Teachers' Perceived Knowledge about Response to Interventions

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Abstract

Response to Intervention (RTI) is a multi-tier approach to the early identification and support of students with learning needs. RtI has several core components such as universal screening, evidence based instruction at different levels, on-going progress monitoring, and data-driven decision making. For RtI to be successful, teachers need to understand these core components. The purpose of this quantitative study is to examine teachers' perceived knowledge of Response to Intervention (RtI). Specifically, it explored the teachers' perceived understanding of the core components of RtI. Participants included elementary teachers in one school district located in the mid-west portion of the United States. They completed a teacher rating scale related to RtI and the results of this study will help drive more effective implementation of RtI in the school district.

Acknowledgment

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Chapter 1

Introduction

"No matter what explains a student's lack of learning, schools can and must commit to a collective responsibility to providing supports."

Austin Buffum (2011)

Teachers can inspire and change children's lives when they take the time to learn each of their student's strengths and weaknesses and then provide individualized instruction. Getting to know each student is similar to when a person goes to the hospital to receive medical treatment and a medical provider takes the time to listen and observe the issues each person might be experiencing. Based on the information a medical provider has observed and learned, he/she provides individualized treatment to the patient. So, if someone has a gaping wound, the medical provider would stitch the wound. However, if someone else is having of an allergic reaction, the medical provider might administer an Epipen but not just give stitches. So why do many teachers provide the same type of instruction to all students in their class even when they have different needs? Like medical providers, teachers need to gather information about each student in order to provide more effective instruction. So how can teachers gather information about their students? Teachers can administer universal screeners to gather basic academic information about their students' instructional needs. A universal screener is a national normed assessment that is given to students three times a year to monitor student learning. Once that data is analyzed, then, as needed, additional drill-down tests are administered to certain students to obtain more detailed information about their skills and abilities. This data allows teachers to

provide more focused and individualized instruction to students. This process is called Response to Intervention (RtI) and it is occurring throughout schools in the United States (U.S.) in order to help teachers make instruction more intentional, and to make learning more effective and meaningful for students (Mellard, McKnight, & Woods, 2009). Further, this approach aligns with research that shows the importance of providing effective intervention strategies to address students' academic needs in a timely and appropriate manner for students (Fuchs, Compton, Fuchs, Bryant, & Davis, 2008).

RtI was an initiative from No Child Left Behind Act (NCLB) in 2001 and the Individuals with Disabilities Act (IDEA). RtI is a framework for school reform that helps educators answer many questions such as: Which students are struggling or might be at-risk academically? What are the areas of concerns? What are teachers currently doing to provide support for students? Are students responding to the instruction or interventions? What other supports do students need? (Weber, 2013) These questions are important because, as Weber (2013) indicates, if students are not making adequate progress, educators need to feel a sense of urgency and provide more intensive interventions to students. Intervention for young students, provided in a collaborative community, has the potential to support early literacy development (Hilbert & Eis, 2013). Further, "Intentionally assessing, monitoring and supporting the development of emergent literacy in preschool years is important to the development of more formal reading skills later in life" (Hilbert & Eis, 2013, p.112 – 113). By intervening early and providing intentional instruction students are more likely to be successful in school. In short, NCLB and IDEA brought attention to the need for early intervention for students who are struggling or at-risk for academic failure and that early intervention is vital to their academic future.

Learning to implement RtI effectively in schools can be a major task for teachers and administrators because of its complexity. It has many core components such as universal screening, high quality research-based core instruction and intervention, on-going progress monitoring, and data-driven decision making. Another challenge of RtI is maintaining the fidelity of procedural implementation. Also, like any school initiative, if administrators do not take into account teachers' feelings and opinions about RtI, then this might negatively affect how it will be implemented (Regan, Berkeley, Hughes, & Brady, 2015). Therefore, it is important for educators to feel a part of the decision-making process for the implementation of RtI to be successful. This can be accomplished, in part, by providing professional development that helps teachers understand and make changes to their instructional practices in ways that improve students' academic success and leads to school reform. By taking into consideration teachers' feelings and opinions and allowing them to be part of the learning and decision-making process during professional development, then it is more likely that teachers will change their instructional practices in ways that promote school reform and improve student achievement (Regan, et al., 2015).

Understanding teachers' perceived knowledge is key to understanding where each teacher currently is on their journey of learning. Stahnke, Schueler, & Roesken-Winter (2016) found teachers' knowledge and experience predict their instructional practice in their classrooms. More recently, Scharlach (2008) studied pre-service teachers who tutored struggling readers with a variety of reading issues, and were expected to help each student become proficient readers. Further, she examined teachers' knowledge of their expectations, instruction, and evaluation of struggling readers. Scharlach (2008) found that many of the preservice teachers felt overwhelmed and doubted they were capable of teaching all of their students to read. The

researcher concluded that preservice teachers' beliefs do influence their teaching behaviors. Are teachers' knowledge due to their confidence or their lack of knowledge?

It is important to understand teachers' knowledge about RtI, to provide meaningful professional development. Consequently, Moreno (2014) examined general education teachers, special education teachers, and principals' perceived knowledge of RtI throughout the state of Texas. She wanted to look at what three groups of educators knew about the different components of RTI. Moreno used a Likert survey to gather information and found a significant difference in perceived knowledge among the general education teachers, special education teachers and principals. Moreno (2014) tested four hypotheses in her study. The first hypothesis was that there would be no statistically significant difference in the perceived knowledge of universal screener attributes between the three types of educators. However, she found out that there was a significant difference between general education teachers and principals, which revealed they had different knowledge levels about the use of a universal screener. The second hypothesis stated there would be no statistically significant difference in the perceived knowledge of evidence-based interventions between the groups of educators. The results showed all three groups of educators have the same perceived knowledge level about the use of evidence-based interventions. The third hypothesis predicted that there would be no statistically significant difference in the perceived knowledge of RtI progress monitoring between the three levels of educators. The outcome suggested that all three levels have the same perceived knowledge level with progress monitoring. The last hypothesis was that there would be no statistically significant difference between the perceived knowledge of data collection in RtI decision making among all of the survey participants. However, the findings showed that there was a significant difference between general education teachers and principal's perceived

knowledge about the use of data collected. Specifically, general education teachers are unsure about how to use data collected from the universal screener. These findings support Mask and McGill (2010) who also examined RtI practices among general education teachers, special education teachers, and principals. Based on her findings, Moreno (2014) argues that institutions of higher education need to offer classes about RtI. Further, Moreno suggested that research should then examine how well first year teachers do or do not implement RtI and compare this to whether they had or did not have a class on RtI in their teacher preparation course work

Purpose of Study

The current study examines teachers' perceptions of their knowledge about RtI. Unlike Monroe's study (2014), which focused on administrators, and general and special education teachers in Texas. I investigated the perceptions among elementary teachers in one school district in the Midwest portion of the U.S. Consequently, my research questions are:

1. What is elementary school teachers' perceived knowledge about RtI in a Midwest school district?
2. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and years of experience?
3. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and number of years teaching in a classroom using RtI?

Question one will help provide information to better understand teacher's current perceived knowledge of RtI. Exploring the relationship between elementary teachers' perceived knowledge of RtI and their years of experience will provide information to see if years of teaching experience matters. Question two examines if there is a positive relationship between

elementary school teachers' perceived knowledge of RtI and years of experience. My hypothesis is there is not a positive relationship between years of experience and teacher's perceived knowledge of RtI. I don't believe having a high number of years of experience will equate to a higher teacher perception of knowledge of RtI. Question three examines if there is a positive relationship between teachers' perceived knowledge of RtI and years of teaching in a classroom using RtI. My hypothesis is there is a positive relationship between teachers' perceived knowledge of RtI and years teaching in a classroom using RtI. The years of working through the components of RtI will help teachers, continuous collaborations, and professional development will help teacher's perceived knowledge of RtI. Findings from this study will provide insight into teachers' perceived knowledge of RtI and may help to determine if professional development in RtI is needed at the district level or with specific groups of teachers.

Significance of the Study

There are multiple studies that examine RtI. For example, studies have focused on student growth and development (e.g., Konopaseki, Nocini, & Krupat, 2016; Zvoch, 2016) or the effectiveness of teachers' implementation of the RtI process (e.g., Castro-Villarreal, Villarreal, & Sullivan, 2015; Spear-Swerling & Cheesman, 2011) but few studies have focused on teachers' perceptions of their knowledge of RtI. Of the few studies that have focused on teachers' perception (i.e., Bryant & Barrera, 2008: Moreno, 2014), they do not provide enough information or guidance to inform professional development. The current study is intended to provide the information needed to help plan and prepare for professional development to help make RtI more successful in classrooms for teachers and students in a suburban school district in which the study will be conducted. Based on my experiences working with teachers in my school district, teachers seem to range in their knowledge of and experience implementing RtI.

However, many of the teachers want to continue growing professionally and this study will provide important information to help teachers understand and implement RtI, which in return, will help students.

Summary of Chapter and Orientation of Subsequent Chapters

In this chapter, I introduced the study and explained its significant. In Chapter 2, I review the relevant literature such as the history of RtI, a description of the RtI framework and its components, the role of professionals in the RtI framework, teachers' knowledge about implementing RtI and ways to support them. In Chapter 3, I describe the study methodology, which includes the research design, participants, data collection and analysis. Chapter 4 will share the results of the study by digging into the statistical analysis of the data. The final chapter, Chapter 5, will summarize the study results, discuss limitations and future work.

Chapter 2

Literature Review

History of Response to Intervention

Since 2004, schools in the United States have used the discrepancy model to determine if students who struggled academically qualify for additional instructional support through special education services. The discrepancy model can be described as a measure of "the difference between a child's potential and actual achievement to determine whether the child has a learning disability" (Buffum, Mattos, & Weber, 2009, p. 2). Many educators and parents believe the problem with this approach is that children do not receive the instructional help they need until there is a discrepancy. At the point that a discrepancy is apparent, the student has already failed. Consequently, RtI helps classroom and special education teachers rethink their role and responsibilities when it comes to educating all students in their school. That is, a student's success is not based solely on one general education teacher but rather on a team of teachers' working collaboratively. In fact, this reconsideration of how to support students has been described as a "seismic shift in educational policy culminated in the Individuals with Disabilities Education Improvement Act (IDEIA), which was signed into law by President George W. Bush in December 2004" (Buffum, et al., 2009, p. 2). School districts and teachers were expected to embrace a model of prevention instead of a model of failure. As the President's Commission (Berdine, 2003, p.93) stated:

> The current model guiding special education focuses on waiting for a child to fail, not on early intervention to prevent failure. Reforms must move the system toward early identification and swift intervention, using scientifically

> based instruction and teaching methods. This will require changes in the nation's elementary and secondary schools as well as reforms in teacher preparation, recruitment, and support.

Hughes and Dexter (2011) discussed how this shift allowed schools to examine evidence-based practices in regular education classrooms, sometimes called Tier 1 instruction, and to focus on more purposeful instruction that leads to adequate student progress and eliminates ineffective instruction. This was important because, historically, many students had been placed in special education due to inadequate classroom instruction rather than a disability (Hughes & Dexter, 2011). Specifically, Yell and Drasgrow (2007) state the Commission recognized that many students who were labeled learning disabled (LD), struggled not due to deficits within themselves but rather to poor and ineffective instruction in the classroom.

Instruction needed to change for the sake of student learning. IDEA encouraged teachers to focus on individual student learning and consider what was and was not working in order for changes to be made in instruction that would maximize each student's learning. Researchers and teacher educators called for a unified system in schools that would help teachers to systematically examine each student's strengths and weaknesses in order to plan for evidence based early intervention for struggling students (Wedl, 2016). Russo, Osborne, and Borreca (2005) discuss the important of educators being able to employ a process to know what to do if students are not respond to scientific, research based interventions. If a student was not making adequate progress during the intervention, then he or she would be referred for a formal evaluation for special education. Special education should be the last resort for student learning after the general education teacher has implemented many other instructional strategies.

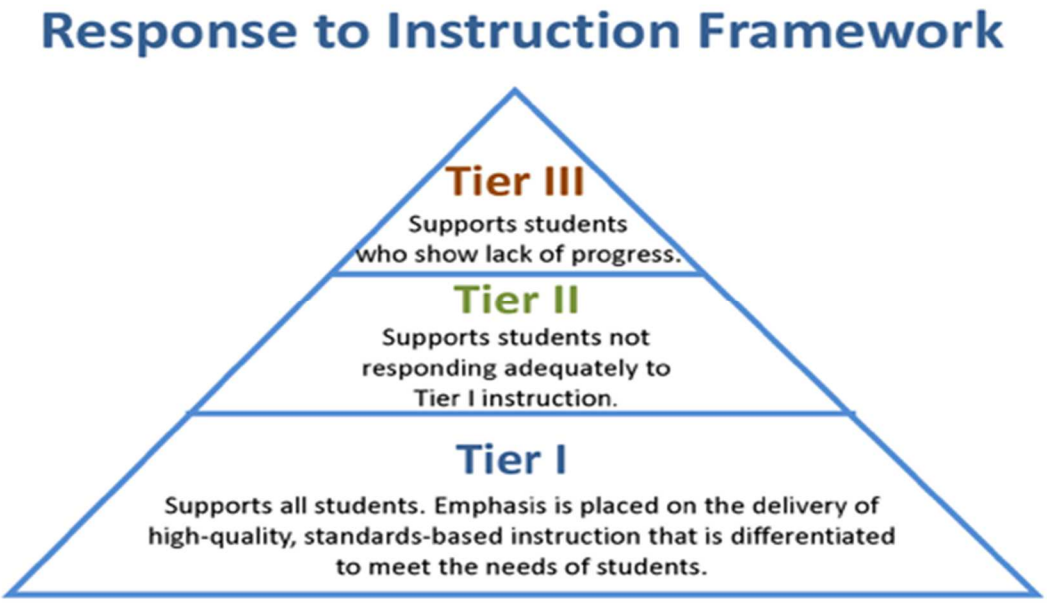
In 2002, the President's Commission on Excellence in Special Education stated that while most schools adhered to the laws related to special education, they also focused more on the process instead of student outcomes. One reason that schools might have focused on the process rather than on the student outcomes was because general education and special education were viewed separately, both financially and instructionally. This view did not allow for communication between general and special education teachers or for collaboration to implement early intervention and prevention. To address these issues, "The Commission recommend[ed] States be given the flexibility to use IDEA funds to support early intervention programs and to combine IDEA funds with the other sources of federal support for these programs" (U.S. Department of Education, Office of Special Education and Rehabilitative Services 2002). According to Owocki (2010), this started the idea of different levels or tiers of instruction, a hallmark of RtI, and provided the opportunity to meet more students' needs within the general education setting. Specifically, "Response to Intervention (RtI) is an instructional framework through which schools can provide early intervention for students experiencing academic and behavioral difficulties" (Hughes & Dexter, 2011, p. 4). Further, RtI emphasizes the importance of closely monitoring student progress during each tier of instruction to determine if instruction is effective (Hughes & Dexter, 2011). However, for RtI to be effective and change to occur within schools, there must be professional learning communities that help all teachers understand and work collaboratively to implement RtI (Buffum, et al., 2009). Professional learning communities are groups of educators who meet on a regular basis, share their expertise with one another, and work collaboratively to improve teaching skills and the academic performance of students.

Response to Intervention: A Tiered System of Intervention

Response to Intervention (RtI) has been described as a "system wide, problem solving and data review process in which students are frequently assessed and provided instruction along a continuum of tiered supports" (Castro-Villarreal, Villarreal, & Sullivan, 2015, p.11). RtI has also been broadly described as quality instruction and progress monitoring so that those students who are not making adequate progress are provided additional instruction as soon as possible. Then, if those students are still not demonstrating adequate progress they will be considered for special education services (Bradley, Danielson, & Doolittle, 2005). In short, RtI examines students' individual academic strengths and weaknesses in order to provide effective and, if needed, specialized instruction.

RtI is a three-tiered approach to address student's needs. Figure 1 (Manscein-Clark County School District, 2016) presents what supports students receive in each tier.

Figure 1: Response to instruction framework



Specifically, Tier I consists of high-quality evidence-based classroom instruction based on students' needs. Tier II consists of additional support for students who are not making adequate progress based on on-going progress monitoring. Finally Tier III consists of intense instructional support for students who are not making sufficient progress via classroom instruction.

RtI is used in diverse schools across the U.S. with the goal of providing direct instruction for students needing specialized support. Teachers, support staff, and administrators in school buildings provide this direct instruction. While some teachers strongly believe this system is beneficial in helping students achieve their potential, other teachers believe it only focuses on a small percentage of students and that it is not a productive use of time and energy (Buffum, et al., 2012). Since people tend to have passion and opposing views in regard to the RtI process, it is possible that teachers are not working well together and, therefore, may not be providing effective instruction for students.

In the following sections, I describe three important points to RtI (a) assessment, (b) tiered instruction, and (c) the role of professionals during RtI.

Assessment Process

So how should teachers work together to implement RtI and identify and support struggling learners? To begin the process, all students are given a universal screener, which is sometimes called bench marking, to identify strengths and weakness in areas such as reading fluency, reading comprehension, math computation, and math skill application. Examples of different screeners include AIMS web, Dynamic Indicators of Basic Early Literacy Skills (DIBELS), subtests of the Woodcock Reading Mastery Test - Revised (WRM-T), and Texas Primary Reading Inventory (TRRI). These nationally normed tests, commonly given in the fall,

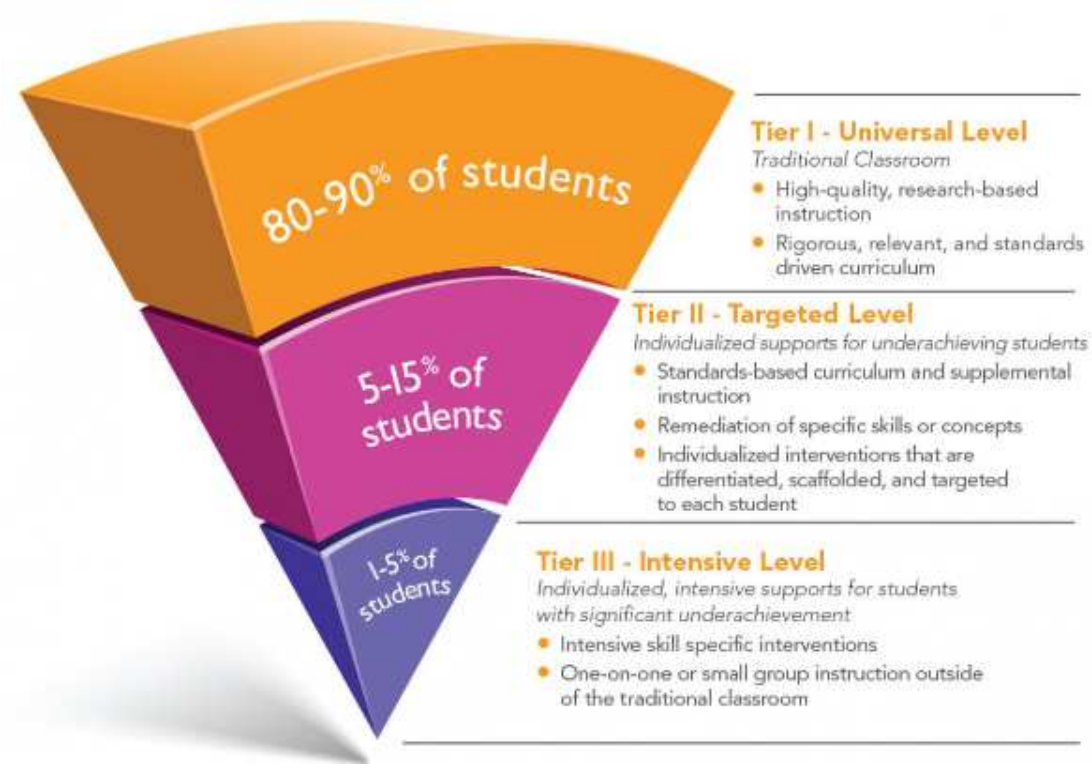
winter, and spring, measure students' current level of understanding and each student's score can be ranked nationally into percentiles and compared to grade-level peers. Students who fall below the 25th percentile normally are placed together in an intervention group. After the screener is administered, additional tests such as Quick Phonics Screener, Diagnostic Reading Assessment, or Student Level Assessment based on the universal screener are administered to those students who performed low to gain a better understanding of specific skills that need to be the focus of instruction. These additional assessments provide detailed information about the skills that students have mastered or that are weak and need further instruction. These assessments are used to create an individualized and sequential plan for each student so the teacher or an interventionist can begin instructional planning. Typically students who have similar needs related to a particular skill, despite grade levels, are grouped together. This allows teachers to provide specialized instruction for students. As students learn in these small groups, teachers monitor their progress through a weekly assessment that aligns with the benchmark assessment. Progress monitoring assessments are short tests that are given throughout the school year and give teachers immediate data on how students are progressing toward the academic standards. This data will help teachers know which students should continue with the small group instruction, as is, or if the intervention should be changed or adapted due to the ineffectiveness (Buffum, et al., 2009).

Tiered Instruction

Response to Intervention is made up of three different levels or tiers of instruction. As seen in Figure 2, typically, 80 to 90% of students in a school receive Tier I instruction, 5 to 15% receive more targeted Tier II instruction, and 1 to 5% of students require more intense, individual

Tier I instruction to make academic gains. In the following section, more information is presented about each of the levels of tiered instruction.

Figure 2: Levels of tiered instruction



(Rios, 2014)

Tier I instruction, commonly referred to as the "core curriculum," consists of "high quality, research based core curricula and teaching methods that have been shown to promote learning and limit learning difficulties" (Whitten, Esteves, & Woodrow, 2009, p.14). Teachers, however, still need to make informed choices about instruction that supports all learners (Jones, Yssel, & Grant, 2012). Therefore, they must be familiar with a variety of evidence-based instructional methods that have been shown to be effective in the classroom. Also, as part of

Tier I instruction, every student completes benchmark assessments three times a year. As previously mentioned, these assessments help teachers understand each student's current academic level and instructional needs, and they help teachers plan for more appropriate evidence-based instruction for that student. Further, they help teachers provide differentiated instruction through flexible grouping based on students' current level of achievement, as well as to determine students' learning styles and interests. Finally, it is important that each student plays an active role in his or her learning. By encouraging a student to have a say in his or her own learning, the student is more likely to be actively engaged and to be more successful. This often occurs through conferring meetings between the teacher and the student. Thus, meeting the needs of all students and encouraging them to take ownership of the learning are major goals of Tier I instruction.

Through screening, diagnostic evaluation, and progress monitoring, teachers identify students who might benefit from Tier II instruction (Whitten, et al., 2009). Fuchs, Fuchs, and Vaughn (2008) state that Tier II, or secondary prevention, is designed to meet the needs of at-risk students who struggle to make adequate progress through Tier I instruction. Tier II typically consists of an additional 20 to 30 minutes of small group intervention (Johnson & Boyd, 2012). Small group instruction allows teachers to teach and reteach skills that students have not previously mastered. The additional time, review of prerequisite skills, and targeted and differentiated instruction is key to successful Tier II instruction. As Buffum, Mattos, and Weber (2009) state, one reason that a student might not make progress in Tier I instruction is "because the teacher's pedagogic practices did not correspond with the student's learning style" (p.91). In small group instruction, however, teachers can try a variety of instructional approaches in order to find an approach that matches students' learning styles more effectively. A second reason that

a student might not make progress in Tier I instruction is that he/she needs more time to understand and master a new concept (Buffum, et al., 2009). Since each student learns at different rates, small group Tier II instruction provides additional time for students to develop skills they might be missing or struggling to understand. Finally, a student might not make progress in Tier I instruction because he/she lacks critical prerequisite skills and knowledge to learn content (Buffum, et al., 2009). Learning continuously builds on previous skills, so when, for example, a student is missing a skill such as knowing how to blend letter sounds together, he/she will not be able to decode words and read fluently. Small group, Tier II instruction provides time to teach foundational skills or background knowledge that students might need. Although there are other reasons for a student to receive Tier II instruction, research shows that, in general, 10 to 15 percent of students in a school could benefit from such support (Owocki, 2010).

To determine if personal goals are met during Tier II instruction, students' progress is monitored on a weekly basis. Personal goals are set based on a rate of improvement multiplied by the number of weeks of the intervention plus the baseline score. This allows students to have personal goals that are obtainable over a set period of time. Each week a score is plotted on a graph for each student in order to determine a trend line, which shows if the student is making progress and, if so, how quickly. This information allows students to know, based on their current work, if they are likely to achieve their goal by the end of the given time period. Teachers can also use this information to evaluate if the current intervention is effective for each student. If the current intervention is working then students can stay the course with the intervention. If the current intervention is not effective with a student, then teachers can make informed decisions about how to change the intervention to something that will be more effective

for the student. Weekly progress monitoring allows students and teachers to think more deeply about teaching and learning.

Tier III interventions occur when students are not successful in Tier II intervention. Tier III interventions become even more direct and purposeful in order to meet the students' needs (Whitten, et al., 2009). The intervention might lead to an increase in the number of times needed (minutes and/ or days) that a student works with an interventionist. The size of the intervention group could become smaller or, in some cases, a student might receive one-on-one instruction. However, the focus of the instruction is always to build on skills students need. Teachers and/or interventionists who deliver the Tier III intervention need to be highly qualified and trained to provide specialized instruction. Likewise, teachers need to understand assessments because they will continue to monitor and analyze students' weekly data in order to make informed instructional decisions. Further, teachers need to collaborate with other educators to coordinate services for students receiving Tier III instruction.

Role of Professionals during RtI

Teachers can help students succeed academically by providing high-quality, evidence-based instruction. However, to do so, teachers must have the expertise to reflect on and make instructional improvements to their teaching to meet students' individual needs (Lipson, 2011). Teacher beliefs and knowledge can either help or hinder the development of this expertise and their willingness to seek resources to better understand students' needs and ways to provide effective instruction. Collaborating with other teachers, specialists, and administrators can help the teachers reflect on their beliefs and practices and learn new approaches for teaching their students (Zvoch, 2016).

Currently, in schools across the U.S., teachers and paraprofessionals are taking an active role in schools' RtI process. Because of this, schools may implement RtI differently. For example, some schools implement a school wide shut down time, where RtI is the only instruction that is occurring during a certain period of time and is provided by both teachers and paraprofessionals. While other schools might implement intervention that is only provided by classroom teachers and with some support from specialists. However, as Buffum, Mattos, and Weber (2009) point out, it is important that highly qualified and trained teachers implement interventions with students who are most at-risk for academic failure. Yet, in some schools, the number of students considered to be at-risk is so great that there are not enough highly qualified teachers to implement small group interventions. Further, with financial issues many districts are facing, often the number of professionals who are available in various school buildings is limited. Consequently, instructional decisions are made to determine how best to serve students and this can mean that a highly qualified teacher works with large groups of students or, in order to create small groups, they might be taught by either highly qualified or less qualified professionals.

The role of professionals in education has been changing and evolving because of RtI. Buffum, Mattos, and Weber (2102) share that general education teachers are starting to look at student data differently compared to what they have done in the past. Specifically, they are analyzing data more carefully to understand why students are struggling so that they can provide more specialized instruction to students. Buffum, Mattos, and Weber (2012) also state that teachers are reteaching or remediating more often in their classrooms to help students learn skills, strategies, and content rather than moving on to the next unit due to the way teachers are examining their student's data. Special education teachers continue to work with students that

have been identified with disabilities and need special instruction. However, special education teachers are collaborating more frequently with other professionals to better support students. They are also working more frequently with general education teachers to help them adapt curriculum and instruction, and problem solving on issues to prevent student failure (Bryant & Barrera, 2008).

Despite changing roles and increasing collaboration, Lipson (2011) states that systems still need to be created within each school to encourage all teachers to work collaboratively in order to support student learning. This means teams of teachers within a school should be analyzing student data, setting goals for students, monitoring student learning, and problem-solving issues together to provide students with more effective instruction. These teams look different from school to school or district to district. Typically the teams are made up of a variety of teachers that might include an administrator, classroom teachers, special education teachers, specialists, and/ or counselor. To work collaboratively, teams should engage in a problem-solving cycle that supports both teachers and students (Donnell & Gettinger, 2016). The team should help classroom teachers make educational plans for students based on their data. Specifically, this process should involve identifying a problem, gathering and analyzing data, developing and implementing a plan, monitoring student progress during instruction, and determining next steps to provide ongoing support for students. Figure 3, the RtI Data Team Cycle, is a chart showing the steps in the cycle and how it helps provide support to teachers and students.

Figure 3: RtI Data Team Cycle

Teachers have many daily responsibilities but some are key issues to effectively implementing RtI. For example, understanding the rationale behind RtI is valuable for teachers. Teachers also need to know the multi-tiered RtI framework because this will help them understand their roles and responsibilities for supporting students. Within the framework, teachers know how to administer and analyze the universal screening tools their school district expects them to use. Likewise, teachers should be aware that many universal screening tools contain information that can guide them on next steps for students. Then, based on each student's scores, teachers need to be able to identify an area of student' strengthens and areas of need to plan instruction. As instruction is provided, teachers need to monitor student learning and their progress. Teachers also need to know their school's procedures for next steps for

helping students when they are not making the expected progress. These are issues that teachers need to know about RtI in order to implement it effectively and help students learn. This study will examine what teachers believe they know about RtI so the information can potentially help one school district provide professional development, as needed, to help teachers learn more about and implement RtI more effectively.

Teachers' Knowledge Regarding Implementation of Response to Intervention

Teachers' knowledge influences their instructional practice; therefore, it is important to examine what teachers know about RtI. Consequently, Spear-Swerling and Cheesman (2011) examined how elementary teachers, both certified or licensed teachers and non-certified teachers, viewed RtI. The participants who were licensed teachers felt better prepared than participants who were unlicensed teachers. Licensed teachers who received training about RtI in college or during professional development felt more knowledgeable about features of RtI such as assessment of RtI subscale. Further, because they were more familiar with the basic features of RtI such as the expectations of each tier, these teachers were more comfortable with the process. However, the area that most participants struggled with was their ability to identify research-based instructional approaches. Finally, when teachers had received professional development related to RtI, they believed they were better able to meet students' needs, which is key to successful implementing RtI (Spear-Swerling & Cheesman, 2011).

Influences on Teachers' Perceptions

Teachers' perceptions are shaped by many factors. For example, their teachers' personal lens influences their perceptions of how they see themselves and others is shaped by their background knowledge and life experiences (IRIS, 2018). Life experiences are shaped facts

such as family traditions, education, work, culture, or the community in which they live. Macleoad and Napoles (2014) explored how teacher delivery of instruction and student progress influences teacher perceptions of teaching effectiveness. The study found when teachers used a high teacher delivery method it helped students to have higher engagement which lead teachers to have higher perceptions that the lessons were the most effective. Teachers' perception of their knowledge is also influenced by their years of teaching experience. For example, Van Maele and Van Houtte (2012) discuss in their study the effects of years of teaching expereince correlates to the perceptions. They found the fewer years of teaching experiences lead to less mastery experiences which has an effect on teachers' perceptions. Pil and Leana (2009) also agree and have stated, "an individual's cumulative abilities, knowledge, and skill developed through formal and informal education experiences" which plays a role in teacher's personal perception. These studies show the importance of being purposeful with professional development. It helps teachers with their own perceived knowledge. Clark, Byrnes, and Sudweek (2014) found in their study teachers who were provided more modeling, verbal support, and learning through professional development had higher perceptions of their own teaching ability.

Support for Teachers

Professional development is critical to the success of RtI (Mohamadi & Asadzabeh, 2011). For example, solid Tier I instruction can increase student learning and reduce the need for intensive interventions in Tier II and Tier III. Research suggests that general education teachers would benefit from professional development related to strong Tier 1 instruction to help students develop a solid foundation in skills (Whitten, et al., 2009). It is important that schools provide professional develop so all teachers learn innovative, evidence-based instructional

practices and assessment methods (Whitten, et al., 2009) that allows them to more effectively implement RtI, and to give them a sense of empowerment. In fact, it is important all staff such as counselors, librarians, and general and special education teachers receive such ongoing professional development on these topics to support students. When all staff members are well trained, students are more likely to receive effective instruction that increases their academic success. Further, when staff members see student progress they will be more vested in RtI. Finally, when all staff members receive professional development they are more likely to feel like a valued team member and empowered, which, in turn supports their perceived knowledge.

To support professional development, Barnes and Burchard (2011) created a scale that helps identify teachers' strengths and weaknesses. First, the researchers conducted a pilot study with teachers and found that professional development should focus on practice such as interpreting student assessments and using data to drive instruction. When teachers received the professional development based on their current needs, the researchers found that teachers were more successful and felt better prepared to teach their students. The study also examined professional development of pre-service teachers. Barnes and Burchard (2011) state that teacher preparation programs and school districts should engage in ongoing collaboration to support both pre-service and in-service teachers' learning. When teachers feel supported and prepared, their self-efficacy will increase, which, in turn, helps teachers deliver more effective instruction in their classrooms (Mohamadi & Asadzabeh, 2011).

Teachers' knowledge has a major effect on instructional practices and student learning in classrooms (Castillo, March, Tan, Stocklager, Brundage, Mccullough, & Sabins, 2016). Teachers' knowledge can positively or negatively impact students, so teachers need ongoing opportunities to learn or professional development, as well as the support of their peers.

Professional development can also help teachers have higher perceived knowledge. Thus, professional development for teachers is critical to teachers' knowledge and self-perceptions, which in turn can lead to student success. Professional development needs to be ongoing and targeted to what teachers currently need to support their learning and it needs to be meaningful and collaborative in nature. Thus, with respect to successfully implementing RtI, professional development should include information about "high quality, research based classroom instruction, universal screening, continuous progress monitoring, research based secondary or tertiary interventions, progress monitoring during intervention, and fidelity measures" (Bradley, Danielson & Doolittle, 2005, p. 46). Finally, each district and school needs to make professional development cyclical in nature and they need to make sure all teachers are receiving the support and knowledge they each need to be successful.

Theoretical Framework

My research examining teachers' perceived knowledge about RtI in order to create an environment that fosters student learning is informed by two theories, constructivism and social cognitive theory. Constructivism theory focuses on the fact that learning is an active process in which a learner (e.g., teacher, student) constructs meaning. Applefield, Huber, and Moallem (2001) state that "constructivism is an epistemological view of knowledge acquisition emphasizing knowledge construction rather than knowledge transmission and the recording of information conveyed by others" (p. 35). Thus, this theory focuses on learners building and transforming their own knowledge through the process. Through life experiences and reflecting on those experiences, learners construct their own knowledge and understanding. Tatto (1998) states, "Constructivist teacher education requires learning opportunities that encourage reflection, dialogue, critical thinking, knowledge ownership, and understanding in context and

within learning communities." In other words, teachers, like students, are continuously making meaning about how to teach while in the classroom and through professional development. Constructivists also believe learning is active, self-directed and draws on a learner's prior knowledge and strengths (Wright, 2002). So, when a learner encounters new information, he/she connects it to previous ideas or experiences. This, in turn, can change previously held beliefs or impressions, or cause the learner to discard the new information due to the irrelevant or incongruous nature of the new experience. Regardless, the learner is an active creator of his/her own knowledge. Further, as a person learns, he/she asks questions, explores, and assesses what is already known. This allows for new information to be built onto previous information to help it "stick." Since teachers are also learners, they draw on previously learned information, as well as new experiences to know what might work better for students in the class and during the RtI process.

Teachers' perceptions play a role in their instructional practices. For example, teachers' perceived knowledge informs their beliefs about what are appropriate instructional practices and their professional role (Tatto, 1998). In addition to influencing their actions, teachers' beliefs and attitude influence students' behavior and their learning (Wiest, 1998). As teachers' reflect on their teaching and how to help their students be their best, their perceptions, in turn, may change.

Scharlach (2008) explored preservice teachers' perceptions on their expectations, instruction, and evaluation of struggling readers. Specifically, the study focused on the participants' perceptions while tutoring struggling readers in order to see how preservice teachers' beliefs influenced their expectations, instruction, and evaluation of the readers. Scharlach found that preservice teachers may not believe they are capable of teaching all

students to read and "teachers' beliefs are congruent with their teaching behaviors and influence teachers' expectation as well as student achievement" (p.167). Scharlach also found the preservice teachers' perceptions were influenced by a variety of items such as the active engaged learners, the degree of support challenged students received, behavior and motivation of students, .

The current study explores teachers' current perceived knowledge related to RtI. Based on their teaching experience in general and in the school district in particular, some teachers may have knowledge of RtI, while other teachers may have limited or no knowledge of RtI. Understanding teachers' perceived knowledge about RtI, based on teaching experiences, as well as asking them what they would like with respect to the future professional development related to RtI, can guide professional development. Since constructivist theory encourages learners to be active participants, engage in real world problem solving to build on their knowledge, and to reflect on experiences, it is important that professional development is based on what teachers know and need, as well as what they want in order for them to gain ownership of their learning. Asking teachers about their perceived knowledge of RtI will help me gain a better understanding of the teachers in the district, and allow me and other district leaders to provide more meaningful and effective professional development related to RtI.

This study is also informed by Social Cognitive Theory, which "proposes that individuals do not simply respond to environmental influences, but rather they actively seek and interpret information" (Nevid & Spencer, 2009, p.122). Further, it states that individuals "function as contributors to their own motivation, behavior, and development within a network of reciprocally interacting influences" (Bussey & Bandura, 1999, p. 684). Thus, Social Cognitive Theory looks at individuals' beliefs in regard to their own capabilities in successfully completing tasks or

achieving goals. Bandura (1986) says individuals successfully change and develop when they intentionally influence their functioning and life circumstance; that is, "self-organizing, proactive, self-regulating, and self-reflecting. They are contributors to their life circumstances not just products of them" (Bandura, 1977, p. 3). While cognitive, personal, behavioral, and environmental factors play a role in this theory, the current study focuses primarily on teachers' self-evaluation of their knowledge of RtI. By evaluating their understanding of RtI, teachers are, hopefully, beginning to engage in self-reflection and ownership that drive informed decision making about instruction for their students.

The constructivism theory states that learning is a process. Regardless of their beliefs and experiences, all teachers should have opportunities to engage in professional development that stretches their thinking and helps teachers refine instructional practices that support student learning (Tatto, 1998). However, the first step in developing meaningful professional develop is to understand teachers' perception about an instructional topic. Thus, the purpose of the current study is to build our understanding of teachers' perceived knowledge about RtI and to understand how teaching experience may influence teachers' perceived knowledge. The three research questions driving this study are:

1. What is elementary school teachers' perceived knowledge about RtI in a Midwest school district?

2. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and years of experience?
3. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and number of years teaching in a classroom using RtI?

The first question serves as baseline of information to better understand teacher's current perceived knowledge of RtI. My hypothesis for question two is there is not a positive relationship between a teachers' perceive knowledge of RtI and their total number of years of experience. I believe that by having more years of teaching experience will help a teacher have a higher perceived knowledge about RtI. My hypothesis for the final question is that there is a positive relationship between teachers' perceived knowledge of RtI and years teaching in a classroom using RtI. I believe there will be a positive relationship because teachers are more likely to have had ongoing work with colleagues on RtI components, problem solving meetings about individual students, and professional development on RtI.

Summary of Chapter 2

In this chapter, I provided a brief history about RtI. I described RtI, the assessment process, the three tiers of instruction and the role of professionals during RtI. I also discussed the importance of teachers' perceptions of knowledge when implementing RtI and the support teachers needed when first implementing RtI. Finally, I presented my theoretical framework. In the next chapter, I present the research design and methods I will use to conduct my study.

Chapter 3

Research Design and Methodology

When teachers understand RtI and they feel capable of implementing it, then students are more likely to be successful. Thus, the current quantitative study examined elementary school teachers' perceived knowledge about RtI. That is, do teachers believe they have the knowledge needed to plan specialized instruction for their students based on student data? Understanding teachers' perceived knowledge of RtI will help school districts and administrators plan professional development that supports teachers and helps them provide more effective instruction to their students. In my current position as a Reading Specialist, I help teachers analyze student data and make instructional decisions. The results of this study will be used to help me and other specialists and administrators in my school district provide better support to teachers about the RtI process. The results of this study might also help other school districts consider their teachers' understanding of RtI and type of professional development their teachers might need.

The purpose of this study was to examine elementary school teachers' perceived knowledge about response to interventions in reading and math. The study addressed the following research questions.

1. What is elementary school teachers' perceived knowledge about RtI in a Midwest school district?
2. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and years of experience?

3. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and number of years of school district implementation of RtI?

Research Design

School District and Participants

This study was conducted in a suburban school district located in the Midwest portion of the United States. The school district serves approximately 18,000 students kindergarten through 12th grade. It also employs approximately 1,400 teachers across the district. Since RtI only occurs at the elementary level, elementary schools were the focus on this study. The district has 723 certified elementary teachers, kindergarten through 6th grade, who serve approximately 9,251 elementary students across 18 elementary schools. On average, the ratio between elementary students to teacher is 22:1. Students attend school based on the zoned neighborhood in which they live. This allows schools to develop a neighborhood feel and it allows students to walk or ride bikes, which helps to minimize transportation costs. However, because of zoning, there is a wide range of demographics across schools and based on students' eligibility for free and reduced lunch, four schools in the district are Title 1 schools and receive additional funds for additional resources.

In this school district, elementary schools have been expected to implement RtI since approximately 2010. Data teams, who are usually made up with a variety of team member such as an administrator, general education teachers, specialists, English language learner teacher and special education teachers, administer universal screening assessments and data tracking programs that are nationally normed. Data teams also administer benchmarking assessments three times a year (fall, winter & spring). After each round of benchmark screening, data is

analyzed and instructional decisions are made based on findings. Data teams also monitor student progress or lack of progress throughout the year, and make modifications, as needed. In order to help teachers implement RtI effectively, administrators complete fidelity checks within each school. During fidelity checks administrators look for evidence in these six categories: students are paired with like peers, instruction begins and ends on time, instruction follows the script closely, high level of student engagement, work is aligned to skill objective, and materials are appropriate for the students' academic level. Once the checks are conducted and the forms are filled out, they are compiled into a notebook. If an area(s) of concern is identified during the fidelity check, the administrator meets with the interventionist to discuss how to support teachers with that concern. While the district strongly believes in the RtI model and RtI is mandated at every elementary school, its effectiveness varies throughout the district.

The survey used to gather teachers' perceived knowledge about RtI was sent to 524 elementary teachers who are responsible for RtI since the survey is asking about their perceived knowledge. While the district employs 723 certified elementary teachers, many of these teachers work within the district such as counselors, librarians, gifted teachers, band and string teachers, or special teachers (art, music and PE) who are not responsible for RtI within their buildings. Surveys were not sent to elementary teachers in these positions within the school district. Of the 524 surveys sent to elementary teachers, 92 surveys or 17% were completed. This is considered a good return rate since an average external return rate for a survey is typically 10% to 15% (Survey Gizmo Resources, 2018).

Participants' current role within their school building fell into three categories: 74.7% identified themselves as general education teachers, 3.6% as special education teachers, and 21.7% as other specialist teacher. Participants were predominantly female (90.4%), which was

expected due to the fact the most elementary teachers are women; 84.3% of the participants have their master's degree and15.7% have a bachelor's degree.

Research Design

The study used survey research design "in which data is collected from part of a group, for the purpose of describing one or more characteristics of the whole group" (Baumann & Bason, 2011, p.405). One advantage of a survey is that it can be administered to a sample and inferences may be made about the population from which the sample was drawn. Consequently, for this study, the survey was administered to all elementary teachers from one school district so inferences could be drawn within the district and possibly about other school districts with similar characteristics. However, there are also some known disadvantages of survey research that were taken into consideration. First, one concern of using survey research is the data can sometimes lack details or depth. When writing the questions, details were included and the response choices were limited to four choices. Another disadvantage of using survey research is having a low response rate. To address this concern, the survey was kept relatively short and only took about approximately 15 to 20 minutes to complete it. It consisted of 33 items. The demographic questions ranged in format. The items that measured teachers' perceived knowledge were answered using a Likert scale format. Also, the survey was administered electronically and teachers were able to complete the survey at their own pace within a specified time frame. Further, reminders were emailed after a week to encourage teacher to complete the survey.

Data Collection and Analysis

After permission for this study was obtained from the Institutional Review Board (IRB) at the University of Kansas and the school district, potential participants, all certified elementary school teachers, were sent an email about this study via the school district along with the electronic survey. They were advised of their rights (e.g., voluntary and confidential) and were informed of the process which would take approximately 15 to 20 minutes to complete. The email sent to participants is found in Appendix A and B. Appendix A, Response to Intervention: Educator's Perceived Knowledge online survey consent form, informed participants of their rights if they choose to participate in the survey. Each person who participated in the study was given consent to participate in the survey. The survey, set up in Qualtrics, was emailed to teachers in January 2018 along with a recruitment letter (Appendix B). Participants had two weeks to complete the survey. After one week, an email was sent to teachers to remind them to complete the survey.

Data Collected: Perceived Knowledge on RTI Survey

Teachers are key to the success of students. However, each teacher brings his/her own life experiences, including teaching experiences and types of interactions with students, into their own classroom. These experiences, in turn, shape teachers' perceived knowledge, which influences classroom practices (Borko & Putnam, 1996). Teachers' perceived knowledge either helps or hurts their efforts to instruct students in their class. Consequently, understanding teachers' perceived knowledge is important because "teacher's beliefs and knowledge influences their classroom practices" (Borko & Putnam, 1996, p. 679).

Few studies focus on teachers' perceived knowledge about RtI and of the studies that do exist, they have different foci. For example, Swanson, Solis, Ciullo, and McKenna (2012)

focused on special education teachers' perceptions and instructional knowledge tied to RtI implementation, while Hilbert and Eis (2013) focused on early intervention for emergent literacy development in pre-kindergarten classrooms. However, two studies did include general education teachers and they contained surveys that measured teachers' beliefs about RtI. First, Castillo, Dedrick, Stockslager, March, Hines, and Tan (2015) created a 27- item survey that measured the extent to which educators beliefs aligned with the practices they were expected to implement. In the second study, Moreno (2014) created a 38-item survey (Appendix C) that focused on general education teachers, special education teacher, and principals' perceptions of their knowledge about the components and process of RtI. The survey was divided into two sections. First, the researcher collected demographic information about the participants and in the second section, the researcher collected information about participants' knowledge of RtI. For the current study, I used Moreno's (2014) survey, *Beliefs on RTI Survey,* as the foundation for my survey. Her survey aligned with my goal of examining the questions, (a) What is elementary school teachers' perceived knowledge about RtI?, (b) Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and years of experience?, and (c) Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and years of school district implementing RtI? Moreno's original questions were given to a focus group to help revise and create the survey that will be used in the current study.

Teacher's Perception of Response to Intervention Survey (Appendix D) was organized into two sections. Section one collects each participant's demographic information. Section two asks participants to rate their perception of their current RtI knowledge using a four choice Likert scale. The scale will allow the participant a range of choices to a specific statement.

Since the number of years teachers working in a district which implements RtI might influence their perceived RtI knowledge, I collected demographic information to address research questions two and three. Then, as I analyzed the survey data, I recorded the scores as a continuous variable. I was looking for the correlation between the years and the total score for perceived knowledge. After correlations are made for total years of teaching experience and number of years in a district that implements RtI, I examined the statements individually. I was looking for items that were strengths or areas for improvements based on the mean score of each item. This allowed for certain categories of understanding RtI system, the use of evidence-based interventions, progress monitoring, and the use of data to make decisions since these are the keys to successful RtI implementation to be identified. Table 1 shows how each question fit into the different RtI categories. This will help to identify areas for professional development in the future.

Table 1: Grouping of Questions by Categories of RtI Skills

demographics	**understanding the RtI system**	**use of evidence-based interventions**	**progress monitoring**	**use of data to make decisions**
# 2	# 9	# 20	# 26	# 19
# 3	# 10	# 22	# 27	#21
# 4	# 11	# 23	# 28	#32
# 5	# 12	# 24	# 29	
# 6	#13	# 25	# 30	
# 7	# 14	# 31		
# 8	#15			
	# 16			
	# 17			
	# 18			
	# 33			

Validity. Validity is the quality of being factually sound. Gall, Gall, and Borg (2007) state validity requirements must be met for any kind of data collected in research, including a survey. In Moreno's study, a panel of RtI experts was selected to validate the survey instrument. Since the survey's focus was to measure the knowledge level of RtI among a group of three professionals (i.e., were general education teachers, special education teachers, and principals) in the school setting, Moreno asked experts, school counselors with extensive RtI training, to assess the validity of the survey. They analyzed the survey for clarity and relevance and they completed a validation form. The form contained a 3-point Likert scale consisting of (a) Y= yes for the questions that were clear and relevant to the study, (b) Y/N = yes for the questions that were somewhat clear but need to be worded a little stronger and are relevant, and (c) N= no for the questions that are not clear and not relevant to the study. The panel found that the majority of the questions overall were well written and relevant to the study. However, if the majority of the panel rated a particular question as "Y/N," the researcher reviewed the question. Three questions were rated Y/N. Two of the questions were reworded for clarity. The third question was reviewed and analyzed carefully for relevance to the study and was found to be relevant. The researcher removed questions that had a majority rating of N.

After closely examining Moreno's study and survey, I realized some of the questions were not appropriate for the teachers to whom I would administer the survey and how they implement RtI within their school district. Thus, I created a focus group to examine and provide feedback on Moreno's original survey. A panel of RtI experts was selected from schools across the district to validate the survey instrument. An email was sent to eight reading teachers at eight different buildings, one math specialist, three counselors at yet three different buildings, and one primary and intermediate teacher still at different schools within the district, explaining I was

putting together a focus group to explore a survey which focused on teacher's perceptions of RtI. All of recipients of the email were able and interested in attending the focus group, so the focus group consisted of six elementary teachers from a variety of schools within the district. There were two reading specialists, a math specialist, one primary teacher, one intermediate teacher, and a counselor from a variety of schools within the district. The group met once to look at Moreno's survey and used her validation form. After each member of the group finished their validation form, they spoke about how they filled out their form as I took notes about their thoughts. The conversation focused on the items that they rated as Yes (Y), Yes/No (Y/N), and No (N) questions. Thus, after listening to their thoughts during the discussion and reviewing the completed form, I made changes to Moreno's survey and constructed the current survey that was used. Table 2 below shows the mean rating of each item with respect to clarity and relevance.

Table 2: Means for Validity of Clarity and Relevance from Survey Items for Focus Group

Item #	Y	Y/N	N	Item #	Y	Y/N	N	Item #	Y	Y/N	N
1	0%	100%	0%	**14**	100%	0%	0%	**27**	100%	0%	0%
2	100%	0%	0%	**15**	0%	12.5%	87.5%	**28**	0%	0%	100%
3	0%	87.5%	12.5%	**16**	100%	0%	0%	**29**	100%	0%	0%
4	0%	87.5%	12.5%	**17**	100%	0%	0%	**30**	100%	0%	0%
5	0%	87.5%	12.5%	**18**	100%	0%	0%	**31**	100%	0%	0%
6	100%	0%	0%	**19**	100%	0%	0%	**32**	100%	0%	0%
7	100%	0%	0%	**20**	100%	0%	0%	**33**	0%	0%	100%
8	100%	0%	0%	**21**	100%	0%	0%	**34**	100%	0%	0%
9	0%	100%	0%	**22**	100%	0%	0%	**35**	100%	0%	0%
10	0%	100%	0%	**23**	100%	0%	0%	**36**	0%	100%	0%
11	100%	0%	0%	**24**	0%	100%	0%	**37**	0%	0%	100%
12	100%	0%	0%	**25**	0%	12.5%	87.5%	**38**	0%	0%	100%
13	100%	0%	0%	**26**	100%	0%	0%				

Note: Y = Yes, the question is clear/relevant, Y/N = Yes, it is somewhat clear, but could be worded better/little relevance, N = No, it is not clear/no relevance

The focus group members discussed changing some of the wording on questions they believed were strong but did not match our current districts wording. They had suggestions of words that should be added, deleted, or replaced. Questions were then changed when the focus group requested additional details or more familiar wording to be used. Also, some response

choices were changed to gain more detailed answers. One question was added to gather additional information. Table 3 below presents changes that were made to the survey after the panel of experts examined the survey from Moreno.

Table 3: Changes made to Moreno's survey questions

Questions Changed	Response Choices Changed	Question Added	Questions Removed
# 3 - added the word "teaching"	# 1 - principal to other specialists	# 4 - gather information about experience in an RtI classroom	# 15
# 5 - added "years in the district"	# 3, 4, 5 - removed choices and added a line for typed answer		# 25
# 24 - removed "on my campus"	# 8 - changed the year		# 28
# 36 - changed campus based to building based	# 9 - removed "service center"		# 33
# 37 - changed campus to building	# 10 - added the answer "unsure"		# 37
	# 16 through 35 - changed the answer choices to four options		#38

Reliability. After the completion of the survey, questions 15 through 33 were examined for reliability for my scale. All of the information was entered into SPSS to examine the Cronbach's coefficient and determine how close the score it to 1.0. I required a Cronbach Alpha score of at least .70 for an item to determine if the question was reliable. A score close to 1.0 means the test is reliable. This strong reliability helps strength the validity of the test. This measurement contained 33 statements but I focused on questions 15 through 33. If the Cronbach's coefficient was not at least .70, I would have removed some survey items. All of the

items were well above the .70 standard that was set to ensure the fidelity. This allowed me to keep all of the items in my survey when reporting the results. No items needed to be removed from the scale.

Data Analysis

Quantitative methods were used to analyze the data, including descriptive statistics. I compared and contrasted teachers' perceived knowledge in different categories by focusing the scale on question 15 through question 33. Overall scores were looked at for all teachers to gain a better understanding of the teachers' perceived knowledge. Scores were examined by teachers' years of experience and years of experience teaching in a district who implements RtI. The correlation between teachers' perceived knowledge of RtI along with their years of experience and teachers' perceived knowledge of RtI and years of working in a classroom with RtI were examined. The correlation was examined to see if there was a positive relationship between teachers' perceived RtI knowledge and total teaching years as well as teachers' perceived knowledge of RtI and years of experience teaching in an RtI district. To help guide future professional development, the means were used to help identify the lowest and highest items. Specifically I examined if the mean scores above 3 and below 3 fell into one of the categories which are their perceived understanding of the response to intervention system, their perceived understanding of reviewing data/ next steps, their perceived understanding of evidence-based tier interventions, and their perceived understanding of collecting and interpreting progress monitoring data to make decisions.

Chapter 4

Results

The purpose of this study was to examine elementary teachers' perceived knowledge about Response to Intervention (RtI) in reading and mathematics. There were three questions that were explored during this study:

1. What is elementary school teachers' perceived knowledge about RtI in a Midwest school district?
2. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and years of experience?
3. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and number of years of school district implementation of RtI?

Question one provided information to understand teachers' current perceived knowledge of RtI. Question two explored the relationship between elementary teachers' perceived knowledge of RtI and their years of experience. My hypothesis was there was not a positive relationship between the years of experience and teacher's perceived knowledge of RtI meaning that the years of experience does not affect teacher's perceived knowledge. The number of years of teaching experience does not have a positive correlation to a teacher's perceived knowledge. The final question examines if there was a positive relationship between teacher's perceived knowledge of RtI and the years of school district implementation of RtI. My hypothesis was there was a positive relationship between teachers' perceived knowledge of RtI and years of school district implementation of RtI. The years of school district implementation of RtI will have a positive correlation to teachers' perceived knowledge of RtI.

Statistical Analysis

Elementary teachers in one suburban district received an email asking them to participate in a survey about teachers' perception of Response to Intervention. (RtI) The survey had 33 questions that asked about their background and their perceptions of knowledge. Nineteen questions focused on the teachers' perceived knowledge of RtI. Teachers were given the choice to participate and were told the survey would be live for two weeks. After one week, another email was provided to gently remind them of the survey. Once the survey was closed, there were 92 participants responses recorded. Because not all respondents answered all critical questions, 9 surveys were removed from the study, which brought the total participants to 83. The internal reliability of the 19 items focused on perceptions of knowledge and was checked by estimating coefficient alpha. This was estimated as .92. Coefficient alpha ranges from 0 to 1, and an alpha of .92 indicates very high internal consistency.

Question 1. What is elementary school teachers' perceived knowledge about RtI in a Midwest school district?

The mean total score across the 19 items was 2.93, SD = .39, N = 83. Table 4 shows the means and standard deviation for each item.

Table 4: Means and Standard Deviations of *Perceived Knowledge of RtI* Scale Items

Item		N	Mean	SD
15	I understand the rationale behind RtI.	83	2.952	0.491
16	I understand RtI uses a multi-tiered system of instruction and intervention.	83	3.036	0.480
17	I understand the process of teaching struggling students in each tier of instruction.	83	2.964	0.528
18	I understand that RtI is an integrated approach between general and special education.	83	2.964	0.528
19	I understand how to use a universal screener to identify students at risk for academic difficulties.	83	2.904	0.637
20	I can develop my own reasons of why my students are not achieving desired levels in reading.	83	2.892	0.563
21	I am able to group students by their needs.	83	3.036	0.614
22	I can select the appropriate evidence based interventions to match the student's needs.	83	2.554	0.703
23	I know how to use interventions with fidelity.	83	2.904	0.655
24	I know how frequent and intensive the intervention should be at each tier.	83	2.892	0.663
25	I can name and explain the five essential components of effective reading instruction.	83	2.783	0.797
26	I know how often I should progress monitor my students.	83	3.398	0.517
27	I am able to collect data to document and monitor student progress.	83	3.205	0.536
28	I could analyze data from progress monitoring assessments to determine if students are responding to the intervention or need further academic support.	83	2.904	0.726
29	I could make modifications to the intervention plans based on students' response to the intervention data.	83	2.651	0.740
30	I know how to use my RtI data to make recommendations for a special education evaluation.	83	2.614	0.794
31	I can apply differentiated instructional strategies for struggling learners.	83	3.012	0.506

32	I know how to manage my time effectively for all students in my classroom, including those in RtI.	83	2.988	0.506
33	I understand the purpose of having a building based problem solving team.	83	3.084	0.546

Question 2. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and years of experience?

Teachers were correlated by the years of experience and the total score for their perceived knowledge. The Pearson correlation coefficient between the two variables of teachers' perceived knowledge and years of teaching experience were r = .17, n=83, and p.12. Figure 4 shows teacher's perceived knowledge related to their total years of teaching experience.

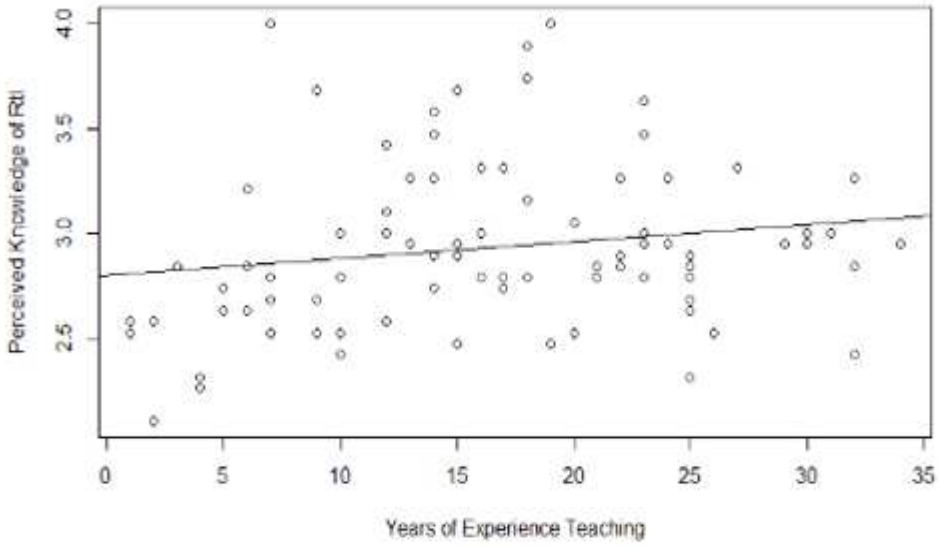


Figure 4: Teachers' perceived knowledge in relationship to their total years of teaching experience

Question 3. Is there a positive relationship between elementary school teachers' perceived knowledge of RtI and number of years of school district implementation of RtI?

Teachers were correlated by their perceived knowledge and number of years of working in a school district that implements RtI. The Pearson correlation coefficient between the two variables of teachers' perceived knowledge and years of teaching experience were r = .36, n=83, and p = .001. Figure 5 shows the positive relationship between teachers' perceived knowledge of RtI and years of teaching in a district that implements RtI.

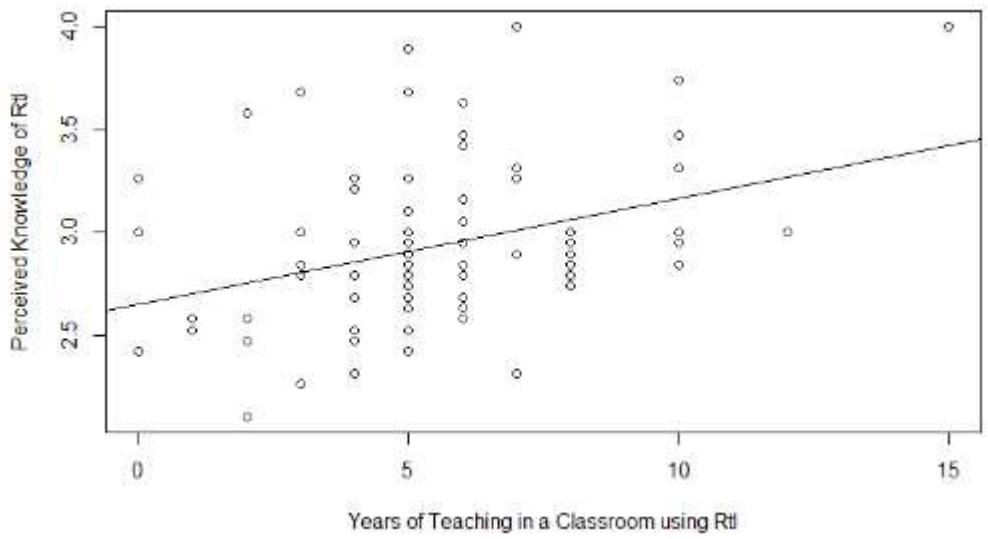


Figure 5: Relationship of teachers' perceived knowledge and years of teaching in a classroom that implements RtI

Chapter 5

Discussion

Response to Intervention (RtI) is a systematic framework that addresses the concerns of struggling students in the areas of reading and mathematics (Fuchs, Fuchs, & Compton, 2012). This study examined elementary teachers' perceived knowledge about RtI in one suburban school district located in the Midwest region of the United States. Further, it looked at the correlation between teachers' perceived knowledge to years of teaching experiences and teachers' perceived knowledge to years of teaching in a district that implements RtI. Eighty-three elementary teachers completed a survey about RtI.

Summary of Results

The first research question explored elementary teachers' perceived knowledge about RtI in one school district located in the Midwest portion on the U.S. The survey results shown on figure 4 and 5 display the wide range of teachers' years of experience, years teaching in an RtI school district, and teachers' perceived knowledge. Teachers ranged in years of experience from one to thirty-four years of teaching. Teachers' responses varied but there were some patterns in the teachers' responses. Table 1 shows which item aligns with a specific categories of RtI. As I looked through the data in Table 4, I examined the mean scores below 3 and the mean scores above 3 of each item. The smaller the mean shows the average of the teachers' perceived knowledge was lower. The mean scores below 3 shows the teachers do not feel as strong in the given area or task. While the mean scores above 3 shows the average of the teachers' perceived knowledge is high. The mean scores above 3 shows the teachers feel stronger and more confident in the given area or task. The five scores below 3 and the mean

scores above 3 were examined to help know where teachers might need additional professional development in the future.

As I looked over the data to determine the findings and future work, I noticed there were two categories of RtI that had means below 3. The mean scores below 3 scored items came from two of the five categories of RtI skills areas. Two items were from the category of "using evidence based interventions" and three items came from the category of "progress monitoring." Table 5 shows the items where teachers had mean scores below 3 compared to the other scores, and these lower scores mean teachers believe they have less knowledge about these items. The five items with the mean scores below 3 indicate that teachers have less perceived knowledge about RtI at the moment they took the survey.

Table 5: Mean Scored Items Below 3

Item Number	Standard Deviation	Mean	Wording or Item	Category of RtI
22	.70	2.55	I can select the appropriate evidence based interventions to match the students' needs.	Use of evidence based interventions
25	.80	2.78	I can name and explain the five essential components of effective reading instruction.	Use of evidence based interventions
28	.73	2.90	I could analyze data from progress monitoring assessments to determine if students are responding to the intervention or need further academic support.	Progress monitoring
29	.74	2.65	I could make modifications to the intervention plans based on students' response to the intervention data.	Progress Monitoring
30	.79	2.61	I know how to use my RTI data to make recommendations for a special education evaluation.	Progress Monitoring

Table 6 shows the five items with mean scores above 3 which show the areas where teachers' perceived knowledge of RtI was the strongest. Teachers on average had mean scores above 3 when asked about "understanding the RtI system", "use of data to make decisions", and "progress monitoring" areas. All five items fell into lower leveled thinking skills within each area. The items asked teachers of their understanding of basic items for RtI and group and collect student work.

Table 6: Mean Scored Items Above 3

Item Number	Standard Deviation	Mean	Wording or Item	Category of RtI
16	0.48	3.04	I understand RtI uses a multi-tiered system of instruction and intervention.	Understanding the RtI system
21	0.61	3.04	I am able to group students by their needs.	Use of data to make decisions
26	0.52	3.40	I know how often I should progress monitor my students.	Progress Monitoring
27	0.54	3.21	I am able to collect data to document and monitor student progress.	Progress Monitoring
33	0.55	3.08	I understand the purpose of having a building based problem solving team.	Understanding the RtI system

Overall results showed teachers have greater perceived knowledge with RtI components when the item asked them to recall, understand concepts, and explain ideas. They had lower perceived knowledge when the teachers had more than one step such as to analyze data for instruction or using data to evaluate an appropriate intervention for each student based on individual need. This information will help drive planning for professional development. This made me realize when planning or implementing professional development in the future, I will

use the data to guide the depth and time spent on each item. The items with a mean score below 3 will be the areas I will need to dig deeper to understand and spend more time discussing with colleagues. While the items with a mean score above 3 will be the items I can touch on briefly with staff and can use these as foundations for new learning.

The second question examined the correlation between elementary teachers' perceived knowledge of RtI and their years of experience. I hypothesized that there would not be a positive relationship between teachers' perceived knowledge of RtI and their years of experience because RtI has not fully implemented in school districts or in the school district in which the study was conducted until 2011. Further from conversations with educators and professors, RtI has not been a focus in teacher preparation program nor are there typically graduate-level courses devoted to using data to drive individual, specialized instruction. Therefore, I assumed both experienced and novice teachers would have similar exposure or knowledge about RtI. The data revealed that there is not a positive correlation between teachers' perceived knowledge of RtI and their total years of experience. This finding supports Barnes and Burchard's (2011) study and the need for teacher preparation programs and school districts to better support preservice and in-service teachers' understanding of RtI. Professional development related to RtI, along with experience, should support teachers' perceived knowledge of RtI.

The final question examined the correlation between teachers' perceived knowledge and years teaching in a school district which implements RtI. I hypothesized that there would be a positive relationship. I believed there would be a positive correlation because of the focus the school district has placed on implementing RtI. Typically when a district implements something new, they put systems in place to help support teachers as they learn and growth in the new item. Since the school district in which the study occurred has been implementing in RtI for the past

six years, teachers should have had some support based on their length of time in the district. Support could come from professional development provided the district or by working with colleagues to implement RtI strategies within their particular school. The data revealed that there was a positive correlation. Participants with more years of teaching experience in a district that implements RtI helped them to have a greater perceived knowledge of RtI compared with teacher with less teaching experience. Research suggests when teachers are more successful, and presumably believe they are more knowledgable about instruction, when they feel supported and prepared (Mohamadi &Asadzabeh, 2011). The professional development and support the district has and is currently providing teachers is helping teachers to have higher perceived knowledge. Teachers' benefit when provided information about tiered instruction (Whitten, et al., 2009) and instructional practices that focus on students need. Although each teacher may be at different places in their professional learning, their experiences with RtI do have an effect of their perceived knowledge. In short, teachers with more years of experience in a school district that has been implementing RtI and providing support to teachers had a higher perceived knowledge about RtI compared with teachers with less teaching experience in such school districts.

One goal of this study was to use findings to help make informed decisions about professional development. Examining the lowest and largest mean scores for individual survey items, provided insight into what components of RtI teachers' believed they were knowledgeable or had limited knowledge. Specifically this information will help guide professional development at the district level in the future. For professional development, the highest mean items shown in table 6 helped identify the RtI components of "use of evidence based intervention", "progress monitoring", and "understanding the RtI system" will not need to be the focus of professional development. These components will be reviewed with teachers to help

remind them of their knowledge and used as a foundation for new learning. The five lowest mean items shown in table 5, showed two major components of RtI which are "use of evidence based interventions" and "progress monitoring" will need to drive professional development for the district.

Originally, I thought the findings of this study would show one or two areas where teachers felt they had strong perceived knowledge while having one or two clear areas teachers felt they were low in their perceived knowledge. This did not occur in this study due to high and low teacher perception of RtI knowledge falling within the same component. I had to dig deeper into each component to figure out teachers' perceived knowledge. This is when I discovered the different levels of items within each component. During professional development instruction, I will need to focus on the individual item perceived knowledge. I focused on the items on table 5 & 6. Combing items teachers feel confident in and items teachers need additional work with will allow teachers to continue to learn and grow professionally. During professional development, teachers will learn alongside each other and be encouraged to collaborate together. This will allow teachers to continue to feel support throughout the year from their colleagues.

Limitations/ Future Study

There are two main limitations of the current study. First, 524 elementary teachers who are active in RtI process in their school buildings were recruited to participate in this study. Ninety-two surveys were completed and 83 were actually used. While the average return rate is 10 – 15% for an external survey, I had a return rate of 18%, which is good. It seems that allowing teachers two weeks to complete the survey, with some reminders, was successful. However, in my role as reading specialist, I attend various meetings in the school district and I

have drawn the conclusion that some buildings had a larger number of participants than other buildings. This conclusion is based on people telling me at meetings or sending emails letting me know they participated in the survey and asking for the results. This makes me wonder if the participants truly represented the school district because I know each school implements their RtI differently. Each building has its own issues so if a large number of participants were from the same building, it may have had an effect on the outcome of the data. If I was to replicate this study again in a different district, I would like to think through this issue so the survey results better represent teachers' perceived knowledge of RtI and presents a clearer picture of the school district.

The second limitation was that the survey was only available during a two-week time frame. I wonder if the timing of the survey made any difference to the results. My goal was to give the survey to the teachers at a time they were not too busy such as preparing report cards or during testing. While teachers are always busy, I wondered if I had given the survey during first semester of the school year compared to the second semester of the school year if the results would have been different. It would be interesting to see if the different time of year would show the same or different results. Also, would the second semester show growth in teachers' perceived knowledge? I would like to give the survey more than once to the same teachers to determine if teachers' perceived knowledge changes over the course of an academic year.

In addition, I believe it is important to look more closely at the effectiveness of Tier 1 instruction to help decrease the need for Tier 2 and Tier 3 instruction. I would like to interview teachers about their beliefs about the effectiveness of RtI in general and Tier 1 instruction in particular, as well as examine student outcomes. Additionally, research is needed to examine

teachers' understanding of and the effectiveness of each components of RtI in order to better meet the needs of students.

References

Applefield, J. M., Huber R., & Moallem, M. (2001). Constructivism in theory and practice: toward a better understanding. High School Journal, 84(2), 35-39.

Bandura, A. (1977). *Social learning theory.* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Barnes, S. K., & Burchard, M. S. (2011). Quality and utility of the multi-tiered instruction self-efficacy scale. *Research & Practice in Assessment, 6*(Winter), 22-42.

Baumann, J.F., & Bason, J.J. (2011). Survey research. In N. Duke & M. Mallette (eds.), *Literacy Research Methodologies* (2nd ed.). New York, NY: Guilford Press.

Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychology Review,* 196, 676-713.

Berdine, W. H. (2003). The President's Commission on Excellence in Special Education: Implications for the special education practitioner. *Preventing School Failure: Alternative Education for Children and Youth, 47*(2), 92-95.

Borko, H., & Putnam, R. T. (1996). Learning to teach. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 673-708). New York: Macmillan

Bradley, R., Danielson, L., & Doolittle, J. (2005). Response to intervention. *Journal of Learning Disabilities*, 38(6), 485-86.

Bryant, D. P., & Barrera, M. (2008). Diane P. Bryant and Manuel Barrera: Changing roles for educators within the framework of response-to-intervention. *Intervention in School and Clinic, 45*(1), 72-79.

Buffum, A. G., Mattos, M., & Weber, C. (2012). *Simplifying response to intervention: Four essential guiding principles.* Bloomington, IN: Solution Tree Press.

Buffum, A. G., Mattos, M., & Weber, C. (2009). *Pyramid response to intervention: RTI, professional learning communities, and how to respond when kids don't learn.* Bloomington, IN: Solution Tree.

Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychology Review,* 196, 676-713.

Castillo, J.M., Dedrick. R.F., March, A.L., Stockslager, K.M., Hines, C.V., & Tan, S.Y. (2015). Development and initial validation of a scale measuring educators' beliefs regarding Response to Intervention. *Journal of Applied School Psychology, 31*, 1-30.

Castillo, J.M., March, A.L., Tan, S.Y., Stockslager, K.M., Brundage, A., Mccullough, M., & Sabins, S. (2016). Relationships between ongoing professional development and educators perceived skills relative to RtI. *Psychology in the Schools, 53*(9). 893-910

Castro-Villarreal, F., Villarreal, V., & Sullivan, J. R. (2015). Special education policy and response to intervention: Identifying promises and pitfalls to advance social justice for diverse students. *Contemporary School Psychology, 20*(1), 10-20.

Clark, S. K., Byrnes, D., & Sudweeks, R. R. (2014). A comparative examination of student teacher and intern perceptions of teaching ability at the preservice and inservice stage. *Journal of Teacher Education, 66*(2), 170-183.

Donnell, L. A., & Gettinger, M. (2015). Elementary school teachers' acceptability of school reform: Contribution of belief congruence, self-efficacy, and professional development. *Teaching and Teacher Education, 51, 47-57.*

Fuchs, D., Compton, D. L., Fuchs, L.S., Bryant, J., & Davis, G. N. (2008). Making "secondary intervention" work in a three-tier responsiveness-to-intervention model: Findings from the first-grade longitudinal reading study of the National Research Center on Learning Disabilities. *Reading and Writing*, *21(*4), 413-436.

Fuchs, D., Fuchs, L. S., & Compton, D. L. (2012). Smart RTI: A next-generation approach to multilevel prevention. *Council for Exceptional Children*, 78(3), 263-279.

Fuchs, D., Fuchs, L. S., & Vaughn, S. R. (2008). Responsiveness to intervention: A framework for reading educators. Newark, DE: International Reading Association.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. Boston, MA: Pearson Education Inc.

Hilbert, D. D., & Eis, S. D. (2013). Early intervention for emergent literacy development in a collaborative community pre-kindergarten. *Early Childhood Education Journal, 42(*2), 105-113.

Hughes, C. A., & Dexter, D. D. (2011). Response to intervention: A research based summary. *Theory into Practice, 50(1),* 4-11.

IRIS. (2018). Is it important to acknowledge students' diversity in classroom settings? Why or why not? Retrieved from http://iris.peabody.vanderbilt.edu/module/div/cresource/q1/p02

Kelley, K. (2003). Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care, 15(*3), 262-266.

Konopasek, L., Norcini, J., & Krupat, E. (2016). Focusing on the formative: building an assessment system aimed at student growth and development. *Academic Medicine, 91*(11), 1492-1497.

Johnson, E. S., & Boyd, L. (2012). Designing effective tier 2 reading instruction in early elementary grades with limited resources. *Intervention in School and Clinic, 48*(4), 203-209.

Jones, R. E., Yssel, N., & Grant, C. (2012). Reading instruction in tier 1: Bridging the gaps by nesting evidence-based interventions within differentiated instruction. *Psychology in the Schools, 49*(3), 210-218.

Lipson, M. Y. (2011). Ask the expert. *The Reading Teacher, 64*(5), 373-374.

Macleod, R. B., & Napoles, J. (2014). The influences of teacher delivery and student progress on experienced teachers perceptions of teaching effectiveness. *Journal of Music Teacher Education, 24(*3), 24 -36.

Manscein, F. (2016). Response to Instruction | Clark County School District. Retrieved from http://www.ccsd.net/parents/response-instruction.

Mask, P. R. & McGill, M.J. (2010). Response to intervention: A work in progress. *National Social Science Perspective Journal 34(*2), 85-92.

Mellard, D. F., McKnight, M., & Woods, K. (2009). Response to intervention screening and progress-monitoring practices in 41 local schools. *Learning Disabilities Research & Practices, 24(4),* 186-195.

Mohamadi, F.S., & Asadzadeh, H. (2011). Testing the mediating role of teacher's self-efficacy beliefs in the relationship between sources of efficacy information and students achievement. *Asia Pacific Education Review, 13(*3), 427 – 433.

Moreno, L. (2014). *Perceived educator knowledge of response to intervention (RTI).* The University of Texas at Arlington.

Nevid, J.S. & Spencer A. R. (2009). *Psychology and the challenges of life adjustment to the new millennium*. Hoboken, NJ: Wiley, 2009.

North Central Educational Service District (NCESD), WSASCD Conference. (2016). Response to Intervention: Beginning to bring it all together for everyone in K – 12 through assessment [PowerPoint Slides]. Retrieved from http://www.ncesd.org/

Owocki, G. (2010). *The RTI daily planning book, K-6: Tools and strategies for Collecting and assessing reading data & targeted follow-up instruction.* Portsmouth, NH: Heinemann.

Pil, F. K., & Leana, C. (2009). Applying organizational research to public school reform: The effect of teacher human and social capital on student performance. *Academy of Management Journal, 52*(6). 1101-1124.

Regan, K.S., Berkeley, S.L., Hughes, M., & Brady, K.K. (2015). Understanding Practitioner Perceptions of Responsiveness to Intervention. *Learning Disability Quarterly, 38*(4), 234-247.

Rios, S. (2014). Is MTSS the new RTI? Retrieved from hhtp://blog.edmentum.com/mtss-new-rti

Russo, C. J., Osborne, A. G., & Borreca, E. (2005). The 2004 re-authorization of the Individuals with Disabilities Education Act. *Education and the Law, 17*(3), 111-117.

Scharlach, T. D. (2008). These kids just aren't motivated to read: The influence of preservice teachers' beliefs on their expectations, instruction, and evaluation of struggling readers. *Literacy Research and Instruction, 47*(3), 158-173.

Spear-Swerling, L., & Cheesman, E. (2011). Teacher's knowledge base for implementing response to intervention models in reading. *Reading and Writing, 25*(7), 1691-1723.

Stahnke, R., Schueler, S., & Roesken-Winter, B. (2016). Teachers' perception, interpretation, and decision-making: A systematic review of empirical mathematics education research. *Zdm, 48*(1-2), 1-27.

Survey Gizmo Resources. (2018). Retrieved from http://www.surveygizmo.com/resources/blog/survey-response-rates/

Swanson, E., Solis, M., Ciullo, S., & McKenna, J. W. (2012). Special education teachers' perceptions and instructional practices in response to intervention implementation. *Learning Disability Quarterly, 35*(2), 115 – 126.

Tatto, M. T. (1998). The influence of teacher education on teachers' beliefs about purposes of education, roles, and practice. *Journal of Teacher Education, 49*(1), 66-77.

U.S. Department of Education Office of Special Education and Rehabilitative Services. *A new: Revitalizing special education for children and their families.* (2002). Retrieved from ectacenter.org/~pdfs/calls/2010/earlypartc/revitalizing_special_education.pdf

Van Maele, D., & Van Houtte, M. (2012). The role of the teacher and faculty trust in forming teachers' job satisfaction: Do years of experience make a difference? *Teaching and Teacher Education, 28*(6), 879-889.

Weber, C. (2013). *RtI in the early grades: Intervention strategies for mathematics, literacy, behavior, and fine-motor challenges.* Bloomington, IN: Solution Tree Press.

Wedl, R. (2016). Home | Education Evolving. Retrieved July 22, 2016 from http://www.educationevolving.org

Whitten, E., Esteves, K.J., & Woodrow, A. (2009). *RTI success: Proven tools and strategies for schools and classrooms.* Minneapolis, MN: Free Spirit Publications.

Wiest, L. R. (1998). Using immersion experiences to shake up preservice teachers' views about cultural differences. *Journal of Teacher Education*, 49, 358–365.

Wright, I. (2002). Constructivism, community, threads, big ideas and standards. *Theory & Research in Social Education, 30(*3), 470-473.

Yell, M. L., & Drasgow, E. (2007). Assessment for eligibility under IDEIA and the 2006 regulations. *Assessment for Effective Intervention, 32*(4), 202-211.

Zvoch, K. (2016). The use of piecewise growth models to estimate learning trajectories and RtI instructional effects in a comparative interrupted time series design. *The Elementary School Journal, 116(*4), 699-720.

APPENDIX A

Response to Intervention: Educators' Perceived Knowledge

ONLINE SURVEY CONSENT FORM

The Department of Curriculum and Teaching at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

The purpose of this study is to understand teachers' perceived knowledge of Response to Intervention (RtI). The information obtained from this study will help us plan more effective and meaningful professional development related to RTI.

This will entail your (completion of a survey) (participation in an interview). Your participation is expected to take approximately 15-20 minutes to complete.

Your participation is solicited, although strictly voluntary. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of future professional development with is needed. Your name will not be associated in any way with the research findings. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission. Also, the content of the survey should cause no more discomfort than you would experience in your everyday life. Your name or school building will not be asked which will allow all of your responses to be non-identifiable.

Only participants who are given the link will be able to participate in the study. The survey results will be recorded through Qualtrics and only the researchers will see the results.

If you would like additional information concerning this study before or after it is completed, please feel free to contact Julie Hogle by email. (j012h806@ku.edu)

Completion of the survey indicates your willingness to take part in this study and that you are at least 18 years old. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or write the Human Research Protection Program (HRPP), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email irb@ku.edu.

Sincerely,

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APPENDIX B

Recruitment Letter

January 2018

Re: Teachers' Perceived Knowledge about Response to Interventions

Dear Elementary Educator,

Hello! I am currently a reading specialist in our school district and pursuing my doctorate in curriculum and instruction from the University of Kansas. For my dissertation, I am studying teachers' perceived knowledge about Response to Intervention (RtI) in order to better support teachers and their students.

I am writing to invite you to participate in my dissertation study. Participation is completely optional and your consent will be given when you click on the survey link. The online survey contains 34 multiple-choice questions and will take approximately 10 -15 minutes to complete. All survey responses are anonymous and confidential.

If the district would like to view the results of the survey to support professional development, only generic results, such as percentages, will be shared at their request.

If you have questions or would like additional information about this study, please email me. julie.hogle@lsr7.net

Thank you for considering this research opportunity!

Julie Hogle

APPENDIX C

Moreno Survey

1. **Job Description:**
   - o General Education Teacher
   - o Special Education Teacher
   - o Principal

2. **Gender:**
   - o Female
   - o Male

3. **Years of Experience:**
   - o Less than 1 year
   - o 1-2 years
   - o 3-5 years
   - o 6-8 years
   - o 9-10 years
   - o 11-15 years
   - o 16 or more years

4. **Number of years in Current Position:**
   - o Less than 1 year
   - o 1-2 years
   - o 3-5 years
   - o 6-8 years
   - o 9-10 years
   - o 11-15 years
   - o 16 or more years

5. **Highest Degree Earned:**
   - o Bachelor's Degree
   - o Master's Degree
   - o Doctorate Degree

6. **Teaching Certificate:**
   - o University
   - o Alternative

7. **I currently service a student in RTI:**
   - o Yes
   - o No
   - o I have prior to the 2012-2013 school year.

8. **How did you learn about RTI? Check all that apply:**
   - o On my own
   - o University
   - o Professional Development
   - o Service Center

9. **How many total hours of staff development or training have you received in RTI throughout your experience?**
   - o Less than 3 hours
   - o 4-6 hours
   - o 7-9 hours
   - o 10-12 hours
   - o 13-15 hours
   - o 16-19 hours
   - o 20 + hours

10. **These previous staff development (SD) have prepared me to implement RTI effectively.**
    - o None
    - o Few SDs
    - o Some SDs
    - o Many SDs
    - o Most SDs 100

11. **I have adequate RTI knowledge and do not need additional staff developments.**
    - o Strongly Agree
    - o Agree
    - o Disagree
    - o Strongly Disagree

12. **If I had an opportunity to attend a staff development on RTI, I would attend.**
    - o Strongly Agree
    - o Agree
    - o Disagree
    - o Strongly Disagree

13. I believe there should be multiple staff development opportunities to present various educators' RTI needs.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

14. I believe colleges/universities should address RTI in at least one course.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

15. Name your school district:

16. I understand the rationale behind RTI.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area 101

17. I understand that RTI uses a multi-tiered system of instruction and intervention.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

18. I understand the process of teaching struggling students in each Tier of instruction.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

19. I understand that RTI is an integrated approach between general and special education.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

20. I understand how to use a universal screener to identify students at risk for academic difficulties.

o I do not have any knowledge in this area
o Unsure o I consider myself an expert in this area

21. I can develop my own reasons of why my students are not achieving desired levels in reading.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

22. I am able to group students by their needs.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area 102

23. I can select the appropriate evidence-based interventions to match the students' needs.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

24. I know how to use the interventions on my campus with fidelity.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

25. I know how frequent and intensive the intervention should be at each Tier.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

26. I can name and explain the five essential components of effective reading instruction.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

27. I know how often I should progress monitor my students.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

28. I can use the appropriate assessments for progress monitoring.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area 103

29. I am able to collect data to document and monitor student progress.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

30. I could analyze data from progress monitoring assessments to determine if students are responding to the intervention or need further academic support.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

31. I could make modifications to the intervention plans based on students' response to the intervention data.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

32. I know how to use my RTI data to make recommendations for a special education evaluation.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

33. I have heard of the term differentiation.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

34. I can apply differentiated instructional/strategies for struggling learners.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

35. I know how to manage my time effectively for all students in my classroom, including those in RTI.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

36. I understand the purpose of having a campus-based problem-solving team.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

37. I know which educators should be involved in my campus' problem solving team.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

38. I understand the various roles of each member of the problem-solving team.

o I do not have any knowledge in this area
o Unsure
o I consider myself an expert in this area

APPENDIX D

Teacher's Perception of Response to Intervention Survey

1. **Job Description:**
   - o General Education Teacher
   - o Special Education Teacher
   - o Other Specialist Teacher

2. **Gender:**
   - o Female
   - o Male

3. **Years of Experience Teaching:** _____

4. **Years of Teaching in a Classroom using RtI:** _____

5. **Highest Degree Earned:**
   - o Bachelor's Degree
   - o Master's Degree
   - o Educational Specialist Degree
   - o Doctorate Degree

6. **Teaching Certificate:**
   - o University
   - o Alternative

7. **I currently service a student in RTI:**
   - o Yes
   - o No
   - o I have prior to the 2017-2018 school year.

8. **How did you learn about RTI? Check all that apply:**
   - o On my own
   - o University
   - o Professional Development

9. **How many total hours of staff development or training have you received in RTI throughout your experience?**
   - o Less than 3 hours
   - o 4-6 hours
   - o 7-9 hours
   - o 10-12 hours
   - o 13-15 hours
   - o 16-19 hours
   - o 20 + hours
   - o unsure

10. **These previous staff development (SD) have prepared me to implement RTI effectively.**
   - o None
   - o Few SDs
   - o Some SDs
   - o Many SDs
   - o Most SDs

11. **I have adequate RTI knowledge and do not need additional staff developments.**
   - o Strongly Agree
   - o Agree
   - o Disagree
   - o Strongly Disagree

12. **If I had an opportunity to attend a staff development on RTI, I would attend.**
   - o Strongly Agree
   - o Agree
   - o Disagree
   - o Strongly Disagree

13. **I believe there should be multiple staff development opportunities to present various educators' RTI needs.**
   - o Strongly Agree
   - o Agree
   - o Disagree
   - o Strongly Disagree

14. I believe colleges/universities should address RTI in at least one course.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

15. I understand the rationale behind RTI.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

16. I understand RTI uses a multi-tiered system of instruction and intervention.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

17. I understand the process of teaching struggling students in each Tier of instruction.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

18. I understand that RTI is an integrated approach between general and special education.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

19. I understand how to use a universal screener to identify students at risk for academic difficulties.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

20. I can develop my own reasons of why my students are not achieving desired levels in reading.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

21. I am able to group students by their needs.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

22. I can select the appropriate evidence-based interventions to match the students' needs.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

23. I know how to use interventions with fidelity.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

24. I know how frequent and intensive the intervention should be at each Tier.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

25. I can name and explain the five essential components of effective reading instruction.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

26. I know how often I should progress monitor my students.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

27. I am able to collect data to document and monitor student progress.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

28. I could analyze data from progress monitoring assessments to determine if students are responding to the intervention or need further academic support.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

29. I could make modifications to the intervention plans based on students' response to the intervention data.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

30. I know how to use my RTI data to make recommendations for a special education evaluation.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

31. I can apply differentiated instructional strategies for struggling learners.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

32. I know how to manage my time effectively for all students in my classroom, including those in RTI.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree

33. I understand the purpose of having a building-based problem-solving team.

o Strongly Agree
o Agree
o Disagree
o Strongly Disagree