissions to use the validated, pre-existing survey are highlighted under ethical considerations. The use of an established measure validates the results. According to Castillo et al., (2010), to ensure content validity of the Perceptions of RtI Skills Survey, project staff:

- reviewed relevant literature, presentations, instruments, and previous program evaluation projects to develop an item set that would be representative of perceived skills important to consider when implementing PS/RtI practices. Next, a draft of the instrument was sent to an Educator Expert Validation Panel (EEVP), which consisted of 14 educators from varying disciplines (e.g., general and special education teachers, school- and district-level administrators, student support services personnel, content specialists) in a neighboring school district who had basic background knowledge in PS/RtI, for review. The Panel provided feedback on the representativeness of the skills covered by the instrument, clarity and quality of the individual items, and suggested modifications to items. (p. 87)

To determine construct validity of the Perception of RtI Skills Survey, staff used exploratory common factor analytic procedures using the responses from a sample of 2,184 educators in 62 schools from eight school districts across Florida. The three factors collectively accounted for 80% of the common variance in participant ratings. The three factors were as follows:

1. Perceptions of RtI Skills Applied to Academic Content,

2. Perceptions of RtI Skills Applied to Behavior Content, and

3. Perceptions of Data Manipulation and Technology Skills
To determine reliability of the instrument, the internal consistency was measured using Cronbach’s Alpha. Castillo et al. (2010) stated,

an internal consistency reliability estimate provided a measure of the extent to which educators’ who responded one way to an item measuring a skill domain (or factor) tended to respond the same way to other items measuring the same domain. (p. 88)

The results were as follows:

**Factor 1** (Perceptions of RtI Skills Applied to Academic Content): $\alpha = .98$

**Factor 2** (Perceptions of RtI Skills Applied to Behavior Content): $\alpha = .97$

**Factor 3** (Perceptions of Data Manipulation and Technology Use Skills): $\alpha = .94$

According to Ravid (2011), “in exploratory research, even the modest reliability of .50 to .60 is acceptable although a higher reliability is always preferable” (p. 199).

The purpose of using a cross-sectional survey was to examine practitioners’ current opinions, attitudes, and practices when prescribing and implementing RtI (Creswell, 2012). Scholars agreed that teachers who have a better sense of RtI have a more positive perception of implementation (Castillo, et al., 2010; Darling-Hammond, 2000; Nunn, et al., 2009; Spear-Swerling & Cheesman, 2012). The 27-question cross-sectional survey was designed to examine educators’ self- perceived academic, behavior, and data manipulation and technology skill set. Researchers noted that school-wide commitment, instructional support, and ongoing professional development for staff in prescribing and implementing RtI goal are paramount in the success of RtI (Greenfield et al., 2010). Educators selected from the following quasi-interval scale when responding to items on the survey: 1 = I do not have the skill at all (NS); 2 = I have minimal skills in this area; need substantial support to use it (MnS); 3 = I have the skills, but still need some support
to use it (SS); 4 = I can use this skill with little support (HS); 5 = I am highly skilled in this area and could teach this skill (VHS).

Qualitative

Instrument description. A 15-question open-ended interview protocol used for qualitative data collection was designed to further understand general and special educators understanding of RtI and gain more knowledge about teacher perceived self-efficacy. The purpose of the in-depth interviews was to triangulate and get a better understanding of the quantitative results (Creswell, 2012; Ivankova et al., 2006; Johnson & Onwuegbuzie, 2004). The researcher ensured that the questions were open-ended, clear, free of research bias, and not two-tailed (Turner, 2010). The questions were reviewed thoroughly by dissertation committee members, the Office of Research and Evaluation in the school district, and by Drexel University’s Institutional Review Board. While participants had the option of using Skype® or Google Plus®, the researcher promoted face-to-face interviews and all respondents used the in person approach.

Participant selection. Participants to be studied were general and special educators teaching in the urban, public, elementary school selected as the research site. A purposeful sample size of 17 general and special education teachers was representative of both populations. Convenience sampling was used and all general and special education teachers with students from kindergarten to eighth grade who taught reading, math, or reading and math were invited to participate. Participation was voluntary. Participants were notified of their right to leave the study at any time. Participants were also informed about confidentiality.
Identification and invitation. Participants received a detailed explanation of the purpose and significance of the study. Since the researcher conducted the study at her place of employment, participants were invited in person and by email using the school Listserv. All informed consent was provided in person and electronically for the participant’s records. Participants were asked if they were interested in participating in the in-depth interviews at the end of the Perception of RtI Skill Survey. Participants received assurance that all information provided would remain concealed and confidential with all data unidentifiable by assigning numbers that would only be known by the researcher, encrypted, and secured on a password-protected computer. Interviewees were contacted and explained that the interview would take between 30 and 45 minutes.

Data collection. The study used a mixed methodology. The first phase of the study was the Perceptions of RtI Skills Surveys. The surveys were replicated in SurveyMonkey® and an upgraded version of the software was used to ensure all amenities were available. The 27-question survey examined academic and behavior content, and data manipulation and technology. Phase 2 of the study was individual interviews. All interviews were recorded, transcribed verbatim, and coded to identify common themes. Backup copies of files were made in case of technological or human error (Creswell, 2007). Dedoose®, a computer-based system was used to interpret information.

Data Analysis Procedures

To analyze data from the Perception of RtI Skills Survey descriptive statistics were used to compare teacher years of experience, their years in their current position, teacher
education level, and self-efficacy. The relationships were identified by using Pearson’s product-moment coefficient correlations to examine the association between two or more numerical values (Creswell, 2012; Ravid, 2011). The software, Statistical Package for the Social Sciences (SPSS), Edition 20 was used to code and analyze statistical data.

To score data, a numerical value was assigned based upon the category of the item. Data was inputted into SPSS to create quantitative results. A grid was created using each respondent’s identification number, a numeric score for their level of education, number of years teaching, number of years in their current position and score of perceived self-efficacy skills from the *Perception of RtI Skills Survey* (Creswell, 2012).

Data from the *Perception of RtI Skills Survey* examined educators’ self-perceived skills related to academic content, behavior content, and data manipulation and technology (Castillo et al., 2010). Academic, behavior, and data manipulation and technology categorized the factors. Educators selected from the following scale when responding to items on the survey: 1 = *I do not have the skill at all (NS)*; 2 = *I have minimal skills in this area; need substantial support to use it (MnS)*; 3 = *I have the skills, but still need some support to use it (SS)*; 4 = *I can use this skill with little support (HS)*; 5 = *I am highly skilled in this area and could teach this skill (VHS)*.

The following factors were analyzed for the questions listed:

**Factor 1:** (Perceptions of RtI Skills Applied to Academic Content): Questions 6 through 22, and 24.

**Factor 2:** (Perceptions of RtI Skills Applied to Behavior Content): Questions 6 through 22, and 24.
Factor 3: (Perceptions of Data Manipulation and Technology Use Skills):


Each respondent was asked the same 15 questions. All interviews were recorded using an audio recorder and transcribed. Pseudonyms were used for three transcriptions to conceal identification of the district, school, and personnel. All interviews were reviewed several times for the researcher to ensure accurate transcription and to start examining comments. The researcher took notes while listening to each audio to start identifying commonalities. The researcher printed the first interview transcription for data analysis to determine and categorize emerging codes. Merriam (2009) suggested beginning with the first interview transcript to “be as expansive as you want in identifying any segment of data that might be useful” (p. 178). All preceding interviews were printed and the interviewer matched anecdotes during the review of the audio recordings. The researcher highlighted the printed transcribed interviews and identified themes. Those themes were documented in the margin of each transcription. All transcribed data were uploaded to Dedoose© to further code qualitative data. Merriam (2009) noted that by assigning open codes to the data, the researcher is to “begin to construct categories” (p. 179), which is called axial coding.

Null Hypotheses

H1\(^0\): There is no statistically significant difference in perceived self-efficacy of teachers with more years of experience.

H2\(^0\): There is no statistically significant difference in perceived self-efficacy of teachers with more years of experience in their current position.
H3\textsuperscript{0}: This is no statistically significant difference in perceived self-efficacy of teachers with advanced degrees.

H4\textsuperscript{0}: Teachers are not equipped with tools needed to successfully implement RtI.

Alternate Hypotheses

H1\textsuperscript{A}: There is a statistically significant difference in perceived self-efficacy of teachers with more years of experience in education.

H2\textsuperscript{A}: There is a statistically significant difference in perceived self-efficacy of teachers with more years of experience in their current position.

H3\textsuperscript{A}: There is a statistically significant difference in perceived self-efficacy of teachers with advanced degrees.

H4\textsuperscript{A}: Teachers are equipped and have the tools needed to incorporate RtI with fidelity.

In summary, the sequential explanatory approach was used to analyze quantitative and qualitative data to identify if there is correlation between teacher perceived self-efficacy, teacher level of education, and teacher years of experience and teacher years in their current position. The analysis also informed the skills and knowledge teachers think are needed to help them implement RtI with fidelity and success. Using a mixed methods research design expanded findings by examining data from surveys and interviews (Creswell, 2007; Creswell, 2012; Ivankova et al., 2006; Johnson & Onwuegbuzie, 2004).

Stages of Data Collection

The researcher gained Institutional Review Board approval from Drexel University on January 29, 2014. A research proposal hearing was scheduled and completed on April 30, 2013. A request to conduct the study was submitted to the Office of Research and
Evaluation of the school district May 5, 2013. The dissertation chairperson supplied a letter of support and explanation. The review board met on May 15, 2013 and the researcher received approval to conduct the study on October 27, 2013. The research comprised a detailed synopsis of the study and informed consent forms. Following in Figure 4 is a representation of the data collection process.

A secure link was sent through the elementary school staff Listserv that included the Perceptions of RtI Skills Surveys that were replicated in SurveyMonkey®. At the end of the survey, the researcher stressed that the interview was also an integral part of data collection and asked respondents to provide information if they were interested in participating in the interview process. Survey data collection occurred between January 29, 2014 and February 10, 2014. The quantitative data were inputted and analyzed using SPSS software.

All the interviews were completed by March 5, 2014. Qualitative data was transcribed, coded, and analyzed by the end of mid-March. The researcher looked for
commonalities in the quantitative and qualitative data by embedding SurveyMonkey® into Dedoose©. Chapter 4 was drafted, revealing findings, results, and interpretations. Those findings are further summarized and explained in Chapter 5. The information of the study was reported to the dissertation committee and other stakeholders.

**Ethical Considerations**

To fulfill the ethical standards of Drexel University and the large urban district in which the study was conducted, the researcher had to acquire approval from the Institutional Review Boards of Drexel University and the Office of Research and Evaluation from the school district, and permission from the principal of the elementary school. Permission was also received from the writers of the *Florida PS/RtI Statewide Project Technical Assistance Manual* (Castillo et al., 2010). According to the manual:

> Potential users of this manual include all educational stakeholders facilitating the implementation and evaluation of PS/RtI practices. Specifically, the contents of this manual can assist school-, district-, and state-level personnel as well as stakeholders from other educational organizations (e.g., universities, Area Education Agencies) in their efforts to make informed decisions regarding PS/RtI implementation and its impact on important educational outcomes. To facilitate clear, concise communication of the information presented, each section describes use of the instrument at the school- and district-levels. Educational stakeholders from other units of analysis or entities can adapt the recommendations to meet their specific needs. (p. iii)

This study included the use of an embedded version of the *Perception of RtI Skills Survey* and individual interviews. SurveyMonkey® was used as quantitative survey instrument. Survey questions were retyped and embedded into SurveyMonkey® with five demographic questions regarding identification, grade taught, years of experience in education, years in their current position, and educational attainment. Interviews were conducted after survey results were gathered. Participants had the option of conducting interviews on or off site. On site is defined as within the school building. Off site is
categorized as any other meeting place outside of the school building. Participants had the option of completing in-depth face-to-face interviews or in-depth interviews using technology-based programs Skype® or Google Plus®. Both programs allowed the researcher to see facial reactions and limited movements using other gestures, such as hand movements.

All data collected remained strictly confidential and no identifiable information was used on either instrument to ensure complete anonymity. Participants also received a letter of consent that stated participation in the study was voluntary and that they had the right to leave the study at any time. After completion of the study, the data was reported in the researcher’s dissertation and to the Office of Research and Evaluation.

The intent of the researcher was for the study to provide viable data and to contribute to the literature regarding teacher self-efficacy, prescribing, and implementing academic and behavioral interventions using RtI. However, there were limitations to the study. The sample size was small. The study was conducted at one school classified as an elementary school, but also has a middle year’s population. While the school employed approximately 28 certified teachers, including the teachers who participated in the study, only two of the participants were special education teachers. The viability of the study was contingent upon participation of subjects. The survey questions asked participants to divulge information about their skill set when prescribing and implementing academic and behavioral interventions using RtI. Participants may not have been honest about self-efficacy and some respondents possibly reported what they thought the researcher expected or what they perceived as acceptable prescription and implementation within their school, especially since the researcher completed an action-
oriented study (Creswell, 2008).

The mixed methods approach is an instrumental methodology in research. Using the explanatory sequential design for this study helped better substantiate both quantitative and qualitative results. *The Perceptions of RtI Skills Survey* helped to examine the perceptions of RtI as an educational reform initiative and teacher perceived self-efficacy when prescribing, implementing, and progress monitoring. The qualitative single instrumental case study focused on one urban, public elementary school further to inform quantitative data results. Chapter 4 will reveal the findings, results, and interpretations of the quantitative and qualitative data outcomes.
CHAPTER 4: FINDINGS, RESULTS, AND INTERPRETATIONS

Introduction

The purpose of this explanatory, sequential, mixed methods study was to examine practitioners’ perceived self-efficacy when prescribing and implementing Response to Intervention (RtI) academic and behavior interventions. The use of RtI is mandated in Pennsylvania, but levels of implementation vary. Although the state of Pennsylvania made educators accountable for using RtI with fidelity, regulators do not examine teacher perceived self-efficacy, particularly in large urban school districts with limited resources. The expectation is that the quantitative and qualitative data collected from this study will inform professional development by having respondents describe in-depth, their knowledge, strengths, and areas of need. The central question of the study was as follows:

**RQ1:** Is there a relationship between teacher perceived self-efficacy and prescribing and implementing academic and behavioral interventions in a Response to Intervention (RtI) model?

**RQ2:** Is there a correlation between teacher years of experience, teacher years in their current position, teacher educational attainment, and perceived self-efficacy when prescribing and implementing academic and behavior interventions?

**RQ3:** What teacher knowledge, skills, and tools are needed for teachers to incorporate RtI successfully?
The null hypotheses for this research study were:

**H1^0**: This is no statistically significant difference in perceived self-efficacy of teachers with more years of experience.

**H2^0**: This is no statistically significant difference in perceived self-efficacy of teachers with more years in their current position.

**H3^0**: This is no statistically significant difference in perceived self-efficacy of teachers with advanced degrees.

**H4^0**: Teachers are not equipped with tools needed to successfully implement RtI.

The research alternate hypotheses for this research study were:

**H1^A**: There is statistically significant difference in perceived self-efficacy of teachers with more years of experience.

**H2^A**: This is statistically significant difference in perceived self-efficacy of teachers with more years in their current position.

**H3^A**: This is statistically significant difference in perceived self-efficacy of teachers with advanced degrees.

**H4^A**: Teachers are equipped and have the tools needed to incorporate RtI with fidelity.

Participants completed a cross-sectional *Perception of RtI Skills Survey* to describe diagnostic, prescriptive, and procedural techniques in academics and behavior. Information was further shared and explained through open-ended, one-on-one interviews. There appeared to be higher practitioner perceived self-efficacy when responding to academics than when responding to behavior. The level of teacher perceived self-efficacy was much lower regarding RtI behavioral knowledge. The
The significance of this study was that the survey and individual interview results could be used to inform the RtI programming in urban school districts. By using the *Perception of RtI Skills Survey* and open-ended, one-to-one interviews, the researcher wanted to examine teacher knowledge of RtI further to provide meaningful professional development experiences that would promote positive self-efficacy and increase practitioners’ understanding of prescribing and implementing academic and behavior interventions.

Quantitative and qualitative data were analyzed to determine if the years of experience in education, the years in their current position, and teacher’s education level had an effect on practitioners’ perceived self-efficacy when prescribing and implementing RtI for academics and behavior. Data collection was completed in two phases: The electronically-based cross-sectional *Perceptions of RtI Skills Survey* and open-ended, one-on-one interviews. The data collected in each phase of the study had the purpose of helping to examine teacher perceived self-efficacy in academics and behavior by also understanding how practitioners use data manipulation, and technology for prescriptive and implementation tools. Quantitative data “can produce results to assess frequency and magnitude of trends” whereas qualitative data uses the words of participants to “offer many different perspectives on the study topic and provide a complex picture of the situation” (Creswell, 2012, p. 535).

The findings of the *Perceptions of RtI Skills Survey* revealed the number of years each teacher had in education, the number of years in their current position, and their educational level. Findings were determined by using descriptive statistics wherein SPSS (version 20) was used to input findings. The survey proceeded with teacher perceived
self-efficacy when prescribing and implementing academic and behavior interventions while addressing data manipulation and technology in the process. Additionally, participants were interviewed using an open-ended, individualized format. Four major common themes emerged from the study:

1. Understanding the teacher’s role in prescribing and implementing behavioral interventions,
2. Managing RtI academic and behavior interventions in the classroom with fidelity,
3. Understanding how to identify, prescribe and implement academic and behavior resources, and
4. Using technology to progress monitor. This chapter reviews the data collection analyses and findings of both phases of the study and the results and interpretations of those findings.

**Phase 1: Perception of RtI Skills Survey**

To commence the quantitative phase of the study, the researcher used The *Perceptions of RtI Skills Survey* published by the Florida PS/RtI project team (Castillo, et al., 2010). Five questions were added to the beginning of the survey that asked identification and demographic information. Participants entered their project identification numbers, grade bracket, number of years in education, total years in their current position, and their highest level of education. The remaining survey questions were designed to help examine educators' self- perceived academic, behavior, data manipulation, and technology skill set. Educators selected from the following quasi-interval scale when responding to items on the survey: 

1. I do not have the skill at all (NS); 2. I have minimal skills in this area; need substantial support to use it (MnS); 3. I have a good understanding of the skill (GdS); 4. I am very proficient in using the skill (Pf); 5. I am an expert in using the skill (Ex)
I have the skills, but still need some support to use it (SS); 4 = I can use this skill with little support (HS); 5 = I am highly skilled in this area and could teach this skill (VHS).

The predetermined alpha level set by the researcher to determine statistical significance was a probability level was 0.5. This statistically significant coefficient or alpha was determined because it is the common probability used in most statistical tests (Ravid, 2011). In this study, when p<0.5, the alternate hypotheses were rejected and the null hypotheses were accepted for the following:

**H1**\(^0\): This is no statistically significant difference in perceived self-efficacy of teachers with more years of experience.

**H2**\(^0\): This is no statistically significant difference in perceived self-efficacy of teachers with more years in their current position.

**H3**\(^0\): This is no statistically significant difference in perceived self-efficacy of teachers with advanced degrees.

**H4**\(^0\): Teachers are not equipped with tools needed to successfully implement RtI.

**Phase 1 Findings: Perception of RtI Skills Survey**

Twenty-eight teachers, 24 general education, and four special education teachers were invited to participate in Phase 1 of the study. Seventeen teachers (n=17), 15 general education, and two special education teachers returned the informed consent form for a 61% response rate. The 17 participants completed the informed consent form before accessing *Perception of RtI Skills Survey*. For anonymity purposes, each participant was assigned a project identification number. Participants accessed the *Perception of RtI Skills Survey* though a secure SurveyMonkey® link. Survey data collection occurred between January 29, 2014 and February 10, 2014. Participants vary
in years in
education and years of experience in the current position, but only one teacher was in education for less than 4 years and 14 out of 17 participants possessed advanced degrees.

**Participant Demographics**

The researcher added participant demographic information to the *Perception of RtI Skills Survey* to gain a better understanding of any potential correlations between teacher’s experience in education, teacher’s experience in their current position, and teacher educational attainment. General and special education teachers were asked to identify their grade bracket. This information was used for identification purposes.

There were three choices: (a) kindergarten through second grade (b) third through fifth grades, and (c) sixth through eighth grades. The sample for this study included 47% (n=8) in kindergarten through second grade, 29% (n=5) in third through fifth grades, and 41% (n=6) in sixth through eighth grades. Eighty-eight percent (n=15) of participants were general education teachers while 12% (n=2) identified as special education teachers. Two teachers listed more than one grade band.

The next question addressed teacher’s years of experience in education. Teachers could choose from (a) 1-4 years, (b) 5-9 years, (c) 10-14 years, (d) 15-19 years, (e) 20-24 years, and (f) 25 or more years. The frequency results were as follows: Less than 1 year n=zero (0%), 1-4 years n=1 (5.9%), 5-9 years n=2 (11.8%), 10-14 years n=5 (29.4%), 15-19 years n=6 (35.3%), 20-24 years n=zero (0%) and 25 or more years n=3 (17.6%). This information is highlighted in Table 1.
### Table 1 Years of Experience in Education

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4 Years</td>
<td>1</td>
<td>5.9</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>5-9 Years</td>
<td>2</td>
<td>11.8</td>
<td>11.8</td>
<td>17.6</td>
</tr>
<tr>
<td>10-14 Years</td>
<td>5</td>
<td>29.4</td>
<td>29.4</td>
<td>47.1</td>
</tr>
<tr>
<td>15-19 Years</td>
<td>6</td>
<td>35.3</td>
<td>35.3</td>
<td>82.4</td>
</tr>
<tr>
<td>20-24 Years</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>82.4</td>
</tr>
<tr>
<td>25 or More Years</td>
<td>3</td>
<td>17.6</td>
<td>17.6</td>
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<tr>
<td>Total</td>
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<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Participants were asked to report their years of experience in their current position. Categories were the same as those asked for teacher’s years of experience in education: (a) less than 1 year, (b) 1-4 years, (c) 5-9 years, (d) 10-14 years, (e) 15-19 years, and (f) 20-24 years. One participant skipped this question. The frequency results were as follows: Less than 1 year n=3 (17.6%), 1-4 years n =6 (37.5%), 5-9 years n=1 (6.3%), 10-14 years n=2 (12.5%), 15-19 years n=3 (6.3%), and 20-24 years n=1 (6.3%). This information is noted in Table 2.
Table 2 Number of Years in Current Position

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
<td>Less than 1 Year</td>
<td>3</td>
<td>17.6</td>
<td>18.8</td>
<td>18.8</td>
</tr>
<tr>
<td>1-4 Years</td>
<td>6</td>
<td>35.3</td>
<td>37.5</td>
<td>56.3</td>
</tr>
<tr>
<td>5-9 Years</td>
<td>1</td>
<td>5.9</td>
<td>6.3</td>
<td>62.5</td>
</tr>
<tr>
<td>10-14 Years</td>
<td>2</td>
<td>11.8</td>
<td>12.5</td>
<td>75</td>
</tr>
<tr>
<td>15-19 Years</td>
<td>3</td>
<td>17.6</td>
<td>18.8</td>
<td>93.8</td>
</tr>
<tr>
<td>20 or more Years</td>
<td>1</td>
<td>5.9</td>
<td>6.3</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
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<td>94.1</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Missing System</td>
<td>1</td>
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<tr>
<td>Total</td>
<td>17</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To conclude the demographics questions of the study, participants were asked to report their highest level of educational attainment (see Table 3). Teachers could choose from the following responses: (a) BA/BS, (b) MA/MS, (c) EdD/PhD, (d) Other. Of the 17 participants, three identified themselves of having a BA/BS (17.6%) while 14 (82.4%) indicated that they had a MA/MS. One participant also denoted the Other choice with the MA/MS to identify having plus 60 credits. For the purpose of the study, the participant was included in the MA/MS category. None of the respondents reported having earned an EdD/PhD.

Table 3 Educational Level

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA/BS</td>
<td>3</td>
<td>17.6</td>
<td>17.6</td>
<td>17.6</td>
</tr>
<tr>
<td>MA/MS</td>
<td>14</td>
<td>82.4</td>
<td>82.4</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
The overall domain means and standard deviations were calculated for teacher responses to academic content, behavior content, and data manipulation and technology. These results are listed in Table 4. Overall, teachers perceived RtI academic and behavior content skills straddled the categories of having skills but need some support to use it (SS) and using it with little support (HS). For data manipulation and technology the skills practitioners perceived themselves between having minimal skills in this area and need substantial support to use it (MnS) and having skills but need some support to use it (SS).

Table 4 Academic Content, Behavior Content, and Data Manipulation and Technology

<table>
<thead>
<tr>
<th>Factors</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Content</td>
<td>17</td>
<td>2.22</td>
<td>4.91</td>
<td>3.45</td>
<td>0.81</td>
</tr>
<tr>
<td>Behavior Content</td>
<td>17</td>
<td>1.81</td>
<td>4.62</td>
<td>3.24</td>
<td>0.76</td>
</tr>
<tr>
<td>Data Manipulation Technology</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td>2.89</td>
<td>1.21</td>
</tr>
</tbody>
</table>

Each factor (academic content, behavior content, and data manipulation) was also examined for correlations between the teacher’s years in education, teacher’s years in current position, and teacher’s educational level. Codes were assigned to each year bracket for teacher’s years in education, teacher’s years in their current position, and teacher’s level of education. Years of experience and years in their current position were calculated using ordinal data while educational attainment was calculated using Likert-type scale data. Years of education were coded as follows: (a) 1-4 years -1 (b) 5-9 years
– 2, (c) 10-14 years – 3, (d) 15-19 years – 4, (e) 20-24 years – 5, and (f) 25 or more years - 6. Years in current position were coded as: (a) Less than a year – 1, (b) 1-4 years – 2, (c) 5-9 years – 3, (d) 10-14 years – 4, (e) 15-19 years – 5, (f) 20-24 years – 6, and (e) 25 or more years - 7. Educational levels were coded as: BA/BS – 1, and MA/MS- 2.

**Perceptions of RtI Skills Applied to Academic Content**

Participants were asked their perceived RtI skills regarding academic content on questions 6 through 22, and 24. Participant’s responses were indicated using a 5-point Likert-type scale. The overall domain mean for all academic content questions was 3.45 for this factor. This suggested participants were somewhere between *having skills but need some support to use it (SS)* and *using it with little support (HS)*. Table 5 denotes the mean and standard deviation for each question.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Education</td>
<td>3.65</td>
<td>1.41</td>
<td>17</td>
</tr>
<tr>
<td>Current Position</td>
<td>2.00</td>
<td>1.50</td>
<td>17</td>
</tr>
<tr>
<td>Education Level</td>
<td>1.82</td>
<td>0.39</td>
<td>17</td>
</tr>
<tr>
<td>Q6A</td>
<td>3.71</td>
<td>0.69</td>
<td>17</td>
</tr>
<tr>
<td>Q7A</td>
<td>3.71</td>
<td>0.92</td>
<td>17</td>
</tr>
<tr>
<td>Q8A</td>
<td>3.18</td>
<td>1.19</td>
<td>17</td>
</tr>
<tr>
<td>Q9A</td>
<td>3.88</td>
<td>0.78</td>
<td>17</td>
</tr>
<tr>
<td>Q10A</td>
<td>3.77</td>
<td>0.66</td>
<td>17</td>
</tr>
<tr>
<td>Q11A</td>
<td>3.63</td>
<td>0.89</td>
<td>16</td>
</tr>
<tr>
<td>Q12A</td>
<td>3.18</td>
<td>1.01</td>
<td>17</td>
</tr>
<tr>
<td>Q13A</td>
<td>3.29</td>
<td>1.05</td>
<td>17</td>
</tr>
<tr>
<td>Q14A</td>
<td>3.77</td>
<td>0.97</td>
<td>17</td>
</tr>
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</table>
Table 5 Perceptions of RtI Skills Applied to Academic Content (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q15A</td>
<td>2.88</td>
<td>1.17</td>
<td>17</td>
</tr>
<tr>
<td>Q16A</td>
<td>3.00</td>
<td>1.06</td>
<td>17</td>
</tr>
<tr>
<td>Q17A1</td>
<td>3.71</td>
<td>1.16</td>
<td>17</td>
</tr>
<tr>
<td>Q17A2</td>
<td>3.53</td>
<td>1.18</td>
<td>17</td>
</tr>
<tr>
<td>Q17A3</td>
<td>3.41</td>
<td>1.12</td>
<td>17</td>
</tr>
<tr>
<td>Q18A</td>
<td>3.18</td>
<td>1.01</td>
<td>17</td>
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<td>Q19A</td>
<td>3.19</td>
<td>1.05</td>
<td>16</td>
</tr>
<tr>
<td>Q20A</td>
<td>3.24</td>
<td>0.90</td>
<td>17</td>
</tr>
<tr>
<td>Q21A</td>
<td>3.35</td>
<td>1.06</td>
<td>17</td>
</tr>
<tr>
<td>Q22A</td>
<td>3.41</td>
<td>0.71</td>
<td>17</td>
</tr>
<tr>
<td>Q24A</td>
<td>3.35</td>
<td>0.93</td>
<td>17</td>
</tr>
</tbody>
</table>

Correlations between Years in Education and Perceptions of RtI Skills Applied to Academic Content.

The mean for the teacher’s number of years in education calculated at 3.65. This was calculated by using the coded system referred to above. All academic questions in this category, teacher’s number of years in education, except question 15, ranged between 3.00 and 3.88. Question 15 asked participants if they could identify the most appropriate type(s) of data to use for determining hypotheses likely to be contributing to the problem for academics. This question had a mean of 2.88. A Pearson correlation coefficient was computed to assess the correlation between teacher’s number of years in education and academic content. Each question was examined for any relationship. There was a positive correlation \((p < .05)\) between teacher’s years of experience in education and question 9, \(r = .527, n=17, p = .030\); question 10, \(r = .572, n=17, p = .016\); and question 18,
Responses showed a statistical significance when teachers were asked to identify the skills they possessed to use data to define current level of performance of target students for academic; determine the desired level of performance for academics; and ensure that any supplemental and intensive interventions are integrated with core instruction in the general education classroom or academics. The results are outlined in Table 6.

Table 6 Correlations between Teacher’s Years in Education and Perceptions of RtI Skills Applied to Academic Content

<table>
<thead>
<tr>
<th>Questions</th>
<th>r</th>
<th>N</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Use data to define current level of performance of target students for academics</td>
<td>.5527</td>
<td>17</td>
<td>.030</td>
</tr>
<tr>
<td>10. Determine the desired level of performance for academics</td>
<td>.1527</td>
<td>17</td>
<td>.016</td>
</tr>
<tr>
<td>18. Ensure that any supplemental and/or intensive interventions are integrated with core instruction in the general education classroom or academics</td>
<td>.5527</td>
<td>17</td>
<td>.030</td>
</tr>
</tbody>
</table>

Correlations between Teacher’s Years in Current Position and Perceptions of RtI Skills Applied to Academic Content

The mean for teacher’s years in their current position was 2.00. This was calculated by using the coded system referenced above. All academic questions in this category, teacher’s years in current position, except question 15, ranged between 3.00 and 3.88. Question 15 asked teachers if they could identify the most appropriate type(s) of data to use for determining (hypotheses) likely to be contributing to the problem for academics had a mean of 2.88. A Pearson correlation coefficient was computed to assess the correlation between teacher’s number of years in their current position and academic
content. Each question was examined for any relationship (see Table 7). There was a negative correlation between teacher’s number of years of in their current position and question 6, $r = -4.86$, $n=17$, $p = .048$, and question 12, $r = -.493$, $n=17$, $p = .044$. This means that as teacher’s current years in their position increased, the participant’s teacher perceived self-efficacy in academics decreased.

*Table 7 Correlations between Teacher’s Years in Current Position and Perceptions of RtI Skills Applied to Academic Content*

<table>
<thead>
<tr>
<th>Questions</th>
<th>$r$</th>
<th>$N$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Access the data necessary to determine the percent of students in core instruction who are achieving benchmark district and grade level standards in academics</td>
<td>-.486</td>
<td>17</td>
<td>0.048</td>
</tr>
<tr>
<td>12. Calculate the gap between student current performance and the benchmark district and grade level standards for academics</td>
<td>-.493</td>
<td>17</td>
<td>0.044</td>
</tr>
</tbody>
</table>

*Correlations between Teacher’s Education Level and Perceptions of RtI Skills Applied to Academic Content*

The mean for teacher’s educational attainment level was 1.82. This was calculated by using the coded system referred to above. Question 15 asked practitioners if they could identify the most appropriate type(s) of data to use for determining hypotheses likely to be contributing to the problem for academics. This question had a mean of 2.88. A Pearson correlation coefficient was computed to assess the correlation between educational attainment level and academic content. Each question was examined for any relationship. There was a positive correlation between educational attainment and question 17, $r = .484$, $n=17$, $p = .049$. This is highlighted in Table 8.
Table 8 Correlations between Teacher’s Education Level and Perceptions of RtI Skills Applied to Academic Content

<table>
<thead>
<tr>
<th>Questions</th>
<th>$r$</th>
<th>$N$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Access resources (e.g. internet sources, professional literature) to develop evidence-based intervention for academic supplemental curricula</td>
<td>.484</td>
<td>17</td>
<td>0.049</td>
</tr>
</tbody>
</table>

**Perceptions of RtI Skills Applied to Behavior Content**

Participants were asked their perceived RtI skills regarding behavior content on questions 6 through 22, and 24. Participants used a 5-point Likert-type scale to indicate their responses to the question. The domain mean for the behavior content factor was 3.24, which was slightly lower than the mean for academic content. This suggested participants were somewhere between *having skills but need some support to use it (SS)* and *using it with little support (HS)*. Each item was also calculated to determine the means in relation to teacher’s years in education, teacher’s current years in their position, and educational attainment. This is highlighted in Table 9.

**Correlations between Teacher’s Years in Education and Perceptions of RtI Skills Applied to Behavior Content**

The mean for teacher’s years of experience in education was calculated as 3.65. This was calculated by using the coded system referred to above. All behavior questions in this category, years in education, except question 18, ranged between 3.00 and 3.85. Question 18 asked practitioners if they could ensure that any supplemental and intensive interventions are integrated with core instruction in the general education classroom for behavior. The response had a mean of 2.94. A Pearson correlation coefficient was computed to assess the correlation between teacher’s number of years in education and
behavior content. Each question was examined for any relationship. There was a positive correlation ($p < .05$) between teacher’s years of experience in education and question 6, $r = .527$, $n=17$, $p = .030$; question 9, $r = .587$, $n=17$, $p = .013$; question 18, $r = .512$, $n=17$, $p = .036$; and question 20, $r = .493$, $n=17$, $p = .044$. This information is highlighted in Table 9.

**Table 9 Perceptions of RtI Skills Applied to Behavior Content**

<table>
<thead>
<tr>
<th></th>
<th>$M$</th>
<th>$SD$</th>
<th>$N$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Education</td>
<td>3.65</td>
<td>1.41</td>
<td>17</td>
</tr>
<tr>
<td>Current Position</td>
<td>2.00</td>
<td>1.50</td>
<td>17</td>
</tr>
<tr>
<td>Education Level</td>
<td>1.82</td>
<td>0.39</td>
<td>17</td>
</tr>
<tr>
<td>Q6B</td>
<td>3.41</td>
<td>0.71</td>
<td>17</td>
</tr>
<tr>
<td>Q7B</td>
<td>3.47</td>
<td>0.87</td>
<td>17</td>
</tr>
<tr>
<td>Q8B</td>
<td>3.12</td>
<td>1.17</td>
<td>17</td>
</tr>
<tr>
<td>Q9B</td>
<td>3.59</td>
<td>0.87</td>
<td>17</td>
</tr>
<tr>
<td>Q10B</td>
<td>3.53</td>
<td>0.87</td>
<td>17</td>
</tr>
<tr>
<td>Q11B</td>
<td>3.44</td>
<td>0.96</td>
<td>16</td>
</tr>
<tr>
<td>Q12B</td>
<td>3.19</td>
<td>1.05</td>
<td>16</td>
</tr>
<tr>
<td>Q13B</td>
<td>3.19</td>
<td>1.05</td>
<td>16</td>
</tr>
<tr>
<td>Q14B</td>
<td>3.85</td>
<td>0.82</td>
<td>17</td>
</tr>
<tr>
<td>Q15B</td>
<td>3.00</td>
<td>1.26</td>
<td>16</td>
</tr>
<tr>
<td>Q16B</td>
<td>3.00</td>
<td>1.03</td>
<td>16</td>
</tr>
<tr>
<td>Q17B1</td>
<td>3.06</td>
<td>0.97</td>
<td>17</td>
</tr>
<tr>
<td>Q17B2</td>
<td>3.09</td>
<td>0.91</td>
<td>17</td>
</tr>
<tr>
<td>Q17B3</td>
<td>3.06</td>
<td>0.90</td>
<td>17</td>
</tr>
<tr>
<td>Q18B</td>
<td>2.94</td>
<td>0.75</td>
<td>17</td>
</tr>
<tr>
<td>Q19B</td>
<td>3.06</td>
<td>1.06</td>
<td>16</td>
</tr>
</tbody>
</table>
Table 9 Perceptions of RtI Skills Applied to Behavior Content (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q20B</td>
<td>3.12</td>
<td>0.78</td>
<td>17</td>
</tr>
<tr>
<td>Q21B</td>
<td>3.29</td>
<td>1.10</td>
<td>17</td>
</tr>
<tr>
<td>Q22B</td>
<td>3.50</td>
<td>0.97</td>
<td>16</td>
</tr>
<tr>
<td>Q24B</td>
<td>3.35</td>
<td>0.93</td>
<td>17</td>
</tr>
</tbody>
</table>

Correlations between Teacher’s Years in Current Position and Perceptions of RtI Skills Applied to Behavior Content

When examining the mean for teacher’s years in their current position in relation to behavior, it was 2.00. This was calculated by using the coded system referred to above. All behavior questions in this category, except question 18, ranged between 3.00 and 3.85. Question 18 asked practitioners if they could ensure that any supplemental and/or intensive interventions are integrated with core instruction in the general education classroom for behavior. This question had a mean of 2.94. A Pearson correlation coefficient was computed to assess the correlation between teacher’s number of years in education and behavior content. Each question was examined for any relationship. There was a negative correlation ($p < .05$) between teacher’s years in their current position and question 12, $r = -.527$, $n=16$, $p = .030$; question 22, $r = -.569$, $n=16$, $p = .021$; and question 18, $r = -.492$, $n=17$, $p = .045$. This means that as teacher’s current years in their position increases in value, the participant’s teacher perceived self-efficacy in behavior decreases in value. The information is shown in Table 10.
Table 10 Correlations between Teacher’s Years in Education and Perceptions of RtI Skill Applied to Behavior Content

<table>
<thead>
<tr>
<th>Questions</th>
<th>r</th>
<th>N</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Access the data necessary to determine the percent of students in core instruction who are achieving benchmark, district and grade level standards, in behavior</td>
<td>.527</td>
<td>17</td>
<td>.030</td>
</tr>
<tr>
<td>9. Use data to define current level of performance of target student for behavior</td>
<td>.587</td>
<td>17</td>
<td>.013</td>
</tr>
<tr>
<td>18. Ensure that any supplemental and/or intensive interventions are integrated with core instruction in the general education classroom for behavior</td>
<td>.512</td>
<td></td>
<td>.036</td>
</tr>
<tr>
<td>20. Provide the support necessary to ensure that the intervention is implemented appropriately for behavior</td>
<td>.493</td>
<td>17</td>
<td>.044</td>
</tr>
</tbody>
</table>

Correlations between Teacher’s Education Level and Perceptions of RtI Skills Applied to Behavior Content

The mean for educational attainment level was calculated as 1.82. This was calculated by using the coded system referred to above. All behavior questions in this category, except question 18, ranged between 3.00 and 3.85 (see Table 11). Question 18 asked practitioners if they could ensure that any supplemental and/or intensive interventions are integrated with core instruction in the general education classroom for behavior. It had a mean of 2.94. A Pearson correlation coefficient was computed to assess the correlation between teacher’s educational attainment level and behavior content. Each question was examined for any relationship. There was no identified relationship between educational attainment and behavior content.
Table 11 Correlations between Teacher’s Years in Current Position and Perceptions of RtI Skills Applied to Behavior Content

<table>
<thead>
<tr>
<th>Questions</th>
<th>r</th>
<th>N</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Calculate the gap between student current performance and the benchmark, district and grade level standards for behavior</td>
<td>-.542</td>
<td>17</td>
<td>.030</td>
</tr>
<tr>
<td>22. Select appropriate data (e.g. behavioral observations) to use for progress monitoring of student performance during interventions for behavior</td>
<td>-.569</td>
<td>17</td>
<td>.021</td>
</tr>
<tr>
<td>24. Make modifications to intervention plans based on student response to intervention for behavior</td>
<td>-.492</td>
<td>17</td>
<td>.045</td>
</tr>
</tbody>
</table>

Perceptions of RtI Skills Applied to Data Manipulation and Technology

Questions 23, 25, and 26 addressed teacher perceived skills when implementing data manipulation and technology. Participants used a 5-point Likert-type scale to indicate their responses to the questions. The calculated overall mean of 2.89 indicated between having minimal skills in this area and need substantial support to use it (MnS) and having skills but need some support to use it (SS). Each item was also calculated to determine the means in relation to teacher’s years in education, teacher’s current years in their position, and educational attainment. This is highlighted in Table 12.
Table 12 Perceptions of RtI Skills Applied to Data Manipulation and Technology

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Education</td>
<td>3.65</td>
<td>1.41</td>
<td>17</td>
</tr>
<tr>
<td>Current Position</td>
<td>2.00</td>
<td>1.50</td>
<td>17</td>
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<tr>
<td>Education Level</td>
<td>1.82</td>
<td>0.39</td>
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<td>Q23 Data</td>
<td>3.06</td>
<td>1.25</td>
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<tr>
<td>Q23 Bench</td>
<td>3.00</td>
<td>1.32</td>
<td>17</td>
</tr>
<tr>
<td>Q23 Peer</td>
<td>2.81</td>
<td>1.22</td>
<td>16</td>
</tr>
<tr>
<td>Q23 Aimline</td>
<td>2.47</td>
<td>1.23</td>
<td>17</td>
</tr>
<tr>
<td>Q23 Trendline</td>
<td>2.65</td>
<td>1.32</td>
<td>17</td>
</tr>
<tr>
<td>Q25 CBM</td>
<td>3.69</td>
<td>1.30</td>
<td>16</td>
</tr>
<tr>
<td>Q25 DIBELS</td>
<td>3.24</td>
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<td>17</td>
</tr>
<tr>
<td>Q25 Access</td>
<td>3.53</td>
<td>1.12</td>
<td>17</td>
</tr>
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<td>Q25 BehObs</td>
<td>3.35</td>
<td>1.32</td>
<td>17</td>
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<tr>
<td>Q26 Electronic</td>
<td>3.24</td>
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<td>17</td>
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<tr>
<td>Q26 Graph</td>
<td>3.00</td>
<td>1.37</td>
<td>17</td>
</tr>
</tbody>
</table>

Correlations between Teacher’s Years in Education and Perceptions of RtI Skills Applied to Data Manipulation and Technology

The mean for teacher’s years of experience in education was calculated as 3.65. This was calculated by using the coded system referred to above in Table 12. Data showed a range of means from 2.47 to 3.52 in this category, data manipulation, and technology. Teachers had the most difficulty with how to construct graphs for large groups, small groups, and individual students using: (a) peer data, 2.81, (b) trendlines, 2.64, and (c) aimlines, 2.47. A Pearson correlation coefficient was computed to assess the correlation between teacher’s number of years in education and data manipulation and technology. Each question was examined for any relationship. There was no identified
correlation between teacher’s years of experience in education and data manipulation and technology.

**Correlations between Teacher’s Years in Current Position and Perceptions of RtI Skills Applied to Data Manipulation and Technology**

The mean for teacher’s years in their current position was calculated as 2.00. This was calculated by using the coded system referred to above. Data showed a range of means from 2.47 to 3.52 in this category, for teacher’s years in their current position. Teachers had most difficulty with how to construct graphs for large groups, small groups, and individual students using: (a) peer data, 2.81, (b) trendlines, 2.64, and (c) aimlines, 2.47. A Pearson correlation coefficient was computed to assess the correlation between teacher’s number of years in their current position and data manipulation and technology. Each question was examined for any relationship. There was a negative correlation ($p < .05$) between teacher’s years in their current position and question 23, bench, $r = -.504$, $n=17$, $p= .039$; question 23, peer, $r = -.529$, $n=16$, $p= .035$; question 25, access, $r = -.593$, $n=17$, $p= .012$; question 25, behob, $r = -.568$, $n=17$, $p= .017$; and question 26, electron, $r = -.577$, $n=17$, $p= .015$. This is highlighted in Table 13.

**Correlations between Teacher’s Education Level and Perceptions of RtI Skills Applied to Data Manipulation and Technology**

The mean for educational attainment level was calculated as 1.82. This was calculated by using the coded system referred in Table 12. Data showed a range of means from 2.47 to 3.52 in this category. Teachers had most difficulty with how to construct graphs for large groups, small groups, and individual students using: (a) Peer data, 2.81; (b) trendlines, 2.64; and (c) aimlines, 2.47. A Pearson correlation coefficient was computed to assess the correlation between educational attainment level and data.
manipulation and technology (see Table 13). Each question was examined for any relationship. There was no identified correlation between teacher’s education level and data manipulation and technology.

Table 13 Correlations between Teacher’s Years in Current Position and Perceptions of RtI Skill Applied to Data Manipulation and Technology

<table>
<thead>
<tr>
<th>Questions</th>
<th>r</th>
<th>N</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>23a. Construct graphs for large group, small group, and individual students by graphing benchmark data</td>
<td>-.504</td>
<td>17</td>
<td>.039</td>
</tr>
<tr>
<td>23b. Construct graphs for large group, small group, and individual students by graphing peer data</td>
<td>-.529</td>
<td>17</td>
<td>.035</td>
</tr>
<tr>
<td>25a. Collect the following type of data and access data from appropriate district or school wide assessments</td>
<td>-.593</td>
<td></td>
<td>.012</td>
</tr>
<tr>
<td>25b. Collect the following type of data: Standard behavioral observations</td>
<td>-.568</td>
<td>17</td>
<td>.017</td>
</tr>
</tbody>
</table>

Phase 2: Open-Ended, Individual Interviews

The purpose of individual interviews was to gain further understanding of the quantitative findings. Analysis of the interviews will explain any relationship teacher’s years of experience, teacher’s years in their current position, and teacher’s education level may have with academic content, behavior content, and data manipulation and technology. Teacher’s years of experience in education is defined as the number of year’s participants worked as an educator. The teacher’s years in their current position referred to the number of years teachers have worked in their existing teaching position. Teacher’s education level is the highest degree earned by the participant. In this section, the definition of Response to Intervention and teachers’ perception of how it
relates to academic content, behavior content, and data manipulation and technology are examined.

Definition of Response to Intervention

The first question of the individual interviews asked participants to define Response to Intervention (RtI) in their own words. According to Brown-Chidsey and Steege (2005), RtI is a “systematic and data-based method for identifying, defining, and resolving students’ academic and/or behavior difficulties” (p. 3). Participants’ definitions varied widely from this established definition – with some participants providing answers that reveal a clear understanding of RtI and other participants whose responses were unclear and inaccurate. In this section, participants’ definitions of RtI are presented and closely examined.

Five of the 17 participants mentioned that RtI is a way to gauge and monitor student attendance, academics, and behaviors. Three of these five teachers mentioned the former process, Comprehensive Student Assistance Process (CSAP). The Comprehensive Student Assistance Process was the process used in the district before RtI implementation as a way of incorporating interventions in the general education classroom and was also a gateway to be evaluated for special education. Responses from those three participants captured the general position of teachers that discussed student attendance, academics, and behavior:

Response to intervention is responding to any academic concerns, behavior concerns, or attendance concerns of the students. I believe it replaces the old CSAP process or incorporates it (Interview Participant Number 85, 2014).

What I understand is that it is the new CSAP, a way to kind of keep track of students’ behavior, academics, and attendance, and it can also be shared with their other teachers (Interview Participant Number 100, 2014).
I know response to intervention to be similar to a CSAP process. When you look at a student and see that they are not being successful in either behavior, academics, maybe attendance, however the case, if they’re not being successful. And it’s a plan that you put in place which drives their deficiencies (Interview Participant Number 110, 2014).

These three participants demonstrate their understanding of RtI by discussing academics, behavior, and attendance. However, they appeared to be unclear about RtI and related it to CSAP. The first participant explained that RtI replaced and incorporated CSAP by responding to academics, behavior, and attendance. The second participant explained that besides being the new CSAP, RtI was a way for teachers to share information about academics, behavior, and attendance. The third participant viewed RtI as being similar to CSAP and a way to plan for academics, behavior, and attendance.

While both frameworks use interventions to address academics, behavior, and attendance, RtI was a proactive approach that starts immediately regardless of a child’s academic, behavior, and attendance tier whereas CSAP is a reactive process for struggling students.

Eight of the 17 participants referred to RtI as a way to address academics and behaviors. Four representative quotes reflect the perspectives of the teachers in this group:

- Response to intervention is a program that we are to use to monitor the students that need extra support in behavior and academics (Interview Participant Number 10, 2014)
- It is a state mandated intervention for behavior and academics (Interview Participant Number 95, 2014).
- RtII is a system that gears levels of students—high risk students, student that’s in the mid-section, and the students that’s in the low section—if it’s behavior or academics (Interview Participant Number 135, 2014).

- It is a program that is used to give students who are at risk additional support when it comes to academic and behavior (Interview Participant Number 115, 2014).
As demonstrated by the data, these eight participants understood the basic elements of RtI – specifically, its attention to both academic and behavior. Beyond this, these eight participants showed minimal understanding of the nuances of RtI. For example, Participant Number 10 and Participant Number 115 were unclear about the framework. Both said that RtI is used for those students who need extra support or at risk students as related to academics and behavior. This is a misconception about RtI. Response to intervention is not limited to students with differences and/or disabilities but includes all students receive evidence-based instruction at the Tier I level.

When asked to define RtI, one teacher pinpointed academics: “Response to intervention is when a teacher does her job to assure that every child is being provided for academically or on his or her level, whether it’s enrichment or extra support” (Interview Participant Number 10, 2014). This teacher did not mention that RtI also addressed behavior. This participant’s focal point was academics. Later in the interview, she discussed specific academic interventions that were used with her students.

Interestingly, three teachers mentioned neither academics, behaviors, nor attendance in their definitions of RtI. Their responses to this question read:

It’s a national program that helps children-, all children, make gains to take them from where they are and you to different types of interventions to help them, that are research-based, to help them make gains (Interview Participant Number 15, 2014).

I believe it is a procedure to document interventions for children who are below basic (Interview Participant Number 45, 2014).

Response to intervention is the results you receive after recording a student’s weaknesses and then the response you get, or the results you get, the conclusion (Interview Participant 5, 2014).
The first participant underscored the importance of data-driven decision-making with children of all needs. The second participant explained that documentation of these interventions is also important but there was a misconception about only using RtI with below basic students. The third participant also highlighted the use of student results to make data driven conclusions and shared that the response received from interventions used help to determine how to proceed.

The definitions of RtI given by participants revealed inconsistencies in their current understanding of the framework. Participants varied in their level of knowledge, with a few teachers presenting misconceptions about RtI. Participants grappled with using RtI for all students and were unsure of how RtI and special education differ. Two teachers - one general education teacher and one special education teacher - addressed this later in the interview, respectively:

I would like to know when some of the students who are in dire need of testing actually get tested. I haven’t seen that happen and I don’t know if it’s because we have a transient population or it’s just time constraints or that we’re not processing the paperwork. It’s most likely that we are not processing the paperwork as quickly as possible on the teacher side but I would like to see exactly what happens when the children have reached the need, the point where the parent has requested that the child be tested; what happens in this whole scheme of RtII? Where, when does it happen? When does the child actually get tested for a learning difficulty, learning disability, or a behavioral disability, severe behavioral disabilities, when are they truly addressed, addressed when you have children whom it just is, it’s not working for? (Interview Participant Number 95, 2014)

I think I need another, like again, an overview, what is RtII? What is specialized services? Where do the two overlap? What do I need to do as a special educator to make sure that I’m RtII compliant? (Interview Participant Number 115, 2014).
Overall, teachers’ definitions identified the use of RtI but they did not have a broad understanding of the framework. Teachers need support to understand, identify, and use the process.

**RtI Skills Applied to Academic Content**

Participants were asked to discuss their perceived self-efficacy regarding RtI academics. In this section, teachers’ perceived self-efficacy of RtI academics are presented by teacher’s years of experience, teacher’s years in their current position, and teacher’s educational level.

**Teacher’s years of experience and RtI academics.** To explore the quantitative findings that a teacher’s years of experience in education influences his or her implementation of RtI and academics, this analysis examined the participant’s responses that discuss academics. In examining the data as a whole, nine of the 17 participants shared that RtI is a way to identify student needs and to hone in on necessary skills. Three representative quotes show how participants described their implementation of RtI with academics:

I’m able to pull a skill that child really needs to hone in on and improve on. (Interview Participant Number 90, 2014)

When using for academic, I get to see the students that are the low achieving and try to give them additional help, support, and interventions and move them along to the next level. (Interview Participant Number 135, 2014)

Guided reading, small group, one-to-one, review and reteach. As far as research-based we used the technology and Reading Eggs, which is self-paced. I do a lot of review. I pull small groups based on need so they’re flexible groups and so after they do work I make a list of which children may need additional help. (Interview Participant Number 15, 2014)
Teachers have attempted to use evidence-based instructional interventions and strategies but tier II and tier III resources are often unavailable. Teachers are relying on research-based strategies such as guided reading, small group, and individualized instruction to compensate for the lack of materials.

**One to 4 years of experience.** The only beginning teacher, Participant Number 130, also referred to RtI being powerful in the identification of student needs:

> Well, I would say that when you have an RtII program in place it really allows the teacher or whomever to really reflect what is going on when you perform a lesson or you are trying to get students to master a particular concept or subject. You want to be able to document and kind of reflect on what worked, what didn’t go that way, what was attached to their goals or the things that you want for the student to accomplish so I would say that whatever teaching strategies you use or whatever plan you had in place to try to get across to that student those things are you know documented and reviewed you can reflect on it so that is how I would answer that.

This quotation denotes the teacher knowledge of a new teacher. The tools needed to prescribe and implement academic interventions are described. A new teacher using data-driven instructional practices is imperative for personalizing learning for all students. In this teacher’s statement, she focused on documentation for reflection but was not very explicit about how she addressed the nonresponders. Nonresponders are defined as students who were prescribed interventions, the interventions are implemented, progress monitored, and practitioners’ do not see growth.

**Five to 9 years of experience.** There were only two teachers with five to nine years of experience both expressed unfamiliarity about the RtI process and academics. Both participants teach middle school: The first a general educator and the other a special educator. Interview Participant Number 100 described her lack of familiarity with RtI:
I’m still not overly familiar with response to intervention but my understanding of it is being able to identify students that are kind of…I can’t think of the word to use, but they really just need that extra little bit of focus. So lately I’ve been able to actually do that and work with students more one-on-one with the new setup, with the classes, so I am seeing them being able to produce more and achieve more because they’re able to work more at their own level.

Interview Participant 115 needed clarification about how RtI functioned in the special education classroom. She said:

To be honest, I’m not really sure because by me teaching students with learning disabilities, I’m sort of, I think, doing most of what RtII would call for, so I’m not really clear, like what is considered specialized services? I’m not really sure where the line between RtII and Special Ed services end and begins to some extent.

Based upon the information divulged from both Interview Participants 100 and 115, there is an additional need for professional development for teachers. General and special education teachers are unfamiliar with the tiers of the RtI framework and are perplexed as to how special education and its related services mesh with the process. The data also showed middle years teachers should to be trained in a different manner due to developmental differences of middle year’s students.

**Ten to 14 years of experience.** Overall, there were five teachers in this category. All five teachers had variations in opinions regarding the effect RtI had on students’ academic achievement in their classrooms. One teacher noted that she is able to identify interventions:

It has helped me to identify interventions that are within the school that I could use. For example, in the reading closet I was able to pull out books that I could use for guided reading with my lower reading group. In addition to that, it gave me an intervention of Study Island, which is an awesome program, as well as First in Math (Interview Participant Number 50, 2014).
A special education teacher in the group saw RtI as a roadmap to specialized services:

Because my students are special needs students, what I would assume is that prior to them getting here they went through some type of response to intervention process before they were able to be tested and identified as special education students, so I guess that was the road in which they came to me (Interview Participant Number 110, 2014).

Interview Participant 50 highlighted interventions that are used with all students, but did not address interventions used with students during other tiers. Interview Participant 110 was unclear if RtI was mandatory to be used before being evaluated for specialized services. This speaks to other participants, both general and special education teachers from all years of experience categories, confusing the understanding of RtI and specialized services. Teachers with 10-14 years of experience addressed some areas of RtI academic content, but teachers in this group did not speak to interventions or the process used for tiers II and III.

**Fifteen to 19 years of experience.** Four of the five teachers with 15-19 years of experience in education stated there has been little or no positive difference since using the RtI framework. They indicated that it is great in theory, but due to the lack of resources, it is difficult to identify impact. One teacher in that category did say that it has helped her with accountability and communication with parents.

**Twenty-five or more years of experience.** All three participants with 25 or more years of experience in education highlighted prescribing and implementing appropriate interventions and strategies according to specific student needs as having an effect in their classrooms. These veteran teachers with the most years of experience in education said:

It helps me to be more responsive in terms of what I see going on. I think I have the ability to look at data and take a look at where the needs are, how to best
modify instruction to meet the needs of students (Interview Participant Number 140, 2014).

One strength in particular I can think of is I can go back to the Reading Eggs data because that is what we use in here and it’s on their level (Interview Participant Number 20, 2014).

It has helped me keep more on track of what they’re doing and just to see where they are say in scope of the whole classroom, where they fall (Interview Participant Number 25, 2014).

Veteran teacher’s discussion of prescribing, implementing, and progress monitoring addressed instructional data analysis procedures for decision-making. All teachers in this group referred to using data to modify or individualize according to student’s needs.

In summary, this sub-section considered teacher’s year of experience in education and RtI academic implementation. Characteristics overlapped between all groups. Teachers with the most experience were secure identifying the needs of their students to prescribe and implement academic interventions. Data also revealed that all teachers found strengths with RtI program when the grade appropriate interventions were available but there were not enough resources for teachers to implement the framework effectively. Teachers also have a desire for ongoing, consistent professional development.

**Teacher’s years in current position and RtI academics.** Quantitative data revealed teacher’s years in their current position had an influence on their implementation of RtI and academics. This analysis examined the participant’s responses that discuss academics. In examining the data as a whole, nine of seventeen participants had been in their current position five years or less. Representative quotes show how participants described their implementation of RtI with academics:
It helps you focus on that child’s skill, on a specific skill. It helps you, it reminds you to monitor, I think we did it monthly, to monitor a specific skill for a specific group monthly. It keeps the teacher, I think, a little bit more organized. (Interview Participant Number 80, 2014)

It helps parents be more accountable for participating on what their child is learning or doing. It helps me also keep more track of who I’m talking to. (Interview Participant Number 5, 2014)

It allows the teacher to work better with other agencies within the school and pulling resources that sometimes we just didn’t know about. And we don’t really get the opportunity to talk to everybody as much, so RTI allows you to get a larger pool of resources that you normally would not have. (Interview Participant Number 85, 2014)

The first participant underscored the importance of accountability of the teacher whereas the second participant noted accountability for parents. The third participant also highlighted the importance of collaboration and networking. The discussion of RtI academic content given by participants revealed various methods used to prescribe interventions. Participants varied in their level involving other stakeholders in the decision-making process.

**Five to 9 years in current position.** There was one teacher with 5 to 9 years of experience in her current position. The teacher was unsure if training provided to special education teachers overlapped the RtI process:

I'm assuming that what I have been trained to do as a teacher is sort of what you’re supposed to do with RTII. So, I think, I don't know. Just maybe some of the teaching strategies that I was taught were things that all good teachers would do. Like, you know, collaborative learning, grouping students according to ability. I try to be good about leveling assignments, even though I'm not really a fan because of how the kids are tested. Like, I understand the purpose of it, but I try to still expose them to at-level materials because they're going to be tested at level. There's no leveling when PSSA testing comes out or anything like that.

Special education teachers write individual education plans (IEPs) to accommodate the educational needs of students. The teacher explained that differentiated instruction is necessary, however it is also important to expose students to grade level text,
particularly because that is what is included on standardized test. This is another example of how teachers use strategies but they may not be evidence-based.

**Ten to 14 years in current position.** Two teachers represented this group. One teacher in this category discussed the value of using RtI for academics:

Rather than giving a teacher an opportunity to just drop a student in special education, RTII gives interventions that can be used to try to scaffold that child and bring them up to grade level, versus just abandoning them. And I don’t mean to say abandoning them; from just like we’re just dropping them off. We are trying other methodologies with the children to ensure that we’re adding value to them. You’re not just going to go sit in the special ed classroom. You need to follow these steps. Try that for 30 days. Follow these steps. Try that for 30 days. And then you go through a process of the child-, if you’re still not adding any value, if you’re still not coming across to the child, then you go the other steps. And that’s what I like about RTII. (Interview Participant Number 50, 2014)

Intervention Participant 50 discussed ways to expose students to interventions in the general education classroom. However, there was a misconception about the process. The teacher explained how the CSAP framework was delivered. CSAP required teachers try an intervention for 30 days. After 30 days, the CSAP team reconvened to determine the next step. The team often suggested an additional 30 days using the same intervention. The interventions and strategies used with CSAP did not have to be evidence-based.

**Fifteen to 19 years in current position.** Three teachers were in their current position for 15 to 19 years. The three teachers in this category identified various strategies used to target academics:

I feel that the children who I know who are struggling, I'm trying to make sure that I get to them every day, whether it's...no matter what we're doing, that I'll pull them and make sure they're aware of where they're supposed to be. And if they're having difficulties. I do a lot with sending notes to parents, in that, look, this is what your child needs help with. I need you to support us and...but just knowing my students. I know my students, and I know that this is something that they'll either get or maybe they need to spend another year with me. Or it's a learning disability, and it's something that I think with Response to
Intervention, I'm not sure where that all fits in for the testing or just needs to be retained a grade or just parent support is needed more, that they need to be trained on how to help their child at home, things like that. But I feel my strength is I know where my children are, where they were, where they will be by the time they leave. (Interview Participant Number 10, 2014)

Overall, teachers with 10 to 14 years of experience in their current position perceived themselves as having the skills to identify the needs of their students. However, teachers noted inadequate evidence-based interventions to use. All three teachers mentioned using tier I interventions. Teacher knowledge of tier II and III interventions was very limited with only one teacher in the group mentioning those interventions.

**Twenty or more years in current position.** Interview Participant 25 was the only teacher with 20 or more years of experience in her current position. The teacher found that using RtI for academic has helped keep parents abreast of interventions being used:

> I think it helps me keep more on track of where the children are and as far as talking to maybe the parents or whatever, you know, so I can let them know where their children are. But as far as the students are concerned, that’s a hard one.

Interview Participant 25 should RtI use in academics as a mechanism to progress monitor and inform parents of student achievement. However, there were no student related benefits identified. Academic interventions are scarce, particularly for the grade in which she teaches. The teacher relied on other strategies to collect data and to drive instruction.

In summary, this sub-section considered teacher’s year of experience in their current position and RtI academic implementation. Characteristics overlapped between all groups. Teachers with least experience in their current position were secure identifying the needs of their students to prescribe and implement academic
interventions. This could be because while teachers have limited experience in their current position, their years of experience in education may be higher. Data results also discovered that all teachers found strengths with RtI academic program and were interested in more resources being available for implementation.

**Teacher’s education level and RtI academics.** Quantitative data results found statistical significance in teacher’s ability to access resources (e.g. internet sources, professional literature) to develop evidence-based interventions for academic supplemental curricula. Teachers with more education are more likely to have the ability to access these resources. Qualitative data findings contradict the quantitative results. In this section, teacher’s education level and perceptions of RtI academics are examined.

Fourteen of the 17 participants had a Master’s degree, while three participants had a Bachelor’s degree. Generally, teachers said they possess the skills to access resources to develop evidence-based interventions, but complain about limited interventions.

**Bachelor’s degree.** Participant Number 10 said, “I found there's not enough interventions that the school has for a response to intervention, that, I think, if we had more, it would work very well.” The teacher was frustrated with the limited grade level interventions and would like to provide more tier II and tier III instruction.

**Master’s degree.** One teacher said, “It hasn’t at all because I don’t have the interventions” (Interview Participant Number 45, 2014). One teacher noted, “It hasn’t had that great an impact as of yet that I can see,” (Interview Participant Number 95, 2014) but noted in her interview it is because of limited resources (Interview
Participant Number 95, 2014). Overall, teachers with Master’s degrees were unable to implement academic interventions due to limited resources. There were several teachers within this category that identified tier II and III interventions.

To summarize this entire section on RtI and academics, the qualitative findings corroborate the quantitative findings on the relationship between teachers’ number of years teaching and their adaptation of RtI. The qualitative data suggest that teachers with more years of experience in education that had four years or less in their current position had higher perceived self-efficacy in academics. Participants in all groups, except teachers in the 5 to 9 years of experience in education group, identified RtI as a way to make data driven decision-making. However, teachers with the most years of experience, 25 years or more in education are more knowledgeable about how to identify student needs, prescribe, and implement academic interventions using data. All three teachers in the 25 or more year’s group referred to using data to define current level of performance, to define targeted performance and to ensure supplemental programs are aligned in the general education classroom.

This is consistent with the quantitative results, which emphasized: a) the use of data to define current level of performance of target students, b) the ability to determine the desired level of performance, and c) the knowledge to ensure that any supplemental and or intensive interventions are integrated with core instruction in general education classrooms. The qualitative findings suggest that teachers who have the least experience in their current position tend to access the data necessary to determine the percent of student in core instruction who are achieving benchmark, district, and grade level standards. The data also suggested teachers with less experience in their current
position were able to calculate the gap between student current performance at benchmark, district, and grade level standards. Overall, teachers with a higher educational level were well versed in identifying academic interventions used in their classrooms but limited resources were a challenge. In the next section, behavior will be analyzed in a similar format.

**RtI Skills Applied to Behavior Content**

Participants were asked to discuss teacher perceived self-efficacy regarding RtI behavior content. In this section, participants’ teacher perceived self-efficacy in relation to behavior was closely examined. Results of overall qualitative behavior data revealed that participants had difficulty with behavior, regardless of teacher’s years of experience, teacher’s years in their current position and teacher’s education level.

**Teacher’s years of experience and RtI behavior.** Qualitative data revealed that regardless of teacher’s years of experience in education, all teachers had difficulty with prescribing and implementing RtI behavioral interventions that worked. Teachers are frustrated because the behaviors the district focuses on are not behaviors that speak to those of students in this particular building.

**One to 4 years of experience.** Participant Number 130 had 1 to 4 years of experience in education, and said that RtI behavior has not had an effect in her classroom because of where she is at professionally. Participant 130 felt her perceived self-efficacy with RtI skills for behavior is why the program has not been successful in her classroom. She said:

Well, honestly speaking I would say from my personal experience in the classroom it has been a very small effect. I don’t think it’s been a major effect for me and that’s just a matter of where I am right now professionally as an educator in places I need to improve (Interview Participant Number 130, 2014).
This aligned with Huberman’s (1989) notion that for the first three years, new teachers are practicing survival and discovery as they try to understand instructional practices, classroom management, and their place as an educator.

**Five to 9 years of experience.** Another teacher in the 5 to 9 years category explained: “I’m not that creative when I’m thinking of ways to manage behaviors” (Interview Participant Number 115, 2014) while the other teacher in this category said, “It has helped with a couple of students” (Interview Participant Number 100, 2014). Teachers in this category do not have a clear understanding of behavioral interventions. Participant 115 discussed being creative in finding ways to manage behavior but RtI recommends using evidence-based interventions rather than creating individual techniques. Participant 100 mentioned RtI helping some students but the framework is used to address all student behaviors.

**Ten to 14 years of experience.** A teacher in the 10 to 14 years of experience category thinks that there is a need for additional support and professional development to address student behaviors exhibited in this building: “Behaviorally, that is a challenge for me. I think that the interventions that they provide for behavior are not speaking the actual behavior of the students that are in here” (Interview Participant Number 50, 2014). The teacher felt that safety is a major concern and there are no interventions to address student behavior. Later in the interview, the teacher gave a candid description of some of the behaviors seen in the school.

**Fifteen to 19 years of experience.** Teachers with 15 to 19 years of experience in education concurred that RtI did not address the behaviors in an urban setting and the following is a representative of the group:
There’s not much support for behavioral interventions in the district. I’m teaching it. There’s not much support at all. They back principals into a corner. They back teachers into a corner when it’s time to discipline students and when these things need to occur. (Interview Participant Number 90, 2014)

Similar to teachers in other categories, teachers in this group felt that RtI did not address student behavior in this building. The teacher felt the district did not support principals with discipline. District personnel track the number of suspensions and principals are held accountable. Even though RtI interventions may be in place, there may not be any follow through.

_Twenty-five or more years of experience._ Despite the number of years of experience in education, two out of three teachers with 25 years or more experience found the RtI framework was not useful or inconsistent for difficult student behavior and had little effect. One teacher in this category said, “I have not actually seen a difference in their behaviors” (Interview Participant Number 25, 2014). Another participant with 25 or more years said:

> Sometimes I’m more successful than others. Most of the time, what I’ve found is that my students, I’m able to hone in and work with each student individually and try to help them, help prevent certain types of behavior and modify the behaviors that is preventing them from learning. (Interview Participant Number 140, 2014)

Teachers with more experience are using strategies that have worked for them in the past rather than following the RtI procedures for behavior. Regardless of the number of years teaching, most participants found that RtI had little impact on student behavior and would like additional professional development opportunities on how to prescribe, implement, and progress monitor behavioral interventions.

_Teacher’s years in current position and RtI behavior._ Quantitative data showed negative correlations regarding how teachers performed the following tasks
based on student RtI for behavior:

1. Calculate the gap between student current performance at the benchmark, district and grade level standards

2. Select appropriate data to use for progress monitoring of student performance during the intervention; and,

3. How teachers make modifications to intervention plans based on student response to intervention for behavior.

In this sub-section, the qualitative findings relevant to this are considered. Eleven of the 17 teachers did not find RtI for behavior to be helpful or conducive in their classrooms. These participants emphasized nonresponders for behavior. Participant Number 85 explained that she is “waiting to see” if RtI will make a difference in the behavior of their students. Other participants were less optimistic. Participant Number 25 stated, “Actually I have not seen a difference in their behaviors.” Two participants offered their perspectives on RtIs limited influence on student behavior:

When using it for behavior in my opinion, it’s unrealistic because it does not address the true issues of our children. You know, how do you address someone who’s overly aggressive? I have children today fighting over a pencil. He’s ready to punch a girl in the face over a pencil…There’s nothing in RtI that speaks to that (Interview Participant Number 50, 2014).

I haven’t really found it to be effective as I would like to. We have these colors, the three colors, and it’s not effective the way I would like it to be. You know, the green is for when they’re on target where they’re supposed to be, the yellow is the middle and red is it’s not good (Interview Participant Number 5, 2014).

These two teachers are a representation of the majority of participants. Regardless of the number of years in their current position, overall, teachers felt that RtI interventions were not useful in their classrooms. The extreme behaviors exhibited were not decreased due to the implementation of RtI.
Interestingly, two participants professed that they did not use RtI to address student behavior at all. However, upon further discussion, each teacher explained the use of interventions that are consistent with RtI. For example, Participant Number 10 stated, “Behaviorally, I don’t use Response to Intervention because I haven’t, knock on wood, had students that need to go that route for behavior.” Yet, upon further discussion, she disclosed that she used daily behavior reports for all students, which are tier II or tier III RtI interventions. When asked how RtI is used for behavior in her classroom, she noted it wasn’t by saying, “I don’t have any behaviors” (Interview Participant Number 80, 2014). Another teacher in this category supported the notion that teachers are uncertain of interventions at all tiers. She shared:

It seems as though students with the more severe behavior [are] the ones that [RtI] focused on, but there’s other behaviors that’s not severe but that need to be focused on as well. I don’t think we reach all the behavior issues in the building (Interview Participant 135, 2014).

These participants’ experiences are congruent with the quantitative findings. Some participants have difficulty understanding the gap between how students should behave and if they need extra support. As a result, the teachers may not be using the appropriate tools or making modifications based on all behaviors.

A beginning teacher, with both one to four years of experience in education and in her current position, gave a power vignette about scenarios seen in urban classrooms:

The biggest thing that would be beneficial to me would be to have a professional development that is strictly centered around proper responses and ways to counteract student behaviors in the classroom, and just to set up some type of rote classroom environment where whoever is the facilitator, whoever is the person who’s running the program can really show myself or whoever is at this professional development show different ways to actually react to something. And the way if I had anything to do with it is that there would be a fight break out, there would be somebody throwing something, and there would be a phone ringing, and the principal coming to your classroom and this stuff would happen
at the same time and see how a person would handle it at least appropriately or what is thought of to be appropriately. That would be the biggest thing that would help me. Interview Participant Number 130, 2014)

Participant Number 130 attributed the limited effect of RtI on student behavior to her own inadequacies as a teacher. Like most participants, Participant Number 130 required additional professional development to support the implementation of RtI in her classroom. Professional development was a common theme when participants discussed RtI and behavior. Participants who expressed a desire for more professional development related to RtI reported:

My areas of need include a discipline plan that is school wide so I can have a prerequisite to work on and also a Functional Behavior Plan template. I need training in how to deal with emotionally disturbed children. (Interview Participant Number 90, 2014)

I have absolutely no idea about behavior and RtI. I definitely need the whole book on that. (Interview Participant Number 110, 2014)

As demonstrated by these quotes, 11 out of 17 participants discussed difficulty with using RtI implementation for behavior. For example, Participant Number 90 and Participant Number 110 were unclear about how to decrease negative student behavior proactively. Both noted they needing training on how to implement RtI for behavior.

Ongoing support and professional development is limited. Teachers are frustrated with RtI because they have inadequate knowledge and resources.

Teacher’s education level and RtI behavior. Three participants possessed a Bachelor’s degree while the remaining 14 have advanced degrees. Regardless of educational level, most teachers expressed concern with using RtI for behavior. Two of the three teachers with a bachelor’s degree said RtI has not affected student behavior in their classroom. The third teacher said she does not use RtI but later in the
interview explained using daily behavior charts, which is tier II and III. This is another example of teachers using their experience in the classroom and not being cognizant of RtI interventions.

Fourteen teachers possessed a Master’s degree. The majority of teachers expressed RtI did not affect student behaviors. Many teachers were frustrated because they felt the behaviors in the building were extreme and not addressed by RtI interventions. Teachers in this building have not bought in to the Positive Behavior Support Interventions (PBIS) and are relying on the principal to take action rather than using classroom-based interventions.

To summarize this entire section on RtI and behavior, the qualitative results show that teachers struggle with RtI behavior content. Teachers’ discussion of RtI behavior content displayed an overall need for ongoing professional development opportunities. One teacher admitted to having extremely limited knowledge. The responses given by participants regarding RtI and behavior revealed consistencies in their current understanding of the framework. Participants were limited in understanding how to prescribe and implement interventions for behavior with a few teachers presenting misconceptions. Participants grappled with using RtI for behavior and were unsure of how RtI interventions speak to the behaviors of their students.

RtI Applied to Data Manipulation and Technology

Participants were asked to discuss teacher perceived self-efficacy regarding data manipulation and technology in the *Perceptions of RtI Skill Survey*. There were no specific questions in the interview regarding data manipulation and technology; however, several themes emerged during interviews that addressed data manipulation
and technology: (a) online accountability system for progress monitoring, and (b) time management. In this section, data manipulation and technology were examined related to using the online system to progress monitor and time management. All participants felt that there was a sense of collecting data to drive instructional practices, but none of the participants discussed ways of targeting and graphing data to determine the aimline and trendline. This finding is consistent with the quantitative results.

Seven of 17 teachers described perceptions of low self-efficacy when using the teacher online accountability system. Participant Number 10 expressed, “I just don’t know enough about it. I’m very computer literate I feel but I’m just at a loss when it comes to that.” Participant Number 100 felt the system was cumbersome:

Pretty much just not being 100% with how the system works completely. I think I understand its purpose and I understand the underlying parts of it, but the actual formats and all that I’m not familiar with so I’m second guessing a lot of times what’s going on.

Participant’s insecurities about using the teacher online accountability system led several to conclude that more training and professional development is required if teachers are to practice RtI effectively. Participant Number 45 stated, “You’re limited to what is on the dropdown menu and if you don’t have them you can’t use them. It seems like a lot of them you need to be trained in.” Participant Number 85 expounded:

We need more PD (professional development) on how to create those groups online. When that online component became a necessary one and teachers were not sure on how to do it, I think it became something we ended up dropping the ball on, or we’re not utilizing to its full effect (Interview Participant Number 85, 2014).

The discussion of data manipulation and technology in RtI revealed inconsistencies in their current understanding of using data manipulation to progress monitor. Participants
varied in their level of knowledge but most found the process to be time consuming and lacked technology-based skills to progress monitor.

The consensus of all participants is that the data management associated with RtI is time-consuming. Participants characterized RtI as another responsibility in the overwhelming amount of tasks teachers already have to complete. Participant 100 lamented, “I’m really not sure of what drawbacks there might be other than it just being another thing to do, another task to try and complete at some point.” Participant Number 95 expressed frustration with how to accomplish all the designated tasks: “The drawback is time constraints, paperwork…I really need more time, just more time. More time to process paperwork, more time to test students. More time, it’s time constraints.”

Three participants describe the time associated with keeping accurate and updated records on each student:

A lot of tedious paperwork and it is difficult for any educator or anybody that’s involved in that to be able to find the time to do all the things that are necessary to do it effectively. That’s the biggest drawback that I’ve come across as an educator is finding the time to really complete accurate and proper and appropriate documentation and also when you have multiple students, which everybody has that have interventions. RtII set up for them. It’s sometimes very difficult when you’re delivering a lesson to capture all the things that’s necessary to even produce documentation in the first place. That is an unbelievably difficult thing and I can personally say I have not mastered that one yet! (Interview Participant Number 130, 2014)

I need time management. I truly need time management to find the time with all of the responsibilities of a regular education elementary teacher. It’s difficult to find time to go online and enter the stuff I need to enter to keep up with the thirty-day span and entering in what was positive and what was negative. Just finding the time is the problem. (Interview Participant Number 50, 2014)

I don’t really know if there’s any time. Maybe there could be some time allotted but I know that’s impossible so I guess it’s just more follow through on
The first participant discussed the time need to complete all of the documentation required accurately. The second and third participants concurred by speaking to time management issues and not being able to enter online data in an efficient manner. All three participants found the amount of time needed to progress monitor very cumbersome.

Several participants described the difficulty with the extensive documentation for all children in the classroom:

I would say its time consuming. It’s a lot of paperwork to me and it takes a lot of time to support every child that needs help and that takes quite a bit of time. (Interview Participant Number 25, 2014)

There are so many different level that they have and I just need help with operating. Sometime I think my plans are great. It is just getting into motion and we have so many students and then its keeping the documents up on every single student. I don’t always get to every student the way I want to. I’m running out of time at and I didn’t make this particular…I didn’t make the goal that I wanted. I don’t always get time to keep up with it the way I like either. (Interview Participant Number 5, 2014).

Time consuming because you have to be…it’s about each child and monitoring…It takes time to get it done right and time is one of the things that you generally have very little of. (Interview Participant Number 140, 2014)

These quotations are representative of the many participants in the study. The first participant discussed the time management issues in entering information for all students. The second participant noted having problems with differentiating and individualizing instruction partly because of time management. The final participant above also focused on the issue of not having time to progress monitor. Response to intervention is a framework that addresses the needs of all students regardless of
academic and behavior performance. All three participants found it difficult to progress monitor with fidelity for all student because of time constraints.

To summarize this sub-section on RtI and data management and technology, the qualitative data corroborated the quantitative findings. Regardless of teacher’s years of experience in education, teacher’s education level, or teacher’s current years in their position, participants had difficulty with the technology and data management required by RtI. Some participants described challenges with record keeping and their own insecurities with using the system. Yet, every participant identified time as the primary enemy of RtI. Given the existing, overwhelming demands on a teachers’ time, participants described RtI as time-consuming. To have fidelity in record keeping for each individual child, participants found the time required to simply be a commodity that they “generally have very little of” (Interview Participant Number 140, 2014).

To summarize Chapter 4 findings, the data analysis of phase one and phase two found teachers with more years of experience had higher perceived self-efficacy in academics, but teacher’s years of experience had no impact on behavior or data manipulation and technology. Teacher’s years of experience in their current position found no overall statistical significance but statistical significant questions inferred teachers with the less experience in their current position had higher self-efficacy in academics. Qualitative data found that teacher’s with the less experience in their current position tended to have a higher perceived self-efficacy in academics, but not in behavior or data manipulation and technology. Teacher’s education level data showed no overall statistical significance in relation to academics, behavior, and data
manipulation and technology. This was corroborated in qualitative results. The results and interpretation section will further analyze and clarify findings.

**Results and Interpretations**

The intent of this study was to examine the potential of correlation between perceived self-efficacy and the way practitioners’ use RtI. The research hypothesis stated there were no statistically significant differences in teacher perceived self-efficacy based upon teacher’s years of experience in education, teacher’s years in current position, and teacher educational attained. The statistical analyses of quantitative data collected from the *Perceptions of RtI Skills Survey* and descriptive analyses of qualitative results from individual interviews supports the researcher’s acceptance of the null hypotheses. The null hypotheses were:

- **H1**: This is no statistically significant difference in perceived self-efficacy of teachers with more years of experience.

- **H2**: This is no statistically significant difference in perceived self-efficacy of teachers with more years in their current position.

- **H3**: This is no statistically significant difference in perceived self-efficacy of teachers with advanced degrees.

- **H4**: Teachers are not equipped with tools needed to successfully implement RtI.

The quantitative data analyzed yielded results congruent with the qualitative data in the following categories:

1. Understanding the teacher’s role in prescribing and implementing behavioral interventions,

2. Managing Response to Intervention academic and behavior interventions in the
classroom with fidelity,

3. Understanding how to identify, prescribe and implement academic and behavior resources, and

4. Using technology to progress monitor. Data revealed overall that practitioners’ have stronger self-perceived efficacy in academic content.

The quantitative data results regarding academic content was similar to those of behavior content, but there were several teachers that displayed lower efficacy during the individual interviews. Data triangulation was apparent in both phases of the study. Practitioners noted that they needed support using technology. Teachers become discouraged in using technology because of limited professional development opportunities or needing ongoing support with usage. This was noted in previous research. Teachers that are not comfortable using a tool are less likely to use the tool with fidelity.

For the purpose of presenting results and interpretations, this section was organized to the results and interpretations according to the research questions.

**Research Question 1:**

Is there a relationship between teacher perceived self-efficacy and prescribing and implementing academic and behavioral interventions in the Response to Intervention (RtI) model?

Positive teacher perceived self-efficacy during the whole process is important to student success. In this study, relationships between teacher-perceived self-efficacy and prescribing and implementing academic and behavior interventions in the RtI model. Teachers expressed a perceived stronger understanding of academic interventions and
strategies. While there were several teachers that do not use evidence-based interventions because the programs were not available, overall teachers had an understanding of how to identify student deficits to prescribe strategies and interventions to meet student academic needs. With regard to things, teachers felt worked well, they said RtI was a way of accountability. Several teachers noted how RtI keeps them engaged in differentiation of instruction to meet student needs. One teacher noted how it helped her put students on different levels to give the type of assistance the student needs to improve.

While the means for RtI academic and behavior content were similar, 3.45 and 3.24, respectively, there was a discrepancy in quantitative and qualitative data. Teachers reported on the quantitative instrument that perceived self-efficacy for behavior content was somewhere between having skills but need some support to use it (SS) and using it with little support (HS). However, the qualitative interview showed many teachers were frustrated with the behavior problems and noted student that do not respond to RtI.

**Research Question 2:**

Is there a correlation between teacher years of experience, teacher years in their current position, teacher educational attainment, and perceived self-efficacy when prescribing and implementing academic and behavior interventions?

Analysis of quantitative and qualitative data concluded that teachers felt they had an overall understanding of prescribing and implementing RtI for academics. The overall mean of teacher’s perception of academic RtI skill was 3.45. The mean appeared fairly low in relation to what teacher’s perceived as their skills. While there were areas teachers would like professional development in academic content, most felt comfortable
with implementing different strategies in their classrooms.

The overall teacher mean for behavior content was 3.24, slightly lower than that of academic content but still noted teachers perceived to have the skills but need some support to use it. As quantitative data revealed that teachers have the skills to deal with behavior, the interviews showed that overall teachers were concerned about behavior and did not understand the RtI framework when using it for behavior.

Teachers were shown to have minimal skills and needing substantial support when using data manipulation and technology. The mean for data manipulation and technology was only 2.89. Teacher understanding of data manipulation and technology was cumbersome for participants regardless of teacher’s years of experience in education, teacher’s current years in their position, and teacher education level and the qualitative data suggested this with so many teachers referring the online accountability system as a barrier. This could be because the system was introduced to all teachers at the same time and most teachers have received minimal professional development in using it. Teachers suggested that ongoing professional development is necessary.

Results were analyzed by looking at question means and statistical significance. The statistical significance was determined by using p<0.05. Qualitative data was coded according to themes and reviewed against quantitative results to corroborate, contradict, and identify any complications. The results and interpretations are below.

**Teacher’s Years of Experience**

In relation to teacher’s years of experience, teachers reported an average of almost fifteen years of experience in education (M=3.65). Previous research has concluded that teacher’s years of experience has an effect on teacher implementation of new initiatives.
Zimmerman (2006) argued that teacher resistance was linked to teacher perceived self-efficacy. Teacher acceptance is higher when a positive culture and teachers they are viable stakeholders. Other researched found that seasoned teachers tend to be more resistant to change and younger teachers are more inclined to accept the concept of new initiatives (Bergstrom, 2008; Klassen, & Chiu, 2010; Myers, et al., 2011).

The results in this study found that responses showed a positive correlation in academic content and teachers’ years of experience in education when teachers were asked to the skills they possessed to use data to define current level of performance of target students for academics; to determine the desired level of performance for academics; and ensure that any supplemental and /or intensive interventions are integrated with core instruction in the general education classroom or academics. This may be because several teachers have a certain number of years of experience in education but teacher experiences in their current positions vary. Furthermore, regardless of teacher’s years of experience, educators were all educators in the study were asked to implement RtI at the same time.

In relation to behavior content and teacher’s years of experience in education, there were positive correlations when teachers answered about how to access the data necessary to determine the percent of students in core instruction who are achieving benchmark using district and grade level standards for behavior. There was also a positive correlation between the use of data to define the current level of performance to target students for behavior; to ensure that any supplemental and /or intensive interventions are integrated with core instruction in the general education classroom for behavior; and to provide the support necessary to ensure that the intervention is
implemented appropriately.

Data manipulation and technology, and teacher’s years of experience in education showed no statistical significance between the two variables. Data showed a range of means from 2.47 to 3.52 in this category and all participants had a wide range of questions regarding how to use data and technology in relation to RtI.

**Teacher’s Years in Current Position**

In relation to teacher’s years in their current position, teachers reported an average of four years in their current positions ($M=2.00$). The results of the study found that 50% of (n=9) teachers had less than four years in their current positions. Teachers may have not have much familiarity with the academic content and behavior expectations of their student in this new position.

There was a negative correlation between teacher’s years in their current position and academic content when teachers are expected to access the data necessary to determine the percent of students in core instruction who are achieving benchmark district and grade level standards in academics and how to calculate the gap between student current performance and the benchmark district and grade level standards for academics. The moderate negative correlations found that teacher’s with less experience in their current position had more difficulty with RtI academic content. Additionally, a note of importance was that a correlation between the variables but the researcher is not suggesting causation (Ravid, 2011).

Behavior content and teacher’s current years of experience also had a negative correlation. Participants struggled with how to calculate the gap between student current performance and the benchmark, district and grade level standards for behavior, select
appropriate data (e.g. behavioral observations) to use for progress monitoring of student performance during interventions for behavior, and make modifications to intervention plans based on student response to intervention for behavior. The moderate negative correlations showed that teacher’s with less experience in their current position have more problems with behavior content. This may be due to teachers new to RtI and new to a novice in their current position. Data manipulation and teacher’s current years of experience also produced a negative correlation. The moderate negative correlations showed that teacher with fewer years in their current position had a higher difficulty with data manipulation and technology.

**Teacher’s Education Level**

A scale rating was assigned to examine education level. The overall mean for education level was 1.82. Only three out of the seventeen people possessed a BA/BS degree. There was a positive correlation in academic content and teacher’s education level when accessing resources (e.g. internet sources, professional literature) to develop evidence-based intervention for academic supplemental curricula. Teacher with more knowledge in education are more inclined to access and implement resources.

In examining any potential correlations for teacher’s education level and behavior content and data manipulation and technology, there were no identified correlations. Perhaps, this is because only three participants represented the BA/BS population and there were no participants in the PhD/EdD category.

**What teacher skills, knowledge, and tools are needed for teachers to incorporate RtI successfully?** Two components that attribute to teacher knowledge and tools needed for successfully implementation of RtI for academics and behavior: (a)
Resources and (b) Professional Development, particularly in time management and technology. During the interviews, teachers identified the lack of resources as a barrier. Interestingly, most participants highlighted programs not readily available. One teacher highlighted how she felt RtI had no effect on her student’s achievement because while she was able to ‘diagnose’ her students, she did not have the proper prescriptive interventions. She also expressed receiving professional development in academic interventions but was interested in updated training. While teachers said there was professional development on RtI, many were interested in learning about new interventions and received support with current interventions. Many teachers shared dismay about using RtI for behavior. The reason practitioners’ are discouraged with RtI for behavior is teachers the framework does not speak to the extreme social emotional concerns of some students. However, teacher perceptions of have their RtI skills may contribute to negative student behaviors. Teachers with higher self-efficacy are more successful in motivating their students (Castillo et al., 2010). One teacher spoke about students with extreme behaviors and the effect it has on the classroom. She is apprehensive about the RtI process because her lack of professional development in prescribing, implementing, and progress monitoring for behavior. She is not alone. Another teacher shared her frustration with not having the support needed. She stressed the importance of a team approach in using RtI.

The data strongly suggest that teachers need designated times to RtI on a consistent basis. Many teachers complained not enough time to complete all task given and to instruct students. Several teachers shared that due to time constraints and the lack of professional development, very difficult for to progress monitor using the Teacher
Online Accountability System. Quantitative data corroborated this with teachers having minimal skills and needing substantial support in using data manipulation and technology. One teacher said that she documents all RtI information but uses paperwork and other forms for convenience. Another teacher noted that in conversation with colleagues, many teachers that find the online system cumbersome and by the district mandating its use, it has deterred some teachers altogether. The qualitative data strongly supports the claims of teacher frustration.

**Summary**

The goal of this study was to explore teacher perceived self-efficacy when using Response to Intervention when prescribing and implementing academic and behavioral interventions in a large, urban school district. While the sample size was small and did not represent teachers throughout the district, it can professional development needs of general and special education teachers within the school and provide research for other school and districts with similar demographics regarding teacher perceived self-efficacy when using RtI. Conducting Pearson Correlation testing to perform a statistical analysis showed statistically significant difference in perceived self-efficacy of teachers for several areas relating to teacher’s years of experience in education, years in their current position, or according to teacher educational attainment. Individual interviews concluded that teachers need support in identifying resources for academic and behavioral interventions and professional development using technology that helps teachers to progress monitoring with fidelity. Future research is imperative to understand the knowledge of general and special education teachers when prescribing and implementing academic and behavioral content. These conclusions and recommendations are in
Chapter 5.
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this explanatory sequential mixed methods study was to explore teacher perceived self-efficacy when prescribing and implementing academic and behavior interventions using Response to Intervention (RtI). The methodology consisted of a cross-sectional quantitative survey and individual interviews from 17 general and special education teachers that teach reading or math. The Perceived RtI Skills Survey and individual interviews were used to understand general and special education practitioners’ efficacy of academic content, behavior content, and data manipulation and technology when using RtI. Previous studies cited teacher perceived self-efficacy as having an effect on the implementation of new initiatives and student success (Nunn et al., 2009; Tschannen-Moran & McMaster, 2009). The degree to which practitioners’ use initiatives is dependent upon the quality of professional development (Tschannen-Moran & McMaster, 2009). Research findings indicated that teachers with higher perceived self-efficacy are more likely to embrace change (Tschannen-Moran & McMaster, 2009). For this reason, understanding current perceptions of teacher’s implementation of RtI skills was important. The findings in this study could be used to develop meaningful, ongoing professional development on prescribing, implementing, and progress monitoring academic and behavior interventions. The hope was that this study would promote the use of RtI with fidelity.

The context of this study was in an urban, public elementary school in Pennsylvania. As RtI became a critical movement in 21st century learning, limited research existed regarding how RtI is used in urban schools. As the educational
paradigm continues to shift, it is imperative practitioners’ are knowledgeable and equipped to use diagnostic tools to drive instruction and manage behavior. When teachers can identify, prescribe incorporate, and progress monitor teacher perceived self-efficacy increases (Tschannen-Moran & McMaster, 2009). Ongoing, meaningful professional development, collaborative practices and support, and updated, accessible academic and behavior interventions and resources are important to teacher implementation. Without these tools, teachers become discouraged, doubt their self-perceived skills, and will not properly diagnose, prescribe, implement, and progress monitor academic and behavior components of RtI. Teachers are under tremendous scrutiny and ensuring positive self-efficacy when use instructional practices are paramount is adding value to all students.

In the design of the study, the researcher decided to use an explanatory sequential mixed methods approach to have more than one data source to triangulate the findings. Creswell (2012) stated that by using this method, the researcher “captures the best of both quantitative and qualitative data—to obtain quantitative results from a population in the first phase and refine or elaborate these finding through an individual qualitative exploration in the second phase” (p. 543). The first phase gathered data using a cross-sectional survey named Perceptions of RtI Skills Survey and the second phase adopted a case study approach using interviews for data collection. This explanatory sequential mixed method study did not have a dominant design so analysis and interpretations were equally weighed in both the quantitative and qualitative phases.
The questions posed for this study were as follows:

**RQ1:** Is there a relationship between teacher perceived self-efficacy and prescribing and implementing academic and behavioral interventions in the use of the Response to Intervention (RtI) model?

**RQ2:** Is there a correlation between teacher experience, teacher education, and perceived self-efficacy when prescribing and implementing interventions?

**RQ3:** What tools are needed for teachers to incorporate RtI successfully?

The intent for this chapter is explicitly to discuss the conclusions and recommendations according to the results of the study and link back to the literature review presented in Chapter 2 regarding RtI program design and further implications for future research.

**Conclusions**

Response to Intervention research primarily focused on evaluating the processes but there was limited literature available regarding RtI implementation and program evaluation in large, urban impoverished areas. This study sought to expand the scope of research regarding RtI by examining teacher perceived self-efficacy in prescribing, implementing and progress monitoring academic and behavior interventions. Three questions were used to guide the study’s quantitative and qualitative data to illuminate the perceptions of practitioners’ RtI skill set. The conclusions drawn from the data analysis are outlined in this section. These conclusions address teacher perceived self-efficacy in the context of extrinsic and intrinsic motivators. The conclusions addressed the research questions and common themes discovered during data analyses.
Research Question 1:

Is there a relationship between teacher perceived self-efficacy and prescribing and implementing academic and behavioral interventions in the Response to Intervention (RtI) model?

Teacher perceived self-efficacy is critical to prescribing and implementing academic and behavioral interventions in using the RtI model and is associated with progress monitoring and fidelity. One major finding of this research is that teacher perceived self-efficacy is higher in prescribing and implementing academic interventions. Some practitioners’ were well versed in academic interventions available for all tiers and researched other evidence-based programs but the resources were not available because of the lack of funding.

Another major concern for practitioners was using the online accountability system to progress monitor academic intervention. The technology awareness appeared cumbersome for most of the participants. Participants noted a lack of understanding with using the system, and time-consuming tasks as major concerns. While teachers would appreciate ongoing professional development using the online system, the consensus was that the system is a positive data management tool that would benefit from programming changes.

Participants had lower perceived self-efficacy when using RtI for behavior. In some instances, data presented in the Perceptions of RtI Skill Survey regarding teacher knowledge about behavior content varied from the individual interviews. The experiences of these participants highlighted on the survey showed a slight differentiation from academic content data; however, during individual interviews teachers stressed a
higher variation between academic and behavior content. Teachers noted environmental factors, such as a lack of resources to deter negative student behaviors or severe social emotional problems, and a lack of home support as issues with the RtI behavior process.

**Research Question 2**

Is there a correlation between teacher’s years of experience, teacher’s years in their current position, teacher’s educational attainment, and teacher perceived self-efficacy when prescribing and implementing interventions?

Most practitioners in the study were tenured teachers with more than 3 years of experience. While almost all the teachers participating in this study were teaching for more than the years required for tenure, a large percentage of the teachers were new to their current position. The majority of participants possessed advanced degrees and educational training. Statistical significance emerged related to a few questions related to years of experience in education and academic content. Data showed significance when using data to define current level of performance of target students for academics; determining the desired level of performance for academics; and ensuring that any supplemental and/or intensive interventions are integrated with core instruction in the general education classroom or academics. There was a negative correlation between teacher’s number of years of in their current position for the following: (1) their ability to access the data necessary to determine the percent of students in core instruction who are achieving benchmark district and grade level standards in academics and (2) their ability to calculate the gap between student current performance and the benchmark district and grade level standards for academics. There was a positive correlation regarding teacher’s education level and their knowledge of how to access resources (e.g., Internet sources and
professional literature) to develop evidence-based intervention for academic supplemental curricula. The teacher’s ability to employ RtI skills to adjust and manipulate academic content came from individual attitudes toward their perceived skill set. However, there were not enough statistical significant questions to deem overall significance of the factor.

Teacher perceptions of RtI behavior skills stemmed from student social emotional problems that teachers believed contributed to the unsuccessfulness of RtI. There was a positive correlation between teacher’s years of experience in education and how teacher’s: access the data necessary to determine the percent of students in core instruction who are achieving benchmark district and grade level standards, in behavior; use data to define current level of performance of target student for behavior; ensure that any supplemental and /or intensive interventions are integrated with core instruction in the general education classroom for behavior; and provide the support necessary to ensure that the intervention is implemented appropriately for behavior. Some practitioners did not have a clear understanding of the RtI process. Although practitioners had an overall low understanding of prescribing, implementing and progress monitoring behavioral interventions, faculty agreed that a collaborative approach with parents and other staff is critical for successful use.

Data manipulation and technology were consistent among all groups regardless of years of experience, years in their current position, or education level. Participant consensus was the online accountability system was cumbersome and not user-friendly. One teacher noted that while she viewed herself as technologically savvy, the online system designed for practitioners’ was difficult to navigate. Teachers were eager to
receive more professional development opportunities on inputting and data management.

**What tools are needed for teachers to incorporate RtI successfully?**

Professional development was believed to be a major component of the successful incorporation of RtI for academic and behavior interventions. The ability for teacher’s to use the online accountability system was found imperative to effective progress monitoring and a way to collaborate and communicate with other faculty. Multiple teachers said that while the system was introduced during the 2012-2013 school year, the system is not user-friendly and is often difficult to establish and maintain groups. Some teachers did not have clarity for their role in using the system. One teacher mentioned inputting behavior data is not the role of the classroom teacher but the responsibility of the RtI Champions. Teachers also viewed resources to be essential to teacher motivation and success. For example, one teacher indicated that while she is aware of interventions used for RtI academics, the resources are not available to teachers in that building. Another teacher noted that two RtI Champions in the school, but with the numerous roles both individuals play and because of the lack of staff, it might be difficult to collaborate on a consistent basis.

**Recommendations**

This study examined the prescriptive tools and implementation practices of general and special education teachers in an urban, public elementary school in Pennsylvania. While the study informs research by providing quantitative and qualitative data about RtI, further investigation is suggested to understand teacher perceived self-efficacy in other schools and school districts. An analysis of the quantitative and qualitative data prompted the following conclusions about RtI:
1. Resources, both tangible and intangible were perceived as essential to the success of RtI’s academic and behavioral components. Resources were limited because of limited funding and support personnel.

2. Practitioners rated themselves as having higher teacher perceived self-efficacy in academic content. Their comfort and knowledge of academic interventions and tools appeared to be related to their perceptions of their own RtI skills, which they gained through understanding differentiation of instruction and pedagogy.

3. Technology is having a negative effect on effective progress monitoring. Teachers are uncomfortable with the online accountability system and note that it is time consuming and not user friendly. Additionally, some misconceptions may arise about the roles and responsibilities of teachers when using the system.

The conclusions from this study prompted recommendations that could inform the design of professional development and promote positive teacher perceived self-efficacy when using RtI for academic and behavioral content. The main recommendation is to have the district revisit its online accountability system, enforce policy changes, and advise future research. This means the district should review ways to support teachers with using the system while enforcing accountability. The hope is that these recommendations could be used to implement an effective RtI system and culture that helps educators efficiently prescribe, implement, and progress monitor student goals.

Further recommendations follow in the next sections.

**Create Professional Learning Communities**

Teachers using RtI should be encouraged to use common planning time to strategically collaborate, discuss, and develop academic and behavior interventions. This
A collaborative approach will be a better way of promoting colleague support, prescribing and implementing goals, and utilizing a specific time for progress monitoring to help those with time management issues. With opportunities to confer and track student growth, teachers are more likely to incorporate RtI with fidelity.

**Identify Resources Prior to Implementation**

Practitioners and leadership teams should research evidence-based tools that would be effective for meeting the needs of their students. Professional development opportunities should be ongoing and available for teachers to ensure programs universal screenings and interventions are used appropriately for academics and behavior.

**Use Ongoing Program Evaluation**

Successful implementation of RtI must encompass ongoing program evaluation of teacher efficacy when using the model. Many educators lack the teacher knowledge needed to incorporate the program with fidelity. RtI Champions should be designated in professional learning communities to evaluate the needs of practitioners on a regular basis. Educators must become comfortable sharing their personal successes and challenges to help create a culture of meaningful professional development designed according to practitioners’ deficits.

**Establish Data and Technology Support**

Practitioners must employ technology awareness to input and progress monitor data using the online accountability system. Teachers must receive weekly, ongoing support to increase perceived self-efficacy. Additionally, an understanding of technology would also help teachers with management of online interventions.
Future Implications

The implications for future studies are important to the continued growth of using the RtI process with fidelity. Based upon the findings from this study, it is recommended that future researchers do the following:

First, use a larger sample size to increase the statistical significance of findings. Because of the use of convenience sampling, there was a small sample size; therefore, using a different type of sampling or sample size may provide different findings. This study also only surveyed and interviewed general and special education teachers that teach reading or mathematics in a pre-kindergarten through eighth grade setting. Pre-kindergarten teachers were not included in the study because of their lack of RtI use. Researchers should replicate this study to include administrators, school-based specialists, paraprofessionals, and preparation teachers, such as physical education, art, and music teacher, and student counselors, at all educational levels. It is imperative that decision-making is done collaboratively.

Second, researchers could replicate the present study with staff in elementary, middle, and high schools. This study researched the perceptions of general and special education teachers in an elementary school. Prescribing and implementing academic and behavior content varies according to grade level. Future researchers could examine if there are statistically significant differences in teacher perceived self-efficacy by investigating grade brackets as a factor. Future studies could adjust the methodology by using a treatment and control group design with those receiving school specific professional development designed according to the results of this study opposed to other schools with similar demographics within the school district not receiving professional
development. Finally, prospective researchers could investigate the factors in high, middle, and low performing schools within the school district to examine teacher knowledge, and determine if there are statistically significant differences in the factors used in the present study.

**Limitations**

This study endured several limitations. First, the convenience sampling was used for data collection. Second, the sample size was small and data were collected from one population at one school. Third, the limited number of teachers caused an underrepresentation of special education teachers and teachers with diverse educational levels. Finally, there was the potential for skewed data findings because some respondents may not fully understand RtI, so in essence, some participants were unable to rate teacher perceived self-efficacy.

**Summary**

The emphasis of preventive programs in general education classrooms helped RtI become commonplace (Goodman & Webb, 2006). On a state level, many school districts incorporated the program for many years. While several pilot programs in this school district occurred before full implementation, RtI was mandated in this school district in the 2012-2013 school year.

This study was an exploration of teacher perceived self-efficacy in RtI for general and special education teachers. This study included 17 general and special education teachers in an urban school and represented a variety of successes and challenges when prescribing and implementing RtI for academics and behavior. The rapid growth of RtI in this large urban school district in such a short period did not provide for the necessary
research to address school-specific issues. The best practices for prescribing, implementing, and progress monitoring academic and behavior interventions were identified, but the level of professional development and teacher knowledge was lacking. The circumstances warranted a study of the current practices of RtI used and the needed resources of its practitioners’. The findings in this study detail valuable data regarding the gaps of teacher knowledge and could give leadership a framework to devise a successful professional development plan for staff. The data supports a critical need for understanding the multifaceted tiers for academic and behavior interventions.

To foster the successful implementation of RtI, the identification of universal screenings and interventions at all tiers for each grade level will be important to fidelity and teacher self-efficacy. Leadership support for prescribing, implementing, and progress monitoring academic and behavior content is imperative to improving teacher performance, thus increasing student achievement. Ongoing program evaluation to refine professional development to target school-based needs is essential to address the needs of practitioners. Applying these practices will not only promote positive teacher perceived self-efficacy, but also will be paramount in making RtI instrumental in the educational transformation of urban districts.
REFERENCES


Appendix A: Introduction Notice

Dear Participant,

My name is Sherri A. Wallace and I am a doctoral student at Drexel University. The following information is provided to you to decide whether you wish to participate in the study being conducted at your school. You are free to decide not to participate or may withdraw from the study without affecting the relationship with the school district, school personnel, or researcher. If you choose to participate, all information is strictly confidential. You will not be identified in the study in any way.

The purpose of this study is to understand the needs teachers have in prescribing and incorporating academic and behavioral interventions and goals while implementing Response to Intervention (RtI). The procedure will be the use of a *Perceptions of RtI Skills Survey*, and in-depth individual interviews.

Data will be collected in two phases. First, teachers will be asked to complete both surveys by February 10, 2014. A secure link will be provided. The second phase of the study will be interviews. If you are interested in being an interviewee, you will have the option to let the researcher know at the end of the survey. For your convenience, the interview can be conducted face-to-face or using tools such as Skype or Google Plus. Please remember that for the study to be significant, the interview is also an integral part.

Do not hesitate to ask questions at any phase of the study: before, during, or after. I look forward to sharing my findings when the research is completed.

Please sign your consent with full knowledge of the nature and purpose of the procedures. A copy of your consent form will be given to you to keep (Creswell, 2012).
Appendix B: Demographic Survey

You will answer questions about academics and behavior.

Perceptions of RtI Skills Survey

Directions: Please read each statement about a skill related to assessment, instruction, and/or intervention below, and then evaluate YOUR skill level within the context of working at a school/building level. Where indicated, rate your skill separately for academics (i.e., reading and math) and behavior. Please use the following response scale:

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

1. Project ID Number:

2. Grade Bracket: Kindergarten through Second, Third through Fifth, Sixth through Eighth

3. Years of Experience in Education: 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, 20-24 Years, 25 or More Years

4. Number of Years in Your Current Position: Less than One Year, 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, 20 or More Years

5. Highest Degree Earned: BA/BS, MA/MS, EdD/PhD

6. Access the data necessary to determine the percent of students in core instruction
who are achieving benchmarks (district grade level standards) in:

- Academics
- Behavior

7. Use data to make decisions about individuals and groups of students for the:

- Core academic curriculum
- Core/building discipline plan

8. Perform each of the following steps when identifying the problem for a student for whom concerns have been raised:

a. Define the referral concerns in terms of a replacement behavior (what the student should be able to do) instead of a referral problem for:

- Academic
- Behavior

The skill to:

b. Use data to define current level of performance of target student for:

- Academic
- Behavior

c. Determine the desired level of performance for:

- Academic
- Behavior

d. Determine the current level of peer performance for the same skill as the target student for:

- Academic
- Behavior
e. Calculate the gap between student current performance and the benchmark (district grade level standard) for:
   - Academic
   - Behavior

f. Use gap data to determine whether core instruction should be adjusted or whether supplemental instruction should be directed to the target student for:
   - Academic
   - Behavior

9. Develop potential reasons (hypotheses) that a student or group of students is /are not achieving desired levels of performance for:
   - Academics
   - Behavior

10. Identify the most appropriate type(s) of data to use for determining (hypotheses) that are likely to be contributing to the problem for:
    - Academic
    - Behavior

11. Identify the appropriate supplemental intervention available in my building for a student identified as at-risk for:
    - Academics
    - Behavior

12. Access resources (e.g. internet sources, professional literature) to develop evidence-based interventions for:
    - Academic core curricula
• Behavioral core curricula
• Academic supplemental curricula
• Behavioral supplemental curricula
• Academic individualized intervention plans
• Behavioral individualized intervention plans

13. Ensure that any supplemental and/or intensive interventions are integrated with core instruction in the general education classroom:

• Academic
• Behavior

14. Ensure that any proposed intervention plan is supported by the data that were collected for:

• Academic
• Behavior

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

• Academic
• Behavior

16. Determine if an intervention was implemented as intended for:

• Academic
• Behavior

17. Select appropriate data (e.g. Curriculum-Based Measurement, DIBELS, behavioral observations) to use for progress monitoring of student performance during interventions:
• Academic

• Behavior

18. Construct graphs for large group, small group, and individual students:

• Graph target student data

• Graph benchmark data

• Graph peer data

• Draw an aimline

• Draw a trendline

19. Make modifications to intervention plans based on student response to intervention

20. Collect the following types of data:

• Curriculum-Based Measurement

• DIBELS

• Access data from appropriate district-or school-wide assessments

• Standard behavioral observations

21. Use technology in the following ways:

• Use electronic data collection tools

• Graph and display student and school data

This concludes the survey. Thank you so much for your time and responses. If you are interested in participating in an interview, please attach your contact information. The interview will be used to better understand the data from the surveys. Please note that all information will remain anonymous and strictly confidential.
Appendix C Interview Protocol

Time of Interview:  
Date:  
Place:  
Interviewer:  
Interviewee Number:  

Position of Interviewee: The purpose of the study is to examine teacher perceived self-efficacy when prescribing and implementing academic and behavior interventions of Response to Intervention. You have completed the first phase of the study and now will be asked several open-ended questions regarding Response to Intervention. There are no right or wrong answers. The interview will be approximately 30-45 minutes in length. All answers given will remain strictly confidential and you will not be identified in any way. Are there any questions? Let’s get started.

1. What is Response to Intervention?
2. How has Response to Intervention affected student achievement academically in your classroom?
3. How has Response to Intervention affected student achievement behaviorally in your classroom?
4. What are the strengths of Response to Intervention when using it for academics?
5. What are the strengths of Response to Intervention when using it for behavior?
6. What are the drawbacks of Response to Intervention when using it for academics?
7. What are the drawbacks of Response to Intervention when using it for behavior?
8. What support are teachers given to prescribe and implement academic interventions?

9. What support are teachers given to prescribe and implement behavioral interventions?

10. What are your strengths in using Response to Intervention academics?

11. What are your strengths in using Response to Intervention for behavior?

12. What are your areas of need in using Response to Intervention for academics?

13. What are your areas of need in using Response to Intervention for behavior?

14. After using Response to intervention for over a year, what professional development do you think you need?

15. Are there any other thoughts you would like to share about Response to Intervention?

Thank you for your cooperation and participation in this interview. Just as a reminder, all responses will remain strictly confidentiality.
Appendix D: Survey Information

Dear Participant:

Thank you very much for consenting to participate in a survey to examine teacher perceived self-efficacy when prescribing and implementing Response to Intervention (RtI) academic and behavior interventions.

I am writing to provide you with the Perception of RtI Skills Survey.

Please complete the survey by clicking the following link:

https://www.surveymonkey.com/s/WCBNHGW

Completing the survey will take approximately 20 minutes of your time.

Your Project ID Number for this study is:

You must enter the code in the beginning of the survey. Your responses are completely anonymous.

Thank you again for your participation!

Best regards,

Sherri A. Wallace
Appendix E: Thank You Letter

Dear Participant:

Thank you so much for completing both phases of the *Response to Intervention: Examining Teacher Perceived Self-Efficacy When Prescribing and Implementing Academic and Behavior Interventions* study.

Your interview transcription is available for your review. If you would like to have a copy of the transcription, please email saw322@drexel.edu.

You will receive your $5 gift card momentarily. Again, thank you for your time.

Best regards,

Sherri A. Wallace