

RESPONSE TO INTERVENTION: PRACTICES AND PROCEDURES IN THE
IDENTIFICATION OF SPECIFIC LEARNING DISABILITIES IN THREE ELEMENTARY
SCHOOLS

A Doctoral Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Education
In
Professional Leadership

by
William Wood
December 2014

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Abstract

The rationale of Response to Intervention (RtI) programs is to address the educational issue of the over-identification of students to special education programs (Batsche, Elliott, Graden, Grimes, Kovalski, Prasse, & Tilly, 2007). The purpose of this study was to examine three elementary schools' RtI programs in relation to the identification of specific learning disabilities. Specifically, how did campus level RtI practices relate to rates of learning disability identification? This quantitative study gathered data from an on-line survey from campus principals, campus RtI coordinators, and third through fifth grade teachers who have implemented RtI in their classrooms. The survey instrument was based on the National Center for Response to Intervention's Essential Components Integrity Worksheet and contained 40 items in five domains (*RTI ECI Worksheet*, 2011). An Analysis of Variance was used to measure the significance of mean differences between the schools. Findings suggest a relationship between the level of RTI implementation and the rate of learning disability identification.

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CHAPTER I

Introduction

The over-identification of special education students is a substantial and costly problem in the American education system. In fact, the per student cost of special education between the years of 1967 and 2005 rose 1,539% ,and between the years of 1991 and 2005 a 69% cost increase was realized by the American taxpayer (Levenson, 2012). Additionally, the cost of servicing a special education student was twice that of a student in general education (Chambers, Parrish, & Harr, 2004). Some school districts, such as the San Carlos School District in the San Francisco area, are spending 25% of their annual budget on special education (Sturgeon, 2010).

The specific learning disability can be defined as; unexpected failure or underachievement (Fuchs, Fuchs, Hintze, & Lembke, 2007) and students requiring services for specific learning disabilities comprise almost half of all those in special education (Kavale & Spaulding, 2008). In fact, a 300 percent increase in the identification of learning disabilities in students was realized between 1976 and 2002 (President's Commission on Excellence in Special Education, 2002). Finally, there are those that argue that many students labeled as learning disabled might actually have the ability to learn in the general education environment, without a special education assignment (Fuchs, 2007).

In 2004, the reauthorization of the Individuals with Disabilities Act ushered in a new program that was designed to address the issue of over-identification; this program was referred to as Response to Intervention (Fuchs, 2007). RtI proposes to provide interventions in the regular education classroom through: early identification of possible learning problems, evidence based instruction and the use of assessment data in a multi-tiered system (Sotelo-Dynega, Flanagan, &

Alfonso, 2011). Further, RtI is designed as a tool to identify students suspected of having specific learning disabilities (Fuchs & Fuchs, 2006). In fact, a majority of states employed some form of RtI to determine if a specific learning disability existed in students (Zirkel & Thomas, 2010). Proponents have seen RtI as having the possibility of significantly altering the special education referral process and hence, altering over-identification by preventing learning problems from becoming worse (Kavale & Spaulding, 2008). However, skeptical perspectives remain, and some experts question the effectiveness of the RtI implementation apparatus. “In theory, if the components are effective, then the overall process would be expected to produce results; however, the question of whether the overall process is effective must also be addressed” (VanDerHeyden, Witt, & Gilbertson, 2007). The implementation and maintenance of RtI in schools is a challenging undertaking. These challenges are particularly important when determining special education eligibility. This study will examine three elementary schools’ RtI practices and procedures in relation to the referral and identification of students with specific learning disabilities.

Historical Perspectives

The notion of specific learning disabilities can be dated back to the 1800’s and was manifested through doctors working with patients having traumatic brain injuries (Kaufman, 2008). In 1962, Samuel Kirk coined the term “Learning Disabilities” in his book, *Educating Exceptional Children*. Kirk is regarded as the pioneering voice in the area of learning disabilities (Mather, 1998). Kirk defined specific learning disabilities as...

“A retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subjects

resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural and instructional factors” (Kirk, 1962, p. 263).

The definition of specific learning disabilities provided by Kirk laid the foundation for current conceptualizations of specific learning disabilities. A short time later, in 1965, on the heels of landmark civil rights legislation, President Lyndon Johnson signed the Elementary and Secondary Education Act. This act sought to address issues associated with inequality in education through increased federal funding. In addition, the Elementary and Secondary Education Act instituted title one, title three, and coordinated early intervening services funding for schools (Elementary and Secondary Education Act, 1965).

In 1977, the Federal government endorsed the discrepancy model, a methodology to identify specific learning disabilities. According to this model, a student with a learning disability must have “... a severe discrepancy between achievement and intellectual ability in one or more of the following areas: (1) oral expression; (2) listening comprehension; (3) written expression; (4) basic reading skill; (5) reading comprehension; (6) mathematics calculation; or (7) mathematic reasoning” (U.S. Office of Education, 1977, p. G1082). Problems with the discrepancy model are based on the notion that in order for a student to qualify as learning disabled, the student must have a significant discrepancy between I.Q. and achievement and that this discrepancy might not present itself until the student has failed consistently (Hale, Wycoff, & Fiorello, 2011).

Response to Intervention

RtI is viewed by many as a potential agent of change in special education because of the manner in which it identifies at-risk students, identifies deficit areas, reduces disproportionality, and aligns interventions (Kavale & Spalding, 2008). Indeed, RtI was designed to address the over-identification of students to special education through prevention of more intense learning problems (Fox, Carta, Strain, Dunlap, & Hemmeter, 2009). The discrepancy model's failure rate in identifying students with specific learning disabilities was a major impetus behind its replacement, the RtI model (Mesmer & Mesmer, 2008). In addition, the high costs associated with continued over-identification inspired the need for an alternate method to identify specific learning disabilities (Fuchs & Fuchs, 2006). Finally, inconsistent state by state identification methods and continued disproportionate representation of minority students were vital to the development of RtI (President's Commission on Excellence in Special Education, 2002).

Important structural elements of RtI include the tier-system. Within tier one; all students are screened for responsiveness to current instruction at least three times per year (Jenkins, Schiller, Blackorby, Thayer, & Tilly, 2013). Tier two contains increased time and frequency of instruction, small group opportunities, and targeted instruction. Tier three is designed for more intensified and individually designed instruction (Texas Education Agency [TEA], 2008).

There are two major theoretical models for RtI; the standard protocol model and the problem solving model. The standard protocol suggests that better results will occur through the application of the same basic set of interventions for all students and that more students can be affected by standardized interventions. The problem solving approach argues for a process oriented structure that identifies and analyzes the problem, implements an intervention plan, and evaluates the intervention plan (Fuchs, Mock, D., Morgan, P.L., & Young, C. L., 2003).

Proponents of RtI point to the many benefits of the framework: evidenced- based instruction, early intervention, and improved achievement for all students (Whitelock, 2010). RtI is also praised for its use of evidence based instruction to address deficits areas that could have been caused by poor teaching practice (Feifer, 2008). In addition, the progress monitoring feature allows for changes to be made to an intervention if the student is unresponsive (VanderHeyden, Witt, and Gilbertson, 2007). Furthermore, RtI represents a departure from the discrepancy model's "wait-to- fail" model of identifying students with specific learning disabilities (Fuchs & Fuchs, 2006). Finally, in RtI the focus is turned from possible student deficiencies to changes in the learning environment in order help drive student success (Stepanek & Peixotto, 2009).

Despite the strengths that RtI demonstrates, one particular area cited as problematic is treatment fidelity. Treatment fidelity refers to interventions being executed as they were intended (O'Donnell, 2008). Treatment fidelity is also referred to as treatment integrity or fidelity of implementation and is defined as; "Using the curriculum and instructional practices consistently and accurately, as they were intended to be used" (Mellard, 2010, p. 3). Treatment fidelity is also important for the expansion of seemingly effective interventions. If an intervention has been deployed with a high level of treatment fidelity, the treatment/intervention could to be expanded and used in other settings (Swanson, Haring, Ciullo, & McCulley, 2011).

Another potential problem with RtI is professional development for the implementers. In order for students to achieve the full benefits of RtI, educators need to be trained in the processes and procedures of the RtI framework (Fuchs, 2007). In fact, critical elements of an RtI framework are; essential knowledge of basic RtI principles, understanding of quality instruction, understanding student assessments, and understanding progress monitoring procedures (Brown-

Chidsey & Steege, 2005). Finally, some argue the validity of employing RtI as a method of identifying specific learning disabilities is questionable (Burns, Jacob, & Wagner, 2008).

Statement of the Problem

Special education in the United States of America has changed significantly from the 1970's. Prior to the passage of the Education for All Handicapped Children Act in 1975 over 1 million students with special needs were left out of the possibilities of a public school education (National Council on Disability, 2000). Despite the efforts of many in the field of education and government and the presence of programs such as RtI, the issue of over-identification of students to special education continues to be problematic. This problem has been particularly difficult in the area of specific learning disabilities. In 2009-2010 the U.S. Department of Education estimated that 6.4 million American students were under the special education umbrella and nearly half of those students were labeled as having specific learning disabilities (U.S. Department of Education, 2012). The identification of students with specific learning disabilities increased from 1.8% of the population of students in 1976 to 6.0% of the student population in 2000-2001. During the same time frame, all other disability categories combined showed only marginal growth from 6.5% to 7.3% (Greene, 2007). Indeed, students identified as having a specific learning disability constitute a majority of students with disabilities (Fuchs, 2007).

There are many problems associated with the over-identification of students labeled as learning disabled. Among the most frequently discussed and studied problems associated with over-identification is the disproportionate representation of minority students in special education. Disproportionality was historically heavily evident in so called "soft" disability categories such as specific learning disabilities as opposed to "hard" categories like those exemplified by such disabling conditions as other health impairments (Donovan & Cross, 2002).

The reauthorization of the IDEA brought in regulations addressing the disproportionate representation of minority students. In effect, the IDEA regulations cite that states must enact policies and procedures that help to limit disproportionality (Oswald, Coutinho, Best, & Singh, 1999).

The identification rates for the detection of specific learning disabilities vary from state to state. In 2009-10, the state of Kentucky identified only 2 % of the state's students as needing special education services. In the same year, the identification rate in Iowa was 8.4 % (Scull & Winkler, 2011). There is also great variance in the state-by-state processes and procedures for placing a student in special education programs. Some schools and districts have seemingly adopted the philosophy that if a student fails in the classroom, that failure is qualification for a disability (Prasse, 2009). Additionally, states have various tier frameworks to guide their interventions. For example; Iowa, Illinois, Michigan employs a three-tiered framework and Wisconsin's framework has two-tiers (Stepanek & Peixotto, 2009). The state of Texas employs the use of a three-tiered framework (TEA, 2008).

The cost of over-identification is also apparent in terms of dollars and staff time being spent on students that do not actually need special education services. As stated by Dr. Jay Greene (2007), "Shifting large numbers of low-achieving-but-not-disabled students into special education diverts attention and resources away from truly disabled students, depriving them of quality services they would otherwise receive" (Greene, 2007, p. 710). Stated further by Hughes and Dexter, "The problem of over-identification for school districts is largely financial. Many school districts already operating on small budgets waste ample amounts of money and manpower on special education services for students who do not need them" (Hughes & Dexter, 2013, p. 1).

Additionally, the decision to refer struggling students to special education is sometimes made without adequate RTI implementation fidelity. Implementation fidelity is considered to be the monitoring element associated with RTI so that interventions are implemented and procedures are in place to ensure the components are delivered in a uniform manner (Bianco, 2010). In short, was the intervention performed in a manner that was consistent with what was intended? In fact, many times, treatment integrity is simply assumed (Dane & Schneider, 1998). In many cases, implementation of RtI is left to the districts thereby, allowing local education agencies the flexibility to enact implementation practices and procedures designed to fit their individual needs (Detgen, Yamashita, Davis, & Wraight, 2011). However, Kathleen Whitmire (2009), the director of the RtI Action Network States;

Implementation of the systematic change that's needed to carry out effective RtI programs is challenging for many schools, as they struggle with resource allocation, staff training and misconceptions that RtI belongs to special education. Clear and relevant guidance is needed, if our schools are to realize the potential of RtI for student success (Whitmire, 2009, p. 8)

To be sure, there are positive aspects to RtI frameworks and although students continue to be over-identified to special education programs (Sanetti & Kratochwill, 2009), research has shown that a lesser need for special education referral occurs when RtI practices and procedures are employed with treatment integrity (Vaughn, Linan-Thompson, & Hickman, 2003). A current gap in the knowledge exists in the area of treatment fidelity, in fact, according to Swanson, Wanzek, Haring, Ciullo, & McCulley, (2011):

Among the top 20 most frequently cited articles with the term fidelity in the title (i.e. articles that most likely address issues directly related to fidelity), 14 are published in

health related, peer-reviewed journals. Only 2 are published in special education journals and 1 in general education journals (p. 4)).

Notwithstanding the understood need for a deeper understanding of treatment integrity and the overall level of fidelity of implementation, there has been a decided gap in the research completed on the topic (Sanetti & Kratochwill, 2009).

Purpose of the Study

The purpose of this study is to examine the practices and procedures relative to the implementation of RtI at three elementary schools in a large suburban East Texas school district, specifically, examining the effect that those practices and procedures have on the identification and referral of students with suspected specific learning disabilities. Specific focus will be placed on the concepts of progress monitoring and fidelity. As argued by VanDerHeyden, Witt, and Gilbertson (2007), “Implementation is the linchpin of RTI. If there is to be an evaluation of RTI, a series interventions must be implemented correctly and monitored” (p. 226). A quantitative design will be used to address the research questions. The study will examine data derived from an on-line survey of campus principals, RtI coordinators, and general education teachers from three feeder elementary campuses.

Significance of the Study

RtI has been touted as an alternative method to identify specific learning disabilities in students across the United States, where at least twelve states require RTI and the majority allows its use (Zirkel & Thomas, 2010). However, the practices and procedures associated with the implementation and the associated treatment integrity are suspect. RtI is a decision making model based on a set criteria, however, RtI does not have a universally embedded design for

carrying out the processes and procedures necessary for student success (Christ, Burns, & Ysseldyke, 2005).

This study will contribute to the research of RTI, through an in depth comparison of three elementary feeder schools. The practices and procedures that are associated with higher identification rates for specific learning disabilities will be studied. Conversely, practices and procedures leading to lower identification and referral rates will also be scrutinized. The research generated by this study will be used by practicing administrators and teachers to better understand the practices and procedures associated with RtI implementation. In addition, the potential pitfalls of various practices relating to the identification of specific learning disabilities will be made apparent.

There remains a gap in the knowledge relating to the concept of treatment fidelity and more research is required (Sanetti & Kratochwill, 2009). As stated by Keller-Margulis (2012):

Additional research is required to continue the development of a feasible and targeted system for measuring implementation within an RtI system without a system for collecting and reviewing fidelity of implementation data, it will be difficult to interpret student response to interventions and to make conclusions about assessment and procedural decisions within the context of RtI model implementation (p. 350).

Further, relatively few fidelity procedures have been endorsed through scientific means (Noell et al., 2005). Leading to further confusion is the lack of a common term to identify treatment fidelity (Schulte, Easton, & Parker, 2009). Burns, Jacob, and Wagner (2008) contend treatment fidelity is one of the foremost threats to RtI assessment and further state:

A thorough examination of RTI treatment fidelity will further our understanding of how often effective interventions are put in place, for whom these interventions are useful, in what settings these interventions work, and who is actually carrying out the interventions (p. 275).

Research Questions

- 1) Is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of the five National Center for Response to Intervention (NCRTI) domains?
- 2) What is the overall fidelity rate of the five domains on each campus?

Definition of Terms

Aimline: the rate at which a student is expected to progress (Burns, Scholin, Kosciolik, & Livingston, 2010).

AIMSweb: a management tool used to classify progress monitoring and benchmark data (Arizona Department of Education, 2009).

Criterion Measure: a measure of performance based on a preset goal (Johnson & Mellard, 2009).

Culturally and Linguistically Diverse Students: students from diverse sociocultural and linguistic upbringings (Garcia & Ortiz, 2008).

Curriculum-Based-Measurements: short exams given to all students over the school year to monitor progress (Clark, 2009).

Cut points: the numeric position that separates students that are possibly at-risk and those that are not at risk (Johnson & Mellard, 2009).

Differentiated Instruction (DI): teaching methods and materials employed for specific learners (Bean & Lillenstein, 2012).

Discrepancy Model: the measure for specific learning disabilities that requires a significant difference between Intelligence (I.Q. test) and achievement test scores (Carreker & Joshi, 2010).

Disproportionality: the over-representation and under-representation of racial, cultural, and ethnic minorities to special education (Hosp, “n.d.”).

Dynamic Indicators of Basic Early literacy Skills (DIBELS): a screening tool based on curriculum-based-measurement processes that measures student’s early literacy skills (Arizona Department of Education, 2009).

Elementary and Secondary Education Act (ESEA): the law pertaining to all grades levels k-12 that initiated funding for at-risk students and poverty stricken schools (Elementary and Secondary Education Act, 1965).

English Language Learners (ELL): students learning English (Ortiz et al., 2011).

Normative Measures: A measure of performance against other students (Johnson & Mellard, 2009).

Predictive Validity: a measure of the screening instrument’s ability to predict future achievement (Hosp, Hosp, & Dole, 2011).

Problem Solving Model: the intervention model that focuses on the individual student using a four-step process of 1) identification of the problem, 2) analysis of the problem, 3) searching for solutions to the problem, 4) implement the plan and 5) evaluation of the solutions (Barge, 2011). The problem solving model uses a team concept to solve problems and includes

teachers from general education and special education working together (Walker, Emanuel, Argabrite Grove, Brawand, & McGahee, 2012).

Progress Monitoring: the process of collecting and recording data to ascertain the effectiveness of an intervention (Johnson, Mellard, Fuchs, & McKnight, 2006).

Response to Intervention: the systematic data based decision making framework that allows for research based and high quality instruction to be applied to all students having difficulty through the use of a multi-tiered format. The level of tiered instruction is based on the level of student need (Fox, Carta, Strain, Dunlap, & Hemmeter, 2009).

Slope: the students' progress or rate of improvement that is represented numerically (McDougal, LeBlanc, & Hintze, 2010).

Standard Treatment Protocol Model: the intervention model that focuses on the use of intervention/treatment for all students having similar learning problems (Carney & Stiefel, 2008).

Texas Essential Knowledge and Skills (TEKS): Texas standards for what students should know and be able to do ("TEA-TEKS," 2013).

Tiered Instruction: the concept of student movement to and from different levels of intervention and intensity based on student need (Bianco, 2010).

Treatment Fidelity: the application of a specific learning intervention in the manner in which was intended (Dane & Schneider, 1998).

Universal Screening: testing procedures, normally offered at least three times per year that evaluate student performance (Jenkins & Johnson, 2007).

Assumptions

There were several important assumptions made in this study. The first assumption made by the researcher was that the data sources of administrators, RtI coordinators, and teachers at the sites would be willing to take part in the study. Likewise, it was assumed that the data sources or participants in the study would be honest and willing to share their actual experiences associated with the RtI practices and procedures at each site. A final, assumption was that each teacher, administrator, and diagnostician had a basic understanding of the concepts surrounding RtI.

Limitations

There were several potential limitations in this study. The focus of this study was on the practices and procedures relating to RtI implementation in three elementary schools within the same suburban school district in East Texas. Therefore, the generalization of study findings was limited and applicable only to the study schools. In addition, the study sites were within one district, which will further limit the generalization of findings since there is no district –to– district comparisons in this study. Further limitations include the limitations of the researcher, whose education experience is entirely within the secondary school setting. Finally, the researcher is the parent of a special needs child that attends public school in the district of study and has a vested interest in the effective functioning of special education programs.

Chapter II

Response to Intervention is a process oriented framework that uses universal screening, evidence-based instruction, progress monitoring, and procedures to ensure fidelity. It is also multi-tiered to intensify instruction as needed (Fox et al., 2009). Jenkins, et.al (2013), states, “Response to Intervention (RtI) consists of a multistep approach to providing early and progressively intensive intervention and monitoring within general education for purposes of improving achievement outcomes and accurately identifying students with learning disabilities” (p. 36). In other words, each piece of the RtI framework is a vital part of a functional RtI program.

Chapter two will examine the key components of an RtI framework and associated implementation problems that can lead to the over-identification of students to special education. The topics of evidence based instruction, universal screening, progress monitoring, the multi-tiered RtI system, models of RtI, fidelity, professional development, campus RtI teams, the three tiers of RtI, alternatives to tier movement, application of RtI to secondary schools, specific learning disabilities, culturally and linguistically diversity in RtI, and personnel roles will all be examined in depth.

The RtI Impetus

Response to intervention has become a significant program in the American education system (Fuchs & Vaughn, 2012) and can be attributed to various elements and circumstances that have served to propel RtI to its current station. One such circumstance is exemplified by the passage of the Education for All Handicapped Act in 1975 which came on the heels the major civil rights legislation of the 1960’s. During this era, Congress attempted to redress past

ills perpetrated on various groups including minorities and the disabled (Kauffman & Landrum, 2009). In fact, prior to the congressional action of this period, civil rights protections for individuals with disabilities was limited to veterans returning from conflicts (Aron & Loprest, 2012).

Laws create requirements that have the potential to influence the direction of policy and practice in all fields, including education. One of the requirements of the Education for All Handicapped Act (EAHCA) was to find, evaluate, and provide services to students with disabilities. In order to satisfy the evaluation requirement of the EAHCA, schools began to put into place psychometric tests to identify eligible students (Ikeda, 2012). In 1977, the specific learning disability was added to the list of qualifying disabilities (Berkeley, Bender, Peaster, & Sanders, 2009). Also in 1977, the discrepancy model measuring the difference between a student's IQ and achievement was enacted as a method to identify learning disabilities and continued as the foremost method to identify learning disabilities (Burns & Ysseldyke, 2005).

Over the course of many years, the discrepancy model became maligned for many reasons including; the difficulty of deciding if a student is a low achiever or disabled, the reliance on IQ as a predictive instrument, and the potential of a wait-to-fail circumstance (Hale et al., 2011). In addition, the explosion of students identified as learning disabled created the impression that the culprit was the discrepancy model. As stated by Hughes and Dexter (2013), "A long standing issue in special education is the over-identification of students with LD. Many in the field blame the IQ-discrepancy method of identification as the cause of this issue" (p.1).

Highlighting the problems associated with the discrepancy model is the disproportionate identification of minorities to special education. Skiba et.al (2008) defines disproportionality as: "The representation of a group in a category that exceeds our expectations for that group, or

differs substantially from the representation of others in that category” (p. 266). The Office of Civil Rights within the U.S Department of Education began taking data related to special education placements in 1968 (Hosp, 2008) and disproportionate placement of minority students into special education placements continues to be a problem (Skiba, Poloni-Staudinger, Simmons, Feggin-Azziz, & Chung, 2005).

The issue of disproportionality was addressed by Daniel J. Losen (2003) in an Applied Research Center article on race and special education. In this article, Losen stated that school administration officials often offer poverty as a potential reason for the wide racial variance in special education assignments; however, Losen retorts that the poverty concept is flawed because it does not explain:

- 1) Why extreme racial disparities are found only in the most subjective and stigmatizing categories like mental retardation and not in medically diagnosed disability categories.
- 2) Why Latinos have far lower identification rate for mental retardation and emotional disturbance than both whites and blacks, despite the fact that Latinos share a far greater risk than whites for poverty, exposure to environmental toxins, and low academic achievement; or
- 3) Why gender differences are more pronounced among black children than among other racial and ethnic groups (p. 6).

Many other scholars argue that poverty is not a direct correlate in the disproportionate identification of minority students to special education (Oswald, Coutinho, Best, & Singh, 1999) and many offer other reasons for the phenomenon of disproportionality such as unconscious bias of school employees and/or process bias in the assessment and referral of minority students (Arnold & Lassmann, 2003).

Over the years, many scholars have questioned methods used to identify minority students as disabled (Kashi, 2008). Specifically, questions began to arise with the McLoughlin and Lewis book *Assessing Special Students* (1986) in which questions were leveled relating to the over-representation of minority students to special education assignments (McLoughlin & Lewis, 1986). To deal with disproportionality, in 1997 the Congress of the United States re-authorized Individuals with Disabilities Act which gave attention to efforts designed to thwart the mislabeling of students to special education (Skiba et al., 2008). It was clear that the heaviness of the significant issues relating to the discrepancy model began a movement toward an alternate identification method.

In 2001, the U.S. Department of Education's Office of Special Education Programs held a learning disabilities summit at which the F.M. Gresham offered a new methodology, Response to Intervention (Burns & Ysseldyke, 2005). In this methodology, Gresham suggested that students who are found to be non-responsive to valid interventions could possibly be learning disabled (Kavale, Kauffman, Bachmeier, & LeFever, 2008). Shortly after, the President's Commission on Excellence in Special Education sanctioned the RtI framework (Burns & Ysseldyke, 2005). With endorsement of RtI, the evident change was a shift to a preventative methodology relating to the topic of specific learning disabilities (Wixson, 2011) and in fact, some consider the concept of RtI was developed as a tool to use data to inform instruction and interventions rather than diagnose a learning disability (Ikeda, 2012). As argued by Justice (2006):

It is considered a preventative model because these multiple tiers of support are introduced to students in the earliest stages of reading development (in prekindergarten and kindergarten ideally), and children's progress within

intervention is carefully and regularly scrutinized to ensure progress in achieving criterion benchmarks in reading (p. 285).

The re-authorization IDEA in 2004 provided for the use of RtI as legitimate method to identify students with learning disabilities (Lembke, Hampton, & Beyers, 2012). In fact, Fuchs and Vaughn (2012) make the case: “The sanctioning of RTI as a method for LD identification within federal law was a major impetus for RTI’S widespread implementation during the past decade” (p. 199). The immediate effect of IDEA 2004 is the use of RtI in all fifty states (Cavendish, 2013). Another major law affecting public education is the No Child Left Behind legislation of 2001. No Child Left behind signaled a major increase in the federal government’s role in public education through annual testing and requirements for yearly progress toward goals (Dee, Jacob, & Schwartz, 2012). Many researchers argue that NCLB provided more momentum for RtI than did IDEA 2004, as stated by Kavale et.al (2008):

We believe that the impetus for promoting RTI is not found in IDEA but rather No Child Left Behind (NCLB) (2001) legislation (PL 107-110). The NCLB foundation provides the reason for general education embracing RTI when historically many special education initiatives (e.g. inclusion) have not been so readily embraced (p. 138).

Response to Intervention is not a recent development as many schools have employed RtI as a prevention program for many years prior to IDEA 2004 (Feifer, 2008). Among the early leaders in RtI implementation is the state of Iowa. In Iowa, the Heartland Area Educational Agency began interventions for students using RtI like methodologies in 1995 (Ikeda, 2012). The Iowa RtI plan is referred to as instructional decision making and employs frequent assessment combined with alterations made to instruction based on student response (Samuels,

2008). Tilly, Harken, Robinson, & Kurns (2008), describe the development of the Iowa model in terms of building consensus among staff, dispelling false ideas about RtI, and the creating appropriate infrastructure (Tilly et.al, 2008). Other early leaders in RtI development include Pennsylvania with the instructional support model and Ohio with the intervention based-assessment model (Burns & Ysseldyke, 2005).

Evidence Based Instruction

In the RtI framework the use of evidence-based instruction is a foundational element (Brown & Doolittle, 2008). The use of evidence-based instruction allows for practices that have been proven most effective to be accessed by the most students possible (Reutebuch, 2008). Evidence based interventions are clarified in the 2006 IDEA regulations originated in the No Child Left Behind Act of 2001:

(A) Means research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs; and

(B) Includes research that:

- (1) Employs systematic, empirical methods that draw on observation or experiment;
- (2) Involves rigorous data analyses that are adequate to test the stated hypothesis and justify the general conclusion drawn;
- (3) Relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators;

- (4) Is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;
- (5) Ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to build systematically on their findings;
- (6) Has been accepted by peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review (No Child Left behind Act, 2001).

The use of evidence based instruction/intervention allows for more precise identification of those students with learning disabilities and presumably, those who fail to respond to such instruction/intervention can be considered for special education services (Gersten et al., 2008). Furthermore, if the majority of students in a class are being successful and responding to instruction, then the students who are not responding to instruction may have some distinction that is the origin of the disparity (Mellard, 2007). Likewise, if student does not respond to evidence-based instruction at tier one or tier two, the instruction is probably not the problem (Fuchs, 2007).

Universal Screening

Universal screening is used to monitor the progress of all students and identify who could be at-risk for learning difficulties (Fox et al., 2009). Generally, universal screening measures student performance above or below a particular threshold. If the student's score is above the

threshold, progress is assumed. If the student's score falls below the threshold, the student may require additional testing or an intervention (Ball & Christ, 2012). Universal screening is completed through the use of testing measures performed, in most cases, three times per school year. In fact, in a sample of 62 elementary schools, Jenkins et.al, (2013), found that 98% of schools screened three times per school year and 90 % use curriculum-based-measures (Jenkins et al., 2013). Universal screening measures can be completed in anywhere from five to twenty minutes (Gersten et al., 2009). The benefits of curriculum-based-measures include speed and ease of administration. Furthermore, they are based on current curriculum, and the data they provide can help drive decisions about instruction and interventions. In addition, curriculum-based measures are cost effective (Ball & Christ, 2012). The universal screening measures are intended to identify students as either at-risk or not at-risk for learning problems (Johnson, Pool, & Carter, n.d.).

Schools employ the use of different screening tools to evaluate students for math and reading. Commonly used math screening tools include Easy-CBM and Math Navigator (Pool, Carter, Johnson, & Carter, 2012). At the same time, reading screening methods are largely performed using curriculum-based-measurements such as Aimsweb (Southeast Comprehensive Center, 2009) and the Dynamic Indicators of Basic Early literacy Skills (DIBELS) (Jenkins et al., 2013). One of the largest challenges in screening is associated with the growth of the student. Speece (2005) makes the case that the ongoing development of the child creates a situation in which the screening instrument needs to be effective enough to hit a "moving target" because the child is in the process of developing the same skills that were being measured by the screening instrument (Speece, 2005). In other words, the screening instrument does not take the

child's growth or new skill development into account when screening is performed on multiple occasions.

The Institute for Education Sciences RtI practice guide promotes the use of screening measures that have a level of reliability, predictive validity, specificity, and sensitivity (Gersten et al., 2009). Reliability measures the screening tool's level of precision (Gersten et al., 2009). Predictive validity is a measure of the screening instrument's ability to predict future achievement (Hosp, Hosp, & Dole, 2011). Specificity is the level at which the screening instrument is able to identify students who are not at-risk. Sensitivity, on the other hand, refers to the level at which the screening instrument is able to identify students who are at-risk while limiting the number of falsely identified students (Hughes & Dexter, 2008c).

Reliable screening instruments are particularly important as errors in diagnosing potential learning problems may lead to misclassification in the first stage of the RtI process. These errors are known as false positives and false negatives (Johnson et al., n.d.). False positives are students who fail the screening and later pass the criterion measure; and false negatives are students who pass the screening but later fail the criterion measure (Jenkins & Johnson, n.d.). Poor screening measures may result in the over-identification of false positive students who are not in need of added academic assistance (Hughes & Dexter, 2008c). Consequently, this may limit the resources available to those students truly needing assistance. In statistical terms, $r = .70$ coefficient should be present for decisions related to screening (Gersten et al., 2008). As stated by McDougal et.al. (2010), "Establishing the reliability of a tool under consideration is an essential first step in determining the appropriateness of that screening procedure (p. 56).

In the What Works Clearing House Universal Screening Practice Manual, Gersten, et.al (2008), argue that universal screening measures misdiagnose students at an unacceptable rate (Gersten et al., 2008). The solution offered in the practice guide is to opt for cut-points that include many students who can later be pared down through progress monitoring measures (Compton, Fuchs, Fuchs, & Bryant, 2006). In addition, universal screening measures should be conducted at minimum three times per school year as screenings performed only at the start of the year produce a greater number of false positives (Johnson & Mellard, 2009). The Virginia Department of Education-Office of Special Education and Student Services has generated standards for judging high-quality screening:

- 1). Screening is school wide, meets accepted psychometric standards, and has evidence of documented reliability and concurrent and predictive validity within a particular school setting.
- 2). Individuals involved in administration, scoring, and interpretation of screening assessments are appropriately trained.
- 3).The site obtains screening data following a designated, fixed schedule.
- 4). Students' screening results are documented and analyzed to refine to process.
- 5). An established data-management system allows ready access to students' screening data.
- 6). Cut points are reviewed frequently and adjusted as necessary.
- 7). Explicit consideration is given to the cost and benefits of classification errors in screening (e.g., false positive versus false negative errors) when setting cut scores.

8). A rationale is provided for the cut points and decision rules (e.g., normative or specific criteria reference) (Johnson & Mellard, 2009, p. 7-8).

In selecting the screening mechanism, schools must also consider how to identify at-risk students. One option in the identification of at-risk students is to use a norm-referenced approach that measures students against students of the same cohort. Students who score below a selected cut-point are labeled at-risk (Fuchs & Fuchs, 2006). One advantage of norm referencing is that it provides services to the lowest performing students. Conversely, a disadvantage is that norm referencing might allow for services to students who do not need them, and therefore, services for those in true need are decreased (McDougal, Graney, Wright, & Ardoin, 2010).

Another option for the identification of at-risk students is the use of a criterion – referenced approach, which measures student performance against a set standard (Gay, Mills, & Airasian, 2012). The use of performance data, such as benchmark data, can be used to assess a student's at-risk status. As stated by Hintze (2007), "Benchmarks may be based on national or local data, and can be determined by using inferential statistics to calculate scores that predict later success, such as meeting end-of-year academic standards or passing state mandated tests" (Hintze, 2008, p. 11).

To more effectively direct the screening process, the universal screening should be managed by a "building-level team" (Gersten et al., 2008). Educational literature suggests that RtI teams are a valuable asset in the implementation of an RtI framework. For example; Nellis (2012) asserts that; "Teams are considered an essential component of Response to Intervention (RtI) and are the vehicle through which data-based decision making occurs at the school, grade, small group, and individual student level" (p. 245). In addition, there is evidence of increases in

academic performance and reductions in special education referrals associated with the use of RtI teams (Kovaleski & Glew, 2006).

Progress Monitoring

In order to effectively measure the success or failure of instruction/intervention, a practice or procedure to monitor the rate of student progress must be in place.

Progress monitoring is simply the assessment of student academic performance in a methodical manner (Johnson, Mellard, Fuchs, & McKnight, 2006) and should be implemented at every tier in the RtI process (Clark, 2009). The National Research Center on Learning Disabilities (2006) submits that there are three purposes for the monitoring of student progress: to find out if the student is gaining from instruction, to create more effective RtI programs, and to ascertain the rates of student gain (NRCLD, 2006). Progress monitoring is recommended by state departments of education in 28 states and required in eight states; however, there is little guidance from states regarding tier-to-tier movement (Zirkel & Thomas, 2010).

A common area of difficulty that schools face is the question of tier-to-tier movement. The movement between tiers is predicated on establishing processes and procedures that help match the level of instructional intensity with student need to create the best learning situation possible (Gillam & Justice, 2010). As Ball and Christ (2012) argue:

The point at which schools typically struggle with data-based decision making relates to decisions at the individual student level. For example, common issues include (a) the number of data points needed to make a decision regarding response, (b) the amount of time necessary to evaluate whether an intervention was successful, (c) whether progress monitoring data are sufficient in lieu of more traditional standardized assessments for making special education placement decisions, and (d) the most appropriate action once

an intervention is deemed successful or unsuccessful (e.g., continue, discontinue, intensity, or change interventions) (p. 232).

Each state, district, or individual school should have a set criterion to judge when tier movement is necessary. Many schools employ the “direct route” toward tier two intervention where if a student screens below a certain threshold, the student is moved to tier two (Pool et al., 2012). The justification for using the direct route to tier two is that the identified students should not be required to wait for needed interventions. The down side to the direct route is that immediate movement to tier two presupposes that the student actually needs further intervention based on the single screening procedure (Hughes & Dexter, 2008c).

The use of progress monitoring procedures to evaluate the need for tier movement is common in schools. With the progress monitoring option, students are monitored after the screening procedure has determined a student to be at-risk (Hughes & Dexter, 2008c). It is important to note that universal screening and progress monitoring are separate procedures. The universal screening measures are generally administered to all students three times per school year (Jenkins et al., 2013). Progress monitoring within the specific tiers applies to individual student progress and response to instruction/intervention (Southeast Comprehensive Center, 2009). As stated by the National Research Center on Learning Disabilities (2006):

Screening of all students is used to determine those students who may be at risk by comparing their performance relative to a criterion measure. Progress monitoring displays individual student growth over time, to determine whether the student is progressing as expected in the generally effective curriculum (p. 23).

Criterion-based progress monitoring measures are effective tools to gauge student progress through time, and the data provided assists in the development of instruction that benefits students in the most effective manner possible (Gillam & Justice, 2010).

Educational literature supports various methods of tier-to-tier movement through progress monitoring processes and procedures. A standard method of progress monitoring allows for the students' CBM scores to be plotted on a graph to determine whether the scores are above or below the "goal-line" (Clark, 2009). The goal-line, also known as the "aimline", rates the level at which a student is expected to progress (Burns, Scholin, Kosciulek, & Livingston, 2010). Six data points from CBMs are plotted and if four of six are above the goal-line the expectations placed on the student are intensified. Conversely, if four data points are below the goal-line, the intervention/instruction is altered (Clark, 2009). Slopes are the students' progress or rate of improvement that is represented numerically (McDougal et al., 2010). Students with acceptable slopes may remain in the current tier while students with unacceptable slopes move to the next tier (Hintze, 2007).

Interventionist have several tools that they are able to use to identify response to instruction. Among the most often applied method of identification is the dual discrepancy. In fact, Brown and Skow in conjunction with the Iris Center (2009) located at Vanderbilt University state; "The dual-discrepancy approach is a method that involves evaluating a student's performance level and rate of growth. It is the preferred method for determining whether students are responding adequately to tier 2 and subsequent tiers of instruction" (Brown, Skow, & IRIS Center, 2009, p. 23). The dual discrepancy measures the slope of student progress for an extended period to measure student growth. The performance level is measured by examining recent assessments (Dexter & Hughes, 2008a).

Proper progress monitoring practices and procedures are critical for successful RtI frameworks and can lead to more appropriate referrals to special education (TEA, 2008). Schools can sustain effective RtI progress monitoring by configuring structures that increase the likelihood of effective progress monitoring. The state of Georgia's Response to Intervention Guide offers specific examples to organizational structures that enhance progress monitoring measures, these include; common schedules allowing for collaborative planning periods, vertical alignment of curriculum, and professional development opportunities for educators, particularly in the area of assessment strategies (Barge, 2011).

The Multi-Tiered Model

The RtI framework generally consists of three tiers of intervention with increasing levels of intensity to address current learning problems and prevent future learning problems (Ball & Christ, 2012). In fact, most states employ a three tiered RtI framework (Berkeley, Bender, Peaster, & Saunders, 2009). Tier one in RtI framework is designed to be functional for 80 % of all students, Tier two focuses on the 15 % of students that need additional instruction/intervention, and the most intensive interventions are present in tier-three for the remaining 5 % of students (Wixson, 2011).

The RtI framework has its roots in the public health model which works in terms of a primary, secondary, and tertiary prevention (Mellard, McKnight, & Jordan, 2010). The public health model was created in response to poverty and health issues in the early 1900's (Gersten et al., 2009). Within models associated with public health, an assessment of risk is calculated for an entire population and measures to prevent the spread of diseases are taken in terms of primary, secondary, and tertiary levels of risk (Mellard et al., 2010). The primary level of prevention serves all students through access to a core program that attempts to prevent future

learning problems (Fox et al., 2009). The secondary level of prevention is designed for those students were not successful in tier one (Mellard et al., 2010). Secondary preventions typically employ some form of small-group and/or tutoring schedule (Compton, Fuchs, & Fuchs, 2012). Finally, the tertiary level of prevention requires specialized intense interventions that can be delivered on an individual basis (Fox et al., 2009).

The multi-tiered model is differentiated by the intensity of the interventions available in each tier. Mellard (2010) maintains that there are ten variables related to intensity of interventions: 1) minutes allowed per student 2) frequency of instruction, 3) duration of instruction, 4) group size, 5) corrective feedback, 6) mastery requirements, 7) opportunities available for response, 8) transitions, 9) specificity and focus of goals, and 10) teacher's professional development and expertise (Mellard, 2010). In Texas, the multi-tiered model is employed to, "Ensure that appropriate instruction directly addresses students' academic and behavioral difficulties in the general education setting, a multi-tiered service delivery model is used. Included are layers of increasingly intense intervention responding to student-specific needs" (TEA, 2008, p. 1).

RtI Models

Many successful enterprises proceed from a set of designs created to guide operations. Within the enterprises of academic interventions, those designs are the standard protocol and problem solving models (Shapiro, 2009). The standard protocol method works to provide a high level of treatment fidelity through evidence based instruction and the use of repeated and replicable teaching techniques (White, Polly, & Audette, 2012). Replication refers to the consistent application of material in the same manner repeatedly over multiple periods of instruction. Shapiro (2009) states:

Standard protocols are designed to be structured and explicit in defining the needed steps for implementation and are able to be delivered to small groups of children. Groups are identified by examining the general nature of student problems and matching them to a particular protocol (p. 1).

One strength of the standard protocol approach is it well established in current educational literature (White et al., 2012). In addition, the standard protocol method is cost-effective in that many students can be serviced through grouping (Shapiro, 2009). Finally, the standard protocol model allows various personnel to deliver the intervention because the intervention is the same over time. This consistency can insure optimum treatment fidelity (The Iris Center, 2014). Conversely, the standard protocol method has limited effectiveness when the student has serious learning problems that require individualized planning (Shapiro, 2009). Several states, such as Florida, Oregon, and Pennsylvania, endorse the standard protocol method (Berkeley et al., 2009).

The problem solving method, while less standardized and more geared to the individual needs of the student, uses a team oriented approach to detect learning problems (VanDerHeyden, n.d.). The problem solving model also employs a four-step process: the identification of the problem, the development of a plan to address the problem, the execution of the plan, and an assessment of the plan's effectiveness (The Iris Center, 2014). Many states, such as Iowa and Nebraska, employ problem solving teams (Berkeley et al., 2009). Because of the individualization needed in the problem solving model, there are limits to the number of students who can be served by a limited number of teachers. Furthermore, when allocating educational resources, this method creates challenges (Shapiro, 2009). There are those in education that argue the problem solving model has the potential to expand student learning if there is a level of

treatment integrity present (Burns & Symington, 2002). Some schools employ the use of a hybrid model that combines elements of both the standard protocol and problem-solving models (Hanover Research, 2011).

Fidelity

The implementation of RtI frameworks in schools requires significant attention to detail and awareness to the processes involved. Fidelity to those processes is a prerequisite for a successful RtI program, and processes put in place without fidelity can lead to the over-identification of special education students. Treatment fidelity and treatment integrity are terms that are often used concurrently to identify the practice of making sure all that interventions are carried out as they were intended (Keller-Margulis, 2012). While there is much agreement regarding the importance of treatment fidelity, difficulties remain due to a lack of research (Sanetti & Kratochwill, 2009). Plus, there is a research gap. No consistent standard exists for reporting data associated with fidelity (Swanson et al., 2011). Finally, fidelity is difficult to perform effectively due to the varied methods of implementing RtI, the multiple protocols, and the numerous associated details (Keller-Margulis, 2012).

The practices and procedures associated with fidelity are important in an RtI framework because solid fidelity measures can link instruction and intervention to student outcomes and hence, assist in uncovering the effectiveness of the instruction and intervention delivery (Keller-Margulis, 2012). By uncovering the effectiveness of instruction and interventions, those methods can be introduced in other settings allowing more students access to proven techniques (Swanson et al., 2011). In addition, interventions enacted with fidelity create the necessary and defensible documentation for the determination of disabilities and address the IDEA mandates regarding evidence based instruction requirements (Bianco, 2010).

Measures to rate the fidelity of the implementation of instruction and interventions should occur often. Additionally, these evaluations should be both planned and unplanned (Keller-Margulis, 2012). Mellard (2010) adds that fidelity measures should be employed specifically when students are not performing well with scientific-based curriculum/interventions, have poor progress monitoring data reports, or when a new intervention or instructional technique is used (Mellard, 2010). Mellard (2010) developed the five elements of fidelity; 1) adherence, 2) duration and exposure, 3) quality of delivery, 4) program specificity, and 5) student responsiveness (p. 7). Adherence refers to staying on course with the plan. Duration and exposure relate to frequency of learning and how long the learning opportunity lasts. Quality of delivery involves the teachers' actions during delivery. Program specificity is the preciseness of the instruction/intervention, and student responsiveness relates to how the student reacts to the instruction/intervention (Mellard, 2010).

Specific methods used to monitor fidelity include direct assessment and indirect assessment. An example of a direct assessment would be conducting an observation of an intervention. An indirect assessment procedure would be using a self-report checklist to verify that the appropriate action had been taken (Mellard, 2010). As clarified by the National Research Center on Learning Disabilities (2006):

- 1) Direct assessment. The components of an intervention are clearly specified in operational terms within a checklist based on the task analysis of the major intervention components. A qualified staff member observes the intervention and counts the occurrence of each component to determine the percentage correctly implemented and identifies those teachers needing retraining.

2) Indirect assessment. Included in this type of assessment are self-reports, rating scales, interviews, and permanent products. Of the indirect methods, permanent product assessment is thought to be the most reliable and accurate. Permanent products might include samples of student work or student performance on assessments and videotapes of instructional sessions (p. 4.4).

Checklists are the most often employed fidelity assessment instrument when measuring adherence to the original instruction/intervention plan (Schulte, 2009). Likewise, the duration and exposure of the instruction/intervention can be overseen by the interventionist completing a self-report checklist that assesses when and for how long a session occurred. This data can then be matched against the instruction/intervention plan to measure alignment (Dusenbury, Brannigan, Falco, & Hansen, 2003). Direct assessments, such as observations, are probably the most reliable method of fidelity measurement. As stated by Bianco (2010), “Direct and frequent assessment of an intervention for fidelity is considered to be best practice” (p. 6). Conversely, Keller-Margulis (2012) asserts that both direct and indirect methods better serve to determine how the treatment was carried out, specifically stating that the combination of direct and indirect measures:

Allow for the determination of whether an assessment is conducted in an accurate and consistent manner; whether interventions are delivered with the frequency, duration, and intensity needed and with adherence to the intervention protocol; and whether the students are moved through the RTI system in the manner intended (p. 349).

Keller-Margulis (2012) sharpens the focus of fidelity to include assessment fidelity, instructional and intervention integrity, and procedural integrity. Assessment integrity means making sure that the testing procedures associated with universal screening and progress

monitoring are done properly. Instructional integrity is the process of verifying which interventions occurred and when they occurred. Finally, procedural integrity relates to the practices and procedures of the students' movement through the multi-tiered RtI system (Keller-Margulis, 2012).

In the event that one or more elements of fidelity are not working, actions are available to address the problem. Simple discussions with the implementing teachers or organized feedback can assist in reasserting treatment fidelity. Organized feedback consists of visual representations, such as graphs that chart teacher performance on fidelity measures implementation (Kupzyk, Daly, Ihlo, & Young, 2012). Other possible avenues to enhance fidelity include tracking forms, the use of specialists to assist the teacher with implementation, and best practice video clips. Tracking forms are checklists that help verify if the intervention was completed with fidelity. The specialist or coaches assist with instruction/intervention development. Finally, high performing teachers are video-taped, and the tapes can be distributed to lower performing teachers to enhance fidelity (Bianco, 2010).

Fidelity is a complicated and taxing process. However, the importance of fidelity in an RtI framework is clear yet often neglected (Schulte, Easton, & Parker, 2009). The issue of fidelity has become more important for schools due to the recent mandates associated with NCLB (2001) and IDEIA (2004) (Sanetti & Kratochwill, 2009). Overall, school administrative teams can enhance fidelity by creating mechanisms to monitor direct and indirect assessments, align schedules to accommodate interventions, and allocate time and resources for the professional development of interventionists.

As a critical component of the RtI process, fidelity has potentially serious implications relating to the over-identification of students as learning disabled. As stated by Keller-Margulis

(2012), “Without a system for collecting and reviewing fidelity of implementation data, it will be difficult to interpret student response to interventions and to make conclusions about assessment and procedural decisions within the context of RtI model implementation” (p. 350). In fact, the validity of the data used to make procedural decisions relating student response might be questionable without proper fidelity procedures (Peterson, Homer, & Wonderlich, 1982) and hence, could lead to improper placements.

Professional Development

The RtI framework was created in response to the over-identification of students to special education. For the RtI framework to be effective, the implementers of the framework must be trained properly. In fact, high quality professional development of teachers and staff is the number one factor required for successful RtI implementation (Harlacher & Siler, 2011). As Reutebuch (2008) maintains, “The knowledge-for-practice perspective, that is, the more teachers know, the more successfully they will teach, is a widely accepted view on teacher learning” (p. 127).

A healthy professional development program is an important factor in the success of an RtI framework (Kratochwill, Volpiansky, Clements, & Ball, 2007). Professional development is also important for attaining a high level of treatment fidelity (Mellard et al., 2010). Professional development opportunities should be offered in the early phases of RtI and periodically afterwards to ensure proper implementation. Also, professional development is mandated in NCLB (2001), and there is a clear connection made between high quality professional development and student achievement (Kratochwill et al., 2007).

According to Harlacher and Siler (2011), the professional development systems in an RtI framework should include training on, “Knowledge of high-quality instruction, knowing various

assessment practices within an RtI system (i.e., screening, diagnostic, and formative), and using data to plan instruction” (p. 21). Using high-quality instruction is a tenet of an RtI framework; however, many teachers lack the requisite skills to incorporate instruction methods correlating to student need (Kupzyk, Daly III, Ihlo, & Young, 2012). As clarified by Danielson (2007), “Depending on their roles, many educators will need training in primary-and secondary- tier interventions, and in the assessments used for screening and progress monitoring, so that they are able to match interventions with student needs” (p. 633).

Scanlon, Gelzheiser, Vellutino, Schatschneider, and Sweeny (2008) conducted a study in which three schools with at-risk kindergarten students received RtI tier one related professional development for teachers. The end result of the study was a reduction in the number of students labeled as at-risk (Scanlon, Gelzheiser, Vellutino, Schatschneider, & Sweeny, 2008). While the results may be fruitful, there are also challenges associated with RtI professional development efforts. Among the potential challenges are the training of staff in the overall concept of RtI (Kratochwill et al., 2007) and gaining staff acceptance for the RtI framework (Harlacher & Siler, 2011).

Another challenge with the implementation of RtI programs is the lack of training associated with problem solving teams. A potential threat to the validity of an RtI framework is treatment fidelity; therefore, the professional development of the staff and the campus teams delivering the interventions is essential to its success. Because of the fidelity problems associated with using teams, a solid professional development program becomes even more important (Burns, Vanderwood, & Ruby, 2005).

Campus RtI Problem Solving Teams

Collaborative frameworks are an important feature of schools in the 21st century. The need for teamwork in the current high-stakes testing and politically charged environment makes collaboration and teams vital to student and school success. Campus RtI problem solving teams can be referred to as data-based-decision making teams (Shapiro et al., 2012), building teams (Nellis, 2012), and student support teams (Barge, 2011). Whatever the designation, campus RtI teams are designed to assist in the implementation of RtI (Shapiro et al., 2012). A fundamental element associated with RtI frameworks is the use of campus RtI teams (Kupzyk et al., 2012). In fact, campus RtI teams are essential to the success of the RtI framework (Shapiro et al., 2012). Nellis (2012) adds, “Within the RtI literature, teaming is widely regarded as a key element in the design and implementation of RtI procedures, processes, and practices (p. 245).

Once again, the impetus for campus teams is derived from the over-identification of students to special education. To address this over-identification problem, pre-referral intervention teams (PITS) began to take shape in the late 1970’s and early 1980’s (Nellis, 2012). The pre-referral team’s basic function was to make placement decisions regarding special education referrals and when pre-referral teams were used in a problem solving model, the PITS morphed into a problem solving team (Burns, Vanderwood, & Ruby, 2005). These Problem solving teams worked to identify learning problems, collect data, monitor progress, and determine interventions (Jenkins, 2007).

Campus RtI problem solving teams make many decisions based on data. Decisions made by the team include the determination of appropriate tier level intervention based on the universal screen data, the monitoring of progress monitoring data to determine tier movement, the determination of when a student has or has not responded to instruction/intervention, and

determining when a student should have a special education evaluation (Shapiro et al., 2012). As stated by Carney and Stiefel (2008) in reference to the problem solving model:

While following some common basic principles, the specific interventions are developed based upon preliminary data concerning a particular student's behavior and performance. Interventions are chosen via a group process and then implemented, feedback on the effectiveness of the interventions is collected and the intervention program is modified accordingly (p. 62).

In order to achieve the highest level of efficiency and effectiveness, campus RtI problem solving teams should make use of systems change approaches such as involving stakeholders in the planning and implementation of RtI frameworks (Nellis, 2012). Wiener and Soodak (2008) conducted a national survey of special education administrators in which the respondents agreed that; "RtI reflects a substantive systems change that is not effective or even possible without totally reforming the instructional delivery system (p. 43).

Another important factor in the effective and efficient development of teams is the communication of practices and procedures, including decision rules and required documentation associated with RtI implementation (Nellis, 2012). Mellard, McKnight, and Woods (2009) confirm, "Data collection forms and expectations should be in place before the school year begins so that screening can be done early with consistency from classroom to classroom" (p. 192). The designation of roles among team members is also critical for team effectiveness (Pool, Carter, & Johnson, 2012).

The professional development of the campus RtI problem solving teams is crucial for successful RtI implementation (Nellis, 2012). In fact, professional development opportunities should be based on data, personalized, and held at school (Noll, 2013). In addition, efficient

team meetings facilitated by assertive, confident, and attentive team members will aid in the creation of a climate conducive to teamwork (Nellis, 2012). The support of the administrative team is also a vital factor in successful team development (Martinez & Young, 2011).

RtI problem solving teams are essential elements of the RtI framework. In order for successful implementation to occur, a healthy understanding of the manner in which teams operate through the examination of data is critical (Burns et al., 2010). In addition, the Campus RtI problem solving team must be accountable and recognize what the students' needs are.

As Pool, Carter, and Johnson (2012) explain:

Using a team approach to RTI allows practitioners to be involved in planning and problem solving. By sharing responsibility as a team, teachers and staff are accountable for student progress and are more aware of the needs of individual students (p. 239).

Tier One Interventions

Most students requiring RtI interventions are serviced in tier one, making this tier a primary element of the RtI framework. The overarching theme of tier one involves the use of evidence-based instruction in the general education environment (Gillam & Justice, 2010). In fact, Carreker and Joshi (2010) state that, "A guiding premise of RTI is that evidence-based practices should take priority over standard practices that have no research base" (p. 944). Compton, Fuchs, and Fuchs (2012) also contend that tier one is a primary prevention and it includes; "(a) the core program, (b) classroom routines that are meant to provide opportunity for instructional differentiation, (c) accommodations that in principle permit virtually all students access to the primary prevention program, and (d) problem-solving strategies for addressing students' motivation and behavior" (p.2).

The use of universal screening data helps to inform teachers when to apply tier one interventions such as differentiated instruction. Differentiated instruction, a strategy used to allow students many paths to learning, is executed through the flexible grouping of students based on skill level, interest area, and/or learning style (Demisky & Goddard, 2010). Once a student has been identified as being at-risk, the use of targeted differentiated instruction is instituted for that student based on specific need. Following the differentiated instruction, a teacher can use curriculum-based-measures to evaluate the effectiveness of the instruction. If the student does not show improvement, movement to tier-two may be warranted (Hoover, 2010). Combining various forms of data such as universal screening and curriculum-based-measures data, in conjunction with a student's response to tier one intervention provides the optimum amount of data needed to determine possible tier movement (Gersten et al., 2008).

A great deal of research is available on reading interventions, and considerable focus in educational literature has been on reading interventions in RtI frameworks; however, it is worth noting that RtI is applicable to all academic subjects (Pool, Carter, Johnson, & Carter, 2012). Riccomini and Witzel (2010) provide six interchangeable RtI principles that apply to reading and math: 1) every student can learn with good instruction and monitoring, 2) universal screening should be used three times per year to uncover students who are at-risk, 3) employ a progress monitoring procedure to drive decision making and gauge instructional effectiveness, 4) use research based instruction, 5) competent educators should use the multi-tier system, and 6) continued program evaluation (Riccomini & Witzel, 2010).

The National Research Center on Learning Disabilities (2006) argues for tier one interventions that attempt to limit the number of "instructional casualties" by implementing the positive tier one elements of high quality instruction and the monitoring of student progress

(NRCLD, 2006). Many schools employ whole-group instruction with specific interventions to contend with individual student needs (Wright, n.d.). Specific tier one interventions such as those in used in schools in Campbellsport, Wisconsin, include additional reviews, tutoring, and differentiated assignments (Campbellsport School District, 2010). Likewise, the focus of tier one interventions in Arizona focuses on adapting teaching methods to fit the needs of all students in a classroom by differentiated whole and small-group instruction (Arizona Department of Education, 2009).

In Texas, tier one is a critical cornerstone of the RtI framework in which quality classroom instruction is aligned with the Texas Essential Knowledge and Skills. (TEA, 2008). However, guidance from the Texas Education Agency with regard to tier one is limited to the following statement from the 2008-2009 Response to Intervention Guidance: “Tier 1: Teachers use high-quality core class instruction aligned with the Texas Essential Knowledge and Skills (TEKS) in which about 80% or more of the students are successful. This tier is the crucial foundation of the RtI instructional model” (TEA, 2008, p. 1).

The process and procedures associated with tier movement should be aligned with the establishment of appropriate levels of instruction/ intervention to create the best possibilities for student learning (Gillam & Justice, 2010). The amount of time spent in tier one is also applied inconsistently. The governing state education agencies offer little in the form of guidance as only three states (New Mexico, New York, and Oklahoma) require a specific time span for tier one interventions (Zirkel & Thomas, 2010). Throughout education literature, perspectives vary on the actual time that should be spent in tier one intervention. Some groups argue for a five to eight week period (Fuchs, Fuchs, & Stecker, 2010), while others opt for four to eight weeks (Hintze, 2007) or even eight to ten weeks (Dexter & Hughes, 2009).

Specific examples of school/state guidance relating to student movement to tier two interventions are found in New Mexico and Georgia. The New Mexico tier one-to-tier two process is predicated on the universal screening cut score and any other assessment that demonstrates the need for intervention in addition to non-response after one to two sequences of interventions applied to all students with fidelity (Bass, 2009). Similarly, Georgia uses universal screening data and benchmark assessment data to determine if tier two interventions are warranted and in that process, three questions are asked:

- 1) Is the learning concern a curriculum issue?
- 2) Is the learning concern an instructional issue?
- 3) Is the learning concern a student issue? (Barge, 2011).

Tier Two Interventions

Tier two RTI interventions are where the individual students are assigned specific interventions to address deficit areas. Interventions at tier two are characterized by small group or individualized instruction along with access to the regular core curriculum (TEA, 2008). In fact, tier two interventions are considered to be in addition to tier one as stated by Hoover (2011), “Key to understanding Tier 2 instruction, is the fact that this instruction must *supplement*, not *replace* Tier 1 instruction-that is, all students provided Tier 2 supplemental instruction must also be provided all Tier 1 instruction” (p. 83). Tier two should also contain increases in the length and strength of the intervention when compared to tier one (Hoover, 2011). The alteration of tier two interventions is important because offering students additional tier one instruction that has already been unsuccessful is not the correct path to student success (Buffum, 2010).

While there is no set standard for the length of time for tier two interventions, the interventions should be long enough to be effective (Johnson, Carter, & Pool, 2012). Many

practitioners argue for specific time frames such as 8-10 weeks (Fuchs et al., 2010) or 10-15 weeks for tier two interventions (Hintze, 2007). In a survey of 62 elementary schools in 17 states, Jenkins, Schiller, Blackorby, & Thayer (2013) found that 79 percent of schools reported interventions taking place four to five days per week, and 79 percent reported the intervention sessions lasting between 20-30 minutes (Jenkins et al., 2013).

Interventions can be strengthened through the lowering of class size and/or intervention groups (Mellard et al., 2010). In the Jenkins study, 77 percent of respondents reported a range of 3 to 15 students in their tier two intervention groups. Other practitioners argue for group sizes of four to six students (Hoover, 2011). In addition to lowering class/group size, the use of explicit instruction in reading and math is encouraged (Johnson et al., 2012). Explicit instruction refers to the manner in which instruction is delivered (Kupzyk, Daly III, Ihlo, & Young, 2012). In summation, it is a direct method of teaching that offers clear instructions, demonstrates objectives, and offers feedback to the students (Pool et al., 2012). Specific tier two intervention mechanisms include the following: using extended support periods, extended instructional support time for students to work on targeted skill development, and frequent assessments to gauge student progress (Barge, 2011).

Identifying students who are not responding to intervention is essential for student success and progress monitoring practices and procedures at tier two fluctuate significantly within schools. In a study of 41 schools, Mellard, McKnight, and Woods (2009) discovered that 24 percent of schools monitored progress weekly, 12 percent monitored quarterly, and 5 percent monitored daily (Mellard, McKnight, & Woods, 2009). In Texas, tier two progress monitoring should occur on a weekly basis (TEA, 2008). However, progress monitoring in general, is required by law in only 24 states (Zirkel & Thomas, 2010).

In total, tier two is designed to address unresponsive students. Three possible avenues are available for students needing tier two interventions: return to tier one, receive more tier two interventions, or move to tier three for more intense interventions (Dexter & Hughes, 2008). The movement between RtI tiers should be accomplished efficient and uncomplicated. As worded by the Milwaukee school district (2013), “Movement between Tiers 1 and Tier 2 is fluid and flexible” (*Milwaukee School District*, 2013, p. 1).

Tier Three interventions

Tier three interventions are the most intense and individualized of the three tiers. This tier is the last opportunity to address learning problems in the general education environment before being referred to special education testing. Tier three in the RtI framework offers the most potent level of support to struggling students (Gersten et al., 2009). These interventions are employed to address current problems, and they are used as a preventative measure against future problems (Ervin, 2008). Tier three interventions include small-group and individualized instruction (TEA, 2008). Plus, they are more intense in terms of the amount of time spent in sessions, the size of the intervention groups, and how often progress monitoring occurs (*New York RtI Requirements*, n.d.). A variety of examples of tier three interventions are accessible at interventioncentral.org and the *What Works Clearinghouse* at ies.ed.gov (Ervin, 2008).

Individual schools/states have varying standards with regard to the duration of each intervention session. For example, New York specifies a 30-60 minute timeframe for a minimum of four days per week (*New York RtI Requirements*, n.d.) while Texas recommends 50 minutes per day with no specific reference to the number of days per week (TEA, 2008). The time spent over the course of tier three interventions fluctuates across jurisdictions as well. For example, in Georgia, the time allotted for tier three is between 6-12 weeks (Barge, 2011). In

Arizona, the time is between 15-30 weeks across tiers two and three (Arizona Department of Education, 2009). Group size also varies among various schools and states. The Arizona technical assistance paper is not specific when it states; “Plan and provide targeted content, specialized instruction, with intensity (time) and focus (targeted instruction) either individually or in small groups (Arizona Department of Education, 2009, p. 6). In New York, the group size is specified as one or two per session (*New York RtI Requirements*, n.d.) while in New Mexico’s two tiered model, the recommendation is two to three (New Mexico Public Education Department [New Mexico PED], 2009).

Across schools the monitoring of student progress is also variable. Georgia, for example, requires that tier three progress monitoring occur one-to-three times per week (Barge, 2011). Texas, on the other hand, recommends monitoring once a week (TEA, 2008). Basically, there are varying estimates as to the percentage of students who will require tier three interventions. The New York State Department of Education maintains that one-to-five percent of students will require tier three (*New York RtI Requirements*, n.d.), while Texas estimates the number to be between five-to-ten percent (TEA, 2008). Jenkins et al. (2013) in a study of 67 elementary schools found that tier three intervention grouping ranged from one- to -six students and 86 percent of respondents communicated a group size of four or less students. Further, 93.5 percent of respondents communicated a period of four-to-five days per week with a range of 25-80 minutes per-day allotted for interventions. Finally, progress monitoring procedures were completed at minimum, on a weekly basis (Jenkins et al., 2013).

Some schools/states publish criteria to access tier three RtI interventions. For example, The Milwaukee public schools examines the universal screening, the progress monitoring data, and the formative sources of data in conjunction with a two-year delay in student achievement

based on benchmark data (*Milwaukee School District*, 2013). The New Mexico standard uses a student assistance team (SAT Team) to make decisions about students moving from tier two to tier three. The SAT team also examines the data from curriculum based measures and other data sources to determine if a pattern of poor student performance exists. In addition, if the student has not responded to tier two interventions after one or two sequences of intervention that have been performed with fidelity, and continues to lag behind classmates academically, the student may be referred to tier three interventions (Bass, 2009).

Alternatives to Tier Movement

Better instruction/interventions can lead to more success for the student designated for additional assistance. Further, stronger in-tier instruction/intervention can prevent more tier movement. A main goal of the RtI framework is to assist students having trouble in the general education environment (Martinez & Young, 2011). According to educational literature, adjustments to procedures and instructional practices can increase student achievement and avert the need for tier movement (Kupzyk et al., 2012).

Successful in tier interventions for increased student performance have been covered in numerous education studies. To begin, basic structures that define an intervention framework must be strong. Feifer (2008) contends, “One of the fundamental tenets of an RTI model is to not look at a “within child” issue until you can document that your core curriculum and instruction are sufficiently sound for the vast majority of students” (p. 813). Along those lines, Lentz, Allen, and Ehrhardt (1996) devised a framework for strong interventions. The framework included the following elements; 1) appropriate student response opportunity, 2) positive reinforcement, 3) immediate feedback, 4) progress monitoring, 5) intervention presented at the appropriate pace, addressing error correction, considerations made for accuracy, rate,

improvement, and use of modeling, prompting, and fading (Lentz, Allen, & Ehrhardt, 1996). In addition, systematic, and explicit instruction are factors that offer the best opportunity for successful learning (Kupzyk et al., 2012).

Strategies for making decisions relating to the actual structures of instruction are also important for strong tier level instruction. Strong instruction/intervention, regardless of tier level, should contain certain curriculum components such as content and skills, evidence-based interventions, instructional setting, and class management. Content and skills refers to the level of skill development in each student, such as reading level and language proficiency. Evidence-based interventions relate to the use of proven strategies that have been validated for instructional purposes (Brown & Doolittle, 2008). The instructional setting regards the manner in which the instruction will be delivered, such as whole-group or independent learning. Finally, instructional management refers to the techniques employed to direct instruction. Some of these techniques include decisions relating to time on task, expectations, and classroom routines (Hoover, 2011). By focusing on in-tier instruction/interventions, teachers, special education staff, and interventionist can strengthen opportunities for student learning, thus negating the need for tier movement and potentially halting an unnecessary referral for special education testing.

Application to Secondary Schools

Response to intervention has been hailed as a valuable methodology in the elementary schools, and the vast majority of research relating to RtI is focused on the elementary settings (Johnson, 2011). This circumstance has led to many questions about implementation in the secondary schools (Prewett et al., 2012). Many teachers feel interventions at the secondary level are fruitless because the intervention should have occurred at the elementary level (Ehren, 2009). This phenomenon leads to a major question relating to secondary RtI, does RtI function as

prevention, as it does in the elementary schools, or as remediation (Fuchs, Fuchs, & Compton, 2010). As stated by Prewett et al. (2012):

Does RTI in secondary schools serve the same preventative purpose as in elementary schools, or is RTI a remediation framework meant to identify and serve adolescent students by addressing existing gaps in their basic knowledge in the areas of reading, writing, and math? (p.136).

Secondary schools face other practical problems centered on several factors: changes in instruction from tier one to tier two, the process for intervention instruction, and which personnel will perform the intervention (Faggella-Luby & Wardwell, 2011). In addition, schools must continue to teach the core class curriculum while attempting to provide worthwhile intervention services (Prewett et al., 2012). To avoid implementation pitfalls for secondary RtI, the National Center on Response to Intervention has suggested solutions such as smaller class size, grouping students by instructional need, using the best teachers as interventionists, and increasing the frequency and duration of the interventions (National Center on Response to Intervention [NCRTI], n.d. a).

In 2010, Prewett and Mellard in conjunction with the National Center on Response to Intervention, conducted research on 42 middle schools in 18 states that had put RtI models into practice. They found that cohort schools varied in how implementation was carried out with regard to screening, progress monitoring, data-based decision making, and in how interventions were conducted. Although screening methods varied, the majority of cohort schools conducted screening three times per year. The monitoring student progress was completed with multiple data measures based on this schedule: tier two was monitored on a weekly to monthly basis while tier three was monitored three times a month. The data used to make decisions on student

progress included scores from screening measures, state exams, formative assessments, daily class performance, attendance, disciplinary records, and the student's response to prior intervention. Finally, interventions were conducted during elective class periods or during a "flex" class. The classroom teacher performed tier two interventions, and special education personnel performed tier three interventions (Prewett & Mellard, 2010).

There are examples in education literature of secondary school success within an RtI framework. The Walla Walla school district in Washington began implementation of the RtI framework in 2004, and by 2007 had achieved a 13.6% drop in referrals to special education. The Walla Walla RtI model is based on seven core elements: goals that guide instruction, formative assessments, research-validated programming, an emphasis on core-instruction, the use of differentiated instruction, strong leadership, and active professional development (Barton & Stepanek, 2009). Cheyenne Mountain Junior High school in Colorado began its RtI program in 2005 and has seen a simultaneous drop in students failing classes and a drop in disciplinary infractions (Johnson, 2011). For RtI to flourish as a prevention or remediation model, it must be applicable to all k-12 students and help show the way to improved outcomes for all. While numerous questions relating to RtI implementation at the secondary level still exist, Walla Walla and Cheyenne Mountain are examples of positive RtI implementation in secondary schools.

Specific Learning Disabilities

In large part, RtI was designed to address the problem of specific learning disabilities. Unlike other many disability categories, specific learning disabilities are not obvious or easily identifiable. As stated by Hernandez-Finch (2012), "Equitable assessment and placement are still complicated by subjective, "soft" special education eligibility categories that involve clinical judgment in areas such as emotional disability, specific learning disability, or mild mental

retardation/cognitive disability (p. 285). Traits associated with specific learning disabilities are unexpected learning problems manifested by underachievement (Fuchs, 2007). As stated in IDEA (2004), specific learning disabilities can be defined as:

A disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia (Individuals with Disabilities Education Improvement Act, 2004).

Identifying students suspected of having a specific learning disability is a controversial topic that stems from the manner in which identification occurs (Huang, Bardos, & D'amato, 2010). Two main methods are used to identify students suspected of having a specific learning disability; RtI and the discrepancy model. The RtI framework originated as an alternative to the discrepancy model (Carreker & Joshi, 2010). A third model, the alternative research-based procedure, is permissible in 20 states (Zirkel & Thomas, 2010).

Since 1977, the discrepancy model was the principal method of identifying students suspected of having a specific learning disability (Kovaleski & Prasse, 2004) and is permitted by law in the majority of the states (Zirkel & Thomas, 2010). However, federal regulations mandate that states may not require the use of the discrepancy model (Sotelo-Dynega et al., 2011). The discrepancy model operates by assessing the discrepancy between students' IQ and his/her achievement. Stated differently, a student's level of cognitive functioning is compared with his/her level of achievement (Feifer, 2008).

Several consistent criticisms are associated with the continued use of the discrepancy model: errors in identification, students must wait-to-fail before receiving interventions (Fuchs, 2007), and the over-representation of minorities as disabled students (Hale et al., 2011). Further, Hale (2010) in a white paper consensus identified the following problems with the discrepancy model:

- 1) Uniform discrepancy application is insensitive to developmental differences in cognition and achievement.
- 2) Unclear which IQ score should be used to establish “ability” for discrepancy calculation.
- 3) Difficulty with distinguishing between children with SLD and low achievers.
- 4) Inconsistent application of the approach across schools, districts, and states.
- 5) Over-identification of students from diverse back-grounds.
- 6) Measurement problems that result in poor decision-making.
- 7) Early identification is unlikely although it is critical for ameliorating problems (a “wait-to-fail” model).
- 8) Encourages “test and place” practices which are neither an accurate nor an effective use of resources (Hale, 2010, p.227).

Multiple factors contributed to the dissatisfaction with the discrepancy method. Consequently, the President’s Commission on Excellence on Special Education (2002) recommended that RtI be offered as an alternative to identify specific learning disabilities in students (Schatschneider, Wagner, & Crawford, 2008). The reauthorization of IDEA in 2004 further established RtI as an alternative to the discrepancy model (Carreker & Joshi, 2010) and directed that the discrepancy model not be required to be used by school districts (Wixson,

2011). Compton et al., (2012) adds, “The 2004 reauthorization of the Individuals With Disabilities Education Improvement Act (IDEA, 2004) described and expressed a subtle preference for what was then a new and untested method of identifying students with learning disabilities...This new method was called “responsiveness to intervention” (p. 263).

The RtI framework is designed for two main purposes: identification of specific learning disabilities and preventing more severe learning problems. Some practitioners stressed identification while others highlighted the prevention function of RtI (Fuchs & Deschler, 2007). Practitioners who view RtI as an identification tool favor standardized intervention practices that stress measurement protocols. On the other hand, practitioners stressing prevention advocate individualized instruction (Johnston, 2011). Some contend that RtI serves the simultaneous purpose of identification and prevention (Tollefson, Mellard, & McKnight, 2007).

The underlying premise of using RtI as a component for identifying specific learning disabilities is clear: the student’s response to intervention can be determined, and it can drive decisions regarding future action (VanDerHeyden et al., 2007). As stated by Fuchs (2007); “If a child does not respond to instruction that is effective for the vast majority of children, then there is something different about the child causing non-response” (p. 8). To identify students with a specific learning disability, the RtI framework employs a dual-discrepancy model that measures academic performance and response to instruction/intervention (Kovaleski & Prasse, 2004). Fuchs, Mock, Morgan, & Young (2003) refer to the RtI process as the provision of strong instruction in general education, progress monitoring, intervention, additional progress monitoring, and finally, non-responders are evaluated for special education services (Fuchs, Mock, Morgan, & Young, 2003).

The use of RtI as a tool for identifying learning disabilities is not accepted by all practitioners in education. Kavale (2005) argues, “The real problem with the RTI model lies not in the procedures themselves but rather in the leap of faith necessary for unresponsiveness to become SLD” (p. 559). Others within RtI literature also have problems with the proposition of RtI as a method to identify specific learning disabilities. Burns, Jacob, and Wagner (2008) contend;

Although RTI holds potential as an assessment-to-intervention model, the implications for diagnosing children as learning disabled are less clear. It could be quite possible that an assessment results in data that are comprehensive, multifaceted, fair, useful and valid for the purposes of improving student learning, but do not result in valid diagnoses of LD” (p. 274).

Questions about the validity of RtI as a tool for identifying specific learning disabilities is a viewpoint revisited throughout education literature. The validity question surrounds the comparison of students of a particular cohort. In fact, Hale (2010), in a white paper consensus, identified the following problems associated with the model:

- 1) No consensus on type of RTI to use (i.e., standard protocol or problem solving);
- 2) No consensus on measurement model for defining responsiveness in RTI Models;
- 3) No agreed-upon curricula, instructional methods, or measurement tools with adequate technical quality;
- 4) Effectiveness of an RTI approach for SLD identification is currently without empirical support;

- 5) RTI research has largely focused on word reading at the early elementary grades with methods across grades and content areas not empirically established;
- 6) No consensus on the definition of empirically-based approaches;
- 7) Single-subject design cannot be used because manipulation of more than one independent variable in problem-solving RTI precludes determining causation;
- 8) No empirically-supported literature supporting determination of response or failure to respond, with different groups of children identified as non-responders by different methods;
- 9) No agreed upon teacher training standards or super-vision methods to ensure interventions are carried out with integrity;
- 10) RTI has no mechanism for differential diagnosis of SLD and other disorders;
- 11) RTI is nothing more than a model of “diagnosis by treatment failure,” which has long been proven to be a poor model in medicine; and
- 12) There is no true positive in an RTI model, meaning that all children who fail to respond to quality instruction and intervention are considered SLD by default (Hale, 2010, p. 228).

In 2013, changes were made to the American Psychiatric Associations definition of specific learning disabilities. These changes came about for two reasons: reorganization of terminology and expansion of the field of knowledge surrounding learning disabilities (Scanlon, 2013). The revisions made to the definition of specific learning disabilities have minor implications for educators working in RtI frameworks, specifically, teachers (Cavendish, 2013). While implications for educators may be limited, state-by-state identification measures are

marked by inconsistency. This inconsistency is odd because the governing law, IDEA, is a national statute (Colker, 2011).

The criteria for referring a student to special education varies from state-to-state with 37 states reporting the use of RtI in conjunction with the discrepancy model, seven states using only RtI, and six states using the discrepancy model, with some form of RtI data (Cavendish, 2013). An example of the variance between states can be found in a comparison between Iowa and Georgia. Iowa is considered permissive in how it identifies learning disabilities by using RtI as a tool for the betterment of instruction for all Iowa students. On the other hand, Georgia requires both RtI and a form of the discrepancy model in the identification of learning disabilities (Colker, 2011). North Dakota allows RtI as one element to identify specific learning disabilities in students and uses a four question process to determine eligibility. According to Miller (2013) the four questions for LD eligibility:

- 1) Adequate achievement: Does the child achieve adequately for the child's age or meet State-approved grade level standards?
- 2) Eligibility Model: Does the child demonstrate a pattern of strengths and weaknesses OR has the child shown a lack of response to scientifically based instruction?
- 3) Have other factors or conditions been ruled out?
- 4) Are the student's academic concerns the result of lack of instruction? (p. 14).

The standards used to identify learning disabilities in the state of Texas are similar to those employed in North Dakota. The Texas standards also mention appropriate instruction, exclusionary factors, and patterns of strengths and weaknesses (TEA, 2013).

The confusion between state identification standards is consistent with confusion at the district level.

In a study of RtI practices, Martinez and Young (2011) surveyed 99 southeast Texas school district personnel implementing an RtI framework. 20% of respondents reported RtI as being the sole source of data used to make decisions related to specific learning disability eligibility and 74% of respondents reported the use multiple instruments (Martinez & Young, 2011). Compounding the matter further, is the variety of RtI practices employed to determine if learning disabilities exist. While states such as North Dakota offer very specific and progressive guidelines (Colker, 2011), the Texas Education Agency lacks specific guidance (TEA, 2008). The lack of clear and specific national, state, and local guidelines create district by district variance as illustrated in the research of Martinez and Young. The problem is two-fold: variance in allowable practices and procedures for the evaluation of specific learning disabilities, combined with the variance in the RtI process leading up to SLD identification. In total, this dynamic creates a confusing and challenging environment for the personnel assigned with RtI deployment in schools.

RtI for Culturally and Linguistically Diverse Students

Demographic changes are sweeping the United States education system. As these changes occur, 76% of English language learners read at or below grade level (Ortiz et al., 2011). With a clear understanding of what the future holds, school leaders have begun to embrace the concept of culturally and linguistic diversity and how it pertains to interventions. Addressing the academic needs of traditionally neglected groups, such as culturally and linguistically diverse (CLD) students, is possible through the use of RtI, and it has demonstrated potential in this area (Kashi, 2008).

Skeptical voices in research contend that RtI may not be developed or perfected to the appropriate level to address the needs of CDL. In a study of the implementation of RtI with English language learners, Orosco and Klingner (2010) found that the use of RtI to address the needs of English language learners was inconclusive and will take more time to determine any degree of success (Orosco & Klingner, 2010). Other researchers suggest that a consideration of culture should be at the heart of the RtI process. As stated by Harris-Murri, King, and Rostenberg (2006), “Without consideration of culturally responsive instruction, discipline, and interventions within all stages of the RTI decision making model, there is continued possibility of misinterpretation of student behavior and emotional well-being as disordered” (p. 781).

Some educators support the implementation of an integrated comprehensive service delivery system (ICS) to address the needs of CLD learners. The ICS framework has four main structures focusing on equality of opportunity, arrangement of services, professional development, and a policy apparatus to ensure funding (Scanlan & Lopez, 2012). Other educators feel that RtI can assist CLD learners because it is an adaptable and accepted program that accounts for different styles of learning (Kashi, 2008). Brown and Doolittle (2008), argue that the RtI can serve the needs of CLD students through a design that takes into account a variety of variables that apply to current student achievement: proficiency in language, student records, patterns of immigration, socio-economic status, and the culture of the student (Brown & Doolittle, 2008).

Several research studies address the education of ELL and CLD students. One study is a triparte theoretical model provided by Scanlan & Lopez (2012) in which a design for the education of ELL and CLD students is addressed. The study addresses how effective schools work with CLD students in terms of cultivating language proficiency, ensuring access to high-

quality curriculum, and promoting sociocultural integration. In cultivating language proficiency, effective schools are said to use a language acquisition models such as developmental bilingual education and dual immersion. The promotion of bilingualism is important because bilingualism stresses the CDL student's strengths and not deficits (Scanlan & Lopez, 2012).

Access to high-quality curriculum is at the heart of RtI frameworks and is often referred to evidence-based instruction. In fact, Brown & Doolittle (2008) state:

RTI is predicated upon effective, research-based and appropriate instruction in the general education classroom or tier I. That is, it is *assumed* that all students are provided with scientifically validated instruction delivered with a high degree of fidelity to the curriculum, and thus all children are provided with an equal opportunity to learn (p. 4).

Access to high-quality curriculum for CLD students can be manifested in many ways. One method is to offer various instructional plans such as bi-lingual education, English as a second language, and migrant programs (Garcia & Ortiz, 2008). To ensure access to high-quality curriculum teachers should strive to make connections between the objectives being taught and the CLD students in the classroom (Harris-Murri et al., 2006).

Finally, the promoting sociocultural integration relates to the CLD student's sense of belonging and has been connected to student success (McMahon & Wernsman, 2009). Hoover (2012) refers to problems of acculturation that CDL students can exhibit when adjusting to a new cultural setting. These problems include withdrawal, acting out, long silences, and behaviors associated with anxiety (Hoover, 2012). In effective schools, teachers and staff take on the responsibility for CDL student learning and success (Scanlan & Lopez, 2012).

The reduction of referrals to special education has been a goal for educators as the disproportionate representation of minority students remains one of the discipline's most pressing issues (Skiba et al., 2008). To reduce inappropriate referrals, several elements should be addressed in regards to the learning needs of CLD students: experiential background of students, level of language two development, behaviors associated with acculturation, and learning styles favored by the students (Hoover, 2012). Garcia & Ortiz (2008) argue that RtI has the structural components to potentially address disproportionate representation of CLD students through measuring progress in tier one and applying interventions at increasing levels of intensity.

Through the tiered process, teachers are better able to differentiate students, who might have a learning disability by excluding elements such as poor teaching technique and including a student's responsiveness to interventions (Garcia & Ortiz, 2008). Further, the use of universal screening methods in RtI frameworks serves to increase the accuracy of determining at-risk students and thereby, decrease the likelihood of the disproportionate assignment of CLD students for special education referrals (Artiles, Bal, & King Thorius, 2010). Another critical piece in the reduction of CLD student special education referrals is ensuring that a CLD student's progress is measured against other CLD students and not learners who are already competent in English (Hoover, 2012).

In fact, Hoover (2012) recommends a specific process to address to issue of unnecessary referrals to special education for CLD students. In flowchart form, the process is as follows:

Table 1

Flowchart of Steps to Reducing Unnecessary Referrals of Diverse Learners

Step 1
Possess knowledge of overrepresentation issues in special education
Step 2
Acquire an understanding of a standards-based framework for teaching diverse learners
Step 3
Become knowledgeable of key cultural and linguistic factors influencing instruction within the standards-based framework
Step 4
Ensure consideration of key cultural/linguistic influences by school teams when discussing referral of diverse learners

(Hoover, 2012, p. 40)

There are specific strategies within the RtI framework that attempt to address the needs of CLD learners. For example, teachers should be aware of student ability in both their native and second language and develop curriculum that includes relevant cultural elements that the student may have experienced (Brown & Doolittle, 2008). As stated by Harris-Murri, King, & Rostenberg (2006) instructional designs should contain, “ (a) the use of grouping practices that do not reinforce tracking; and (b) the inclusion of topics of inquiry centering on the cultural relevance to the learners” (p. 790). Teachers of CLD students can also apply re-teaching strategies and differentiate instruction (Linan-Thompson & Ortiz, 2009). In addition, teachers can employ the use of explicit language instruction, visuals, modeling, and frequent feedback (Brown & Doolittle, 2008). Garcia & Ortiz (2008) developed a framework for RtI as it pertains

to CDL students, specifically addressing curriculum and instruction for CLD students.

Curriculum and instruction for CLD students should contain/include the following:

- 1) Build on prior knowledge
- 2) Meaningful, comprehensible, interactive discourse
- 3) Culturally relevant academic and social skills curriculum
- 4) Thematic instruction
- 5) Collaborative learning
- 6) Scaffolding
- 7) Individual guidance and support (p. 27).

Consistent throughout the literature for the appropriate and effective education of CLD students is the importance of teacher professional development. Professional development activities are a vital factor in the creation of instructional programs for CLD students (Garcia & Ortiz, 2008). However, most educators in American classrooms are not adequately trained to work with linguistically diverse students (Brown & Doolittle, 2008). To address these issues, professional development activities should include programs that assist teachers in understanding their unconscious, personal bias toward CDL students (Harris-Murri et al., 2006). In addition, Orosco & Klingner (2010) state that teacher professional development should encompass the notion of sociocultural theory, which, they argue, can assist teachers in identifying CDL students' cultural and linguistic strengths and allow for consideration of their own instructional methodologies (Orosco & Klingner, 2010).

For RtI frameworks to address the needs of CLD students, many practitioners in the field of education argue that a paradigm shift must occur. Orosco & Klingner (2010) propose a movement away from addressing “within-child deficits” to a focus on environmental classroom

factors (Orosco & Klingner, 2010). This paradigm shift requires educators to become experts in data collection and interpretation (Harlacher & Siler, 2011) and forces all personnel to transform their current roles (Bean & Lillenstein, 2012). Implicit within the RtI paradigm is the idea that environmental factors and better teaching to the needs of the individual students can and should be the standard (Buffum, 2010). Regardless of the need for change, RtI remains a potential answer to the question of how to best educate CLD students. As stated by Kashi (2008):

Another benefit is RTI's sensitivity to human diversity and hope for those who struggle with learning because of their cultural, linguistic, or ethnic differences. For those individuals with different learning styles, different backgrounds, different languages, different lifestyles, and so on, RTI provides an opportunity to move forward in education without a handicapping classification (p. 44).

Personnel Roles in an RtI Framework

The effective implementation of an RtI framework requires that groups of educators work together in a collaborative manner, and it may require changes in the manner in which schools function. In fact, in a study of five schools currently working with an RtI framework, Bean and Lillenstein (2012) examined educator perceptions, changing roles, and essential skill sets for RtI. In this study, respondents felt that effective RtI involves a shift in educator thinking about teaching, learning, and collaboration (Bean & Lillenstein, 2012). All types of school personnel can have a role in RtI frameworks: administrators, counselors, librarians, special education teachers, para-professional aides, bi-lingual teachers, speech-language pathologist, and of course, the classroom teacher. According to Richards et al. (2007):

RTI requires the collaborative preparation and flexible role definitions of school

personnel. To successfully implement such a model will require supporting school teams comprising of special educators, school psychologists, speech therapist, reading specialist, administrators, and others who will need to work together to assist the general education teacher in identifying at-risk learners, and in developing and implementing appropriate interventions and progress monitoring (Richards, Pavri, Golez, Cange (p. 60).

School administrators implementing RtI frameworks are vital to the success of the program. They may serve an active role or a supporting role in RtI efforts; however, their main role is to create an environment conducive to RtI success (Bean & Lillenstein, 2012). The administrator's role is made even more important by the reality that each school and community is different and that various decisions must be made within the context of each school's individual climate. Administrators require proficient skills in management and leadership to function effectively in those various environments (Hamilton, 2010). Also, administrators should look for appropriate professional development in RtI for staff members (Ortiz et al., 2011). Finally, administrative commitment to an RtI program is essential. In a case analysis of one elementary school, White, Polly, and Audette (2012) found that multiple study respondents noted the principal's role was essential in the success of the RtI program at the school (White et al., 2012).

While the administrator's role is nuanced and more global, other staff may serve more limited, yet still important roles in the RtI framework. School counselors may serve as parent and staff liaisons, creating presentations that communicate elements of RtI. The counselor may also help coordinate tier placement of students, generate and process RtI forms, and finally, assist efforts by being an RtI advocate (Ryan, Kaffenberger, & Carroll, 2011). School librarians can also add to school collaborative efforts by being involved in curriculum planning, developing

professional development resources for other staff members, and assisting with technology aspects of RtI (Robins & Antrim, 2012).

Traditionally, special education staff has been thought of as the interventionists in many schools. For schools that use RtI frameworks, the special education staff serves in a variety of roles such as data interpreter, screener, and interventionist (Richards et al., 2007). In multiple cases, the classroom teacher is the interventionist in tier one and tier two. This becomes problematic as the classroom teacher, who is already accountable for classroom instruction, can become overburdened (Fuchs & Vaughn, 2012). The special education teacher can assist the classroom teacher through increased collaborative efforts and ideas relating to available interventions (Bean & Lillenstein, 2012). Plus, special education teachers may also serve in the capacity of universal screener, progress monitor, tier level interventionist, data interpreter, and organizer of professional development. Para-professional staff or aides also have a role in RtI through assisting teachers with charting behaviors, administering CBMs, administering make-up tests, and monitoring student progress (Hauerwas & Goessling, 2008).

Bi-lingual teachers serve the ELL at their schools and are a vital part of the RtI framework. As the student ELL population continues to grow, the need for teachers who understand the dynamics of second language acquisition, instruction of ELL students, and the cultural dynamics of ELL students and families is paramount. Specifically, Bi-Lingual teachers can assist with gathering and interpreting data and communicating student strengths and weakness to the RtI collaborative team (Ortiz et al., 2011). The Speech-language pathologist can also assist through screening, assessment, and intervention for students with problems in reading and writing (Kerins, Trotter, & Schoenbrodt, 2010). Speech-language pathologist can also serve students by collaborating with staff, performing audits for tier one instruction, creating

interventions, monitoring student progress, and providing students with tier two interventions (Justice, 2006).

The classroom teacher serves on the frontline of education and is at the heart of the RtI framework. He or she is fundamental to RtI through delivering a high-quality, research-based core curriculum (Hanover Research, 2011). Furthermore, the classroom teacher is also responsible for differentiating instruction, which Bean and Lillenstein (2012) define as; “The ability to select appropriate and engaging materials and methods for specific students, management of whole-and small-group instruction, and continuity in instructional focus and intensity across instructors and settings through ongoing collaboration” (p. 495). The use of high-quality differentiation and small-group instruction can reduce the need for tier two interventions (Noll, 2013).

In tier one of RtI; the classroom teacher may be responsible for employing the universal screener and interpreting the data (Richards et al., 2007). In fact, tier one should include research-based curriculum, evidence based interventions, differentiation, and adequate learning opportunities for students (Hoover, 2011). Tier two requires the classroom teacher to collaborate with the RtI team to interpret student data, monitor student progress, and if necessary offer interventions to the student (Stetter & Duerr, 2008). Finally, Tier three requires classroom teachers to work closely with the interventionist and maintain membership as part of the RtI collaborative team (Richards et al., 2007).

The overarching theme through RtI literature is the importance of collaboration between all relevant school personnel; at the same time, the importance of collaborating with parents should not be overlooked. Parents can offer crucial information regarding their child’s strengths and weaknesses, which can assist in the determination of instructional and intervention decisions

(Ortiz et al., 2011). In this context, family involvement is a key factor in the successful implementation of RtI in schools (Harlacher & Siler, 2011).

Response to intervention is a multi-tiered process that uses specific criteria to establish student success and ascertain student needs. There is evidence that RtI models have led to a reduction in the overall rate of referrals to special education in certain school districts (Hanover Research, 2011). If, implemented correctly, RtI can reduce the number of special education referrals (Bean & Lillenstein, 2012). As argued by Lembke, Hampton, and Beyers (2012):

Although RtI models may be relatively new to a majority of educators, school districts in several states (i.e., Iowa, Minnesota, Florida, Ohio, and Illinois) have been using RtI models for identifying and assisting struggling students in reading for more than a decade with positive results. Two important inferences about the implementation of RtI are drawn from these state initiatives: (a) RtI models may be successfully implemented in schools to meet the needs of struggling learners, and (b) RtI models assume different identities and formats across different schools and districts (p. 257).

Many factors influence RtI frameworks such as universal screening practices, progress monitoring practices, fidelity measures, levels of professional development, and practices and procedures associated with CLD students. Each factor has the potential to affect student achievement positively or negatively. Reduction in the over-identification of students to special education is a primary mission. However, the lack of consistent national, state, and local education agency guidance relating to the use of RtI as a tool to identify specific learning disabilities in students also compounds the problem.

Chapter III

Chapter three will include descriptions of subsections of the chapter including the actual research questions, the setting of the study, the subjects for the study, the procedures that will be used in the study and the instrumentation employed in the study. The study is quantitative in nature. Specifically, the quantitative design was chosen in order to gain a deeper understanding of the practices and procedures relating the implementation of response to intervention in three elementary schools feeding one junior high school. As stated by the University of Texas Instructional Assessment Resources website:

Quantitative design follows a deductive research process and involves the collection and analysis of quantitative (i.e., numerical) data to identify statistical relations of variables.

Common quantitative research methods include: content (relational) analysis, experiments, observations (scaled ratings, checklists), and surveys (closed-ended, validated scales) (*IAR*, 2011, p. 1)

Research Questions

- 1) Is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of the five NCRTI domains?
- 2) What is the overall fidelity rate of the five domains on each campus?

Research Design

The research design for this study was guided by a series of questions designed by the National Center on Response to Intervention in their RTI Essential Components Integrity Worksheet. The integrity worksheet is designed to rate participant schools level of RtI implementation. The survey questions were adapted from the NCRTI document and rephrased to accommodate the survey format. The survey tool was designed in a Likert Scale format with

responses ranging from 1-5 (see table 2). Likert scales are commonly used in educational research. As stated by Gay et al. (2011):

A Likert scale requires an individual to respond to a series of statements by indicating whether he or she strongly agrees (SA), agrees (A), is undecided (U), disagrees (D), or strongly disagrees (SD). Each response is assigned a point value, and an individual's score is determined by adding the point values of all statements (Gay et al., 2012, p. 157).

Table 2

Survey Scale

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Never	Rarely	Sometimes	Frequently	Always

There are eighteen RtI elements in five subtopics that are examined through forty specific questions within the worksheet including:

1) Screening

- Does your school conduct screening at least three times during the school year?
- Is a well-defined cut score used to identify students at risk?
- Do you conduct a follow-up assessment to ensure that the results of the initial screening were accurate before placing a student in secondary prevention?

3) Evidence-Based Intervention

- Do you use evidenced based program(s) for secondary intervention (tier II)?

4) Fidelity

- Are procedures in place to monitor the fidelity of implementation of the secondary level interventions (tier II)?
- Is there evidence that the interventions were implemented with fidelity?

5) Instruction

- Are the interventionist adequately trained to deliver secondary (tier II) interventions?
- Are secondary (tier II) interventions always conducted with small groups of students?
- What is the maximum small group size? _____

6) Determining Responsiveness to Secondary (tier II) Level Interventions

- Are decisions about whether or not a student is responding to secondary (tier II) interventions based on progress monitoring data?
- Are the decisions made based on the slope of a student's progress?
- Are the decisions made based on the student's final status at the end of secondary level prevention?
- Are the criteria implemented accurately and consistently?

7) Addition to Primary

- Are secondary level interventions implemented as a supplement to the core curriculum?

8) Evidence-Based Intervention (tier III)

- Are the tertiary (tier III) level interventions longer in duration (more minutes) than the secondary level intervention?

9) Fidelity

- Are procedures in place to monitor the fidelity of implementation of the tertiary (tier III) level interventions?
- Are there procedures to ensure that the individualized instruction at the tertiary (tier III) level includes evidence-based instructional practices?

10) Tertiary (tier III) Intervention

- Are the tertiary (tier III) level interventions led by staff adequately trained to implement the interventions as designed?
- Are certified personnel always leading interventions?
- What is the maximum small group size? _____

11) Determining Responsiveness to Tertiary (tier III) Level Prevention

- Are decisions about whether or not a student is responding to tertiary (tier III) interventions based on progress monitoring data?
- Are the decisions made based on the slope of a student's progress?
- Are the decisions made based on the student's final status at the end of tertiary (tier III) level prevention?
- Are the criteria implemented accurately and consistently?

12) Relationship to Primary

- Are the tertiary (tier III) level interventions implemented as a supplement to the core curriculum?

13) Progress Monitoring Tools

- What specific tools are used for progress monitoring?
-

14) Monitoring Progress

- How often is the progress of students at the secondary level (tier II) monitored? _____
- How often is the progress of students at the tertiary level (tier III) monitored? _____

15) Decision Making Process

- Describe how decisions are made to move students between levels.

- Who is involved in the decision making? _____

- What data are used to inform those decisions, and how are they used?

- What criteria and guidelines are used for making decisions? _____

- Do you believe that the decision-making process may be subject to bias or inappropriate influence?

16) Leadership

- Are school administrators aware of the RTI framework at your school?

17) Staff Qualifications

- Are staff adequately trained to provide the secondary (tier II) and tertiary (tier III) interventions?

- Is there ongoing professional development available to staff who provide secondary (tier II) and tertiary (tier III) interventions?

18) Culturally and Linguistically Responsive

- Have efforts have been made to ensure that core instruction and secondary (tier II) and tertiary (tier III) level interventions take into account cultural, linguistic and socioeconomic factors for students?

The research design was based on the use of the research questions to identify the practices and procedures at each of the respondent schools. The results helped to inform the researcher by comparing participant responses to RtI best practices located within the RTI Essential Components Integrity Worksheet Rubric and the best practices found in the literature review of this study. Further, responses were compared between the three elementary schools principals, RtI coordinators, and teachers. Archival data indicated the three feeder elementary schools had significantly different rates of specific learning disability identification. School two had a rate of 1 of every 76 students; school three had a rate of 1 of every 51 students, and school one had a significantly higher identification rate of 1 of every 25 students. This data was reflected in the overall special education populations at each school. For example, at school two, 11.47 % of students were classified as special education students. At school three, 10.18 % of students were classified as special education students, and at school one, 17.20 % of students were classified as special education students. The design measured the level of RtI implementation at each site and compared respondent data from each school by the following subtopics:

1) Screening

2) Tiered intervention practices and procedures

- 3) Progress monitoring
- 4) Data-based decision making
- 5) Overarching factors

The subtopics respondent data was compared across schools and conclusions were drawn in relation to each school's identification rate for specific learning disabilities and their RTI Essential Components Integrity Worksheet mean score for each subtopic. The survey instrument helped quantify gaps between best practices and the school's implementation of RTI programs. In addition, the perceptions of the level of RtI implementation was compared across the three staff positions; principal, RtI coordinator, and teacher.

Setting

The setting for the study was three elementary school sites in a large suburban school district in southeast Texas. The three elementary schools were located within a three kilometer radius from one another and had large to relatively large minority populations. For example; school one had a total of 779 students and a minority population of 596. School two had a total population of 1072 and a minority population of 749. Finally school three had a total population of 570 and a minority population of 162. See table three for specific racial data.

Table 3

School Demographic Data

	School One	School Two	School Three
African-American	42	100	30
Hispanic	525	571	118
White	183	323	408
Asian	11	40	5
Total Students	779	1072	570

Note. AEIS Data 2011

The school data reflected that school one and school two were majority minority schools. School one was 76.5 % minority and school two was 69.78 % minority. School three was 28.42 % minority. Further data relating to economic disadvantage, limited-English proficiency, and bilingual status demonstrated similar distributions for schools one and two. For example, school one had 561 economically disadvantaged students, 358 limited-English students, and 357 bilingual students. Similarly, school two had 549 economically disadvantaged students, 340 limited-English students, and 333 bi-lingual students. School three had 134 economically disadvantaged students, 48 limited-English students, and 47 bilingual students.

The school data reflected that school one and school two were similar in the percentages of students that were economically disadvantaged, limited in English proficiency, and of bilingual status.

The total student teacher ratio per school was 13.66 for school one, 16.19 for school two, and school one had 16.21 students per teacher. The three schools had significantly different staff distributions. For example, 37.21% of staff at school three had more than 20 years of experience while school 2 had a rate of 22.61% and school 1 had an overall rate of 14.45% of teachers with more than 20 years of experience. See table four for specific teacher data.

Table 4

Teacher Data

Teacher Experience	School One	School Two	School Three
Over 20 years	14.45%	22.61%	37.21%
10-20 years	31.06%	24.16%	34.25%
6-10 years	29.94%	30.58%	25.68%
1-5 years	21.04%	16.61%	2.85%
Beginning teacher	3.51%	6.04%	0.0%
Teacher experience	11.9 years	12.68 years	17.78%
Teacher tenure	7.19 years	7.18 years	12.33 years

Note. AEIS Data 2011

Subjects

The subjects for the quantitative study were the three building principals, the three RtI coordinators and teachers from the three feeder elementary schools. The evaluation included 32 teachers from the three feeder elementary schools. The building principal and RtI coordinators were included in the evaluation to compare leadership responses to the implementing teacher's responses.

Procedures

The engagement of relevant stakeholders is an important step in the research process. In engaging stakeholders, the researcher can access information relating to stakeholder concerns and identify future consumers of data (Fitzpatrick et al., 2011). The University of Texas at Austin's Department of Instructional Assessment Resources defines stakeholders as;

Stakeholders-the individual(s) and organization(s) that will be affected by the results of the assessment or evaluation. Stakeholders may include individuals involved in program operations, those served or affected by the program, and the intended users of the assessment or evaluation. The project sponsor is always a stakeholder (*UT-Program Evaluation*, 2011, p. 1).

The engagement of relevant stakeholders in this study included the following process:

- 1) Contacted district level personnel by email or phone to gauge interest in the project and seek input.
- 2) Scheduled face-to-face meetings with the Director of Elementary Curriculum and the Director of Interventions. The meeting with stakeholders served the purpose of narrowing the focus and increasing the utility of the project. As stated by Fitzpatrick et al. (2011):

During the planning stage of an evaluation, it is essential that the evaluator identify all the various stakeholders and audiences for the evaluation.

Involving the stakeholders during the planning stage helps ensure that the evaluation addresses appropriate concerns, and it assists the evaluator in identifying potential users (p. 287).

- 3) Contacted building principals by email or by phone and introduced the plan.
- 4) After Institutional Review Board and district level approval was received, a scheduled time to release the electronic survey was created.

The data collection procedures for this study are based on the recommendations of The Program Manager's Guide to Evaluation (2010) from the Office of Planning, Research and Evaluation in the U.S. Department of Health and Human Services. The recommendations included:

- 1) Review the NCRTI instrument to be used in data collection, including the meaning of each item, the reason for including the item, and how the item should be completed.
- 2) Review all instructions on the administration and use of the instrument. Also review the instructions to the participants.
- 3) Review potential problems that could occur during administration of the NCRTI instrument and solutions to those problems.
- 4) Hold a practice session.
- 5) Administer the informed consent form to participants and address participants' confidentiality.

- 6) Ensure consistent collection of data (Office of Planning, Research and Evaluation Administration for Children and Families [OPREA], 2010).

The NCRTI instrument was reviewed in order to assure that each question addressed the specific issues related to the study being conducted. Questions that were redundant were eliminated from the survey instrument. Prior to data collection, the instructions for completing the survey instrument was reviewed by the researcher, and the instructions were reviewable for the participants.

Potential problems that could have occurred during the administration of the NCRTI instrument were addressed. According to Fitzpatrick et al. (2011) there are a multitude of issues that could have a negative effect on data collection practices and procedure. Potential problems included:

Table 5

Potential problems with Data Collection

Potential problems with data	Potential fix to problem
Unclear directions to respondents	Pilot-test questions
Inexperienced data collectors	Training for data collectors
Loss of information	Make copies and secure data
Data recorded incorrectly	Frequent checks while recording data
Fraud	Multiple data sources
Break down in procedures	Simplify logistics

Note. (Fitzpatrick et.al, 2011)

The potential problems associated with problem one was addressed through clear instructions to respondents. Problem two was minimized by the education and experience of the researcher.

The researcher has successfully completed two advanced degrees in which research and research methods were included in the coursework. Additionally, the researcher is currently enrolled in doctoral level coursework in research methods and has field experience in data collection.

Problem three was eliminated by making copies of the data collected in both paper and digital formats. Problem four was addressed through consistent monitoring of data recording. Problem five was reduced by receiving the data from multiple sources and sites. Finally, problem six was addressed by simplifying procedures. The procedures were simplified by using an electronic survey. The data recorder was the researcher and the researcher secured all materials personally.

Prior to conducting the actual survey, a practice run was conducted with other district personnel that were not directly involved with the study, yet they had RtI programs on their campuses. In addition, the questions were administered to groups of six elementary-level teachers not directly involved with the study yet had RtI programs on their campuses and were responsible for RtI implementation in their classrooms.

The informed consent is an essential component of research studies. In fact, informed consent is more procedural than a one-time event and is fundamental to the protection of the rights of human subjects (Fitzpatrick et al., 2011). In obtaining informed consent for this study, the researcher made email contact with the prospective participants in order to fully explain the purpose of the study, the potential risks, and benefits of participation in the study. All potential participants in the study were over eighteen years of age and were full-time, certified district employees. Each potential participant served as a principal, RtI coordinator, or classroom teacher within the district.

The initial contact informed the potential participants of the purpose of the study. The purpose for this study was; to identify the RtI practices and procedures of the individual

elementary schools that contribute to increased identification of students with specific learning disabilities. The ultimate goal of the study was improvement of RtI practices and procedures within all elementary schools. Also, the risks associated with the study were discussed in the initial contact. In this study, there were no potential risks to the participants. The benefits that participants derived from participation in the study were limited to the overall improvement of the educational program at each school. In addition, the procedures and duration of the study were discussed. The specific format for study was an electronic survey for principals, RtI coordinators, and classroom teachers. There were no experimental procedures in this study.

An explanation of confidentiality was also offered to the potential participants during the initial contact. The potential participants were informed that their responses would be kept confidential through the use of code designations. The code designation assigned individual letters to the three schools. For example, school 1 was assigned the letter A, and the principal from school one was assigned the letters AP1. The RtI coordinator at school one was assigned AC1. Finally, the teachers from school one were assigned AT1, AT2, AT3, AT4, AT5, and AT6. This technique helped to ensure that confidentiality occurs.

All data collected from participants from each of the three sites was handled consistently throughout the study. Because the survey was electronic, the data was collected as completed over time. This created convenience for all the participants. As stated by Fitzpatrick et al, (2011), "Electronic surveys have become common means for administering surveys" (Fitzpatrick et al., 2011, p. 432). The data was stored by the researcher in a secure location.

The data analysis for this study included data derived from the survey instrument. In employing the use of the survey instrument that was based on the NCRTI instrument, the evaluation process was simplified as the questions were organized systematically into subtopics.

The subtopics included: screening, tiered intervention practices and procedures, progress monitoring, data-based decision making, and overarching factors.

In order to address research question one, the data generated from the survey instrument was analyzed by finding the mean of the responses by position. As indicated in the research, identification rates for special education are correlated to the level of RtI fidelity of implementation (Sailor, 2009). By examining the differences in responses, the researcher sought to identify RtI practices possibly contributing to higher rates of learning disability identification. Research question two was addressed by finding the mean of the responses by school allowing for a general understanding of the level of RtI implementation at each school. The mean was also generated for response data in each subtopic and compared across schools. By measuring the mean responses by subtopic, the overall level of RtI implementation was calculated for each school.

The statistical measures for this study included a measure of central tendency known as analysis of variance (ANOVA). The ANOVA was employed to evaluate the various subject responses from the survey instrument and ultimately, measuring the perception that principals, RtI coordinators, and teachers had regarding their schools RtI practices. Specifically, the ANOVA measured the differences in the mean responses of the survey participants. In addition, a Tukey procedure was employed evaluate to statistical significance of the means. As stated by Driscoll (1996), “in contrast to ANOVA, the Tukey-Kramer procedure also identifies which means are statistically different from one another” (Driscoll, 1996, p. 265).

Instruments

The instrument that was used for this evaluation is a cross-sectional survey. Cross-sectional surveys take data from respondents at one particular point in time and are thought of as

presenting a snapshot of the conditions in a particular study (Gay et al., 2012). The instrument used to evaluate the three participant elementary schools was electronic and was based on the RtI Essential Components Integrity Worksheet from the National Center for Response to Intervention. The NCRTI worksheet employs a five-point rating scale and a corresponding rubric to rate school-level RtI implementation fidelity. The rubric offers descriptions of RtI practices that correspond to the ratings of 1-3-5. If the individual school has practices and procedures that do not fall exactly in the 1-3-5 range, ratings of 2 or 4 may be assigned. As stated in the RtI Essential Components Integrity Worksheet:

The RTI Essential Components Integrity Rubric and the RTI Essential Components Integrity Worksheet are for use by individuals responsible for monitoring the school-level fidelity of Response to Intervention (RTI) implementation. They may also be used by schools for self-appraisal; however, they were not designed for compliance monitoring and therefore should not be used for this purpose. The rubric and the worksheet are designed to be used together and are aligned with the essential components of RTI (*RTI ECI Worksheet*, 2011, p. 1).

The RTI Essential Components Integrity Rubric and the RTI Essential Components Integrity Worksheet have been used to evaluate RtI programs in several states. Ruby, Sederstrom, & Piper (2012), presented an overview of the state of Washington's RtI integrity, explaining that using the RTI Essential Components Integrity Worksheet could help Washington State:

- 1) Advance understanding of essential components of RTI
- 2) Identify strengths

- 3) Identify gaps/needs
- 4) Encourage conversations & collaborations
- 5) Inform development of resources and assistance statewide (Ruby, Sederstrom, & Piper, 2012, p. 38).

For the purposes of this study, the NCRTI instrument was converted into a survey instrument and included a Likert Scale to measure principal, RtI coordinator, and teacher perceptions relating to campus RtI implementation. Included in the survey were nine questions that allow for further explanation. The nine questions allowing for further explanation were included to gain a deeper understanding of the overall process of RtI implementation within each campus.

Chapter IV

Introduction

The purpose of this quantitative study was to examine the relationship between RtI practices and the identification of students with specific learning disabilities in three elementary schools in a large suburban district in southeast Texas. The study was completed using an on-line survey instrument. In addition, statistically significant differences in responses were analyzed to gain deeper insight into respondent perceptions of RtI practices and procedures on each campus. The responses were measured across three schools and three groups: principal responses, RtI coordinator responses, and teacher responses. The overall level of RtI implementation was also revealed.

The survey instrument was based on the National Center for Response to Intervention's Essential Components Integrity Worksheet (2011). The NCRTI instrument is divided into the domains of screening, multi-level prevention/intervention systems, secondary level prevention, tertiary level of prevention, progress monitoring, data-based decision making, and overarching factors. For the purposes of simplicity and to increase the response rate, the survey instrument was shortened. In addition, the domains of secondary level prevention and tertiary level of prevention were consolidated within the multi-level prevention/intervention domain.

The domain scoring was calculated by participant survey responses and was illustrated in several ways. In order to address research question one – “Is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of the five NCRTI domains?” - The responses were measured and compared across positions. Statistically significant differences between leadership and teacher responses were revealed and contrasted against the school's rate of learning disability identification. To

address research question two – “What is the overall implementation fidelity rate of the five domains on each campus?” - The total implementation fidelity score is offered by domain and contrasted against the school’s rate of learning disability identification.

Several states have used implementation surveys to measure the level of RtI implementation. For example, in 2009 the state of Washington employed Evaluation Research Services to “Assess the effectiveness of implementing RTI and the impact of RTI implementation on the referral of students in special education programs” (Evaluation Research Services, 2010, p. 4). In addition, Florida’s Problem Solving/Response to Intervention Evaluation Tool Technical Assistance Manual uses surveys as part of its self-assessment element. The Florida Problem Solving/Response to Intervention Evaluation Tool Technical Assistance Manual is designed to support personnel in the identification of RTI practices that improve or detract from RtI implementation efforts (Castillo et al., 2012).

Several researchers have studied multiple facets of RtI deployment in public schools. Peterson, Prasse, Shinn, and Swerdlik (2007) examined the Illinois flexible service delivery system over several years. One of the three research questions for the study was to measure the effect that the model had on referrals and placements into special education. The researchers found that the rates of referral and placement remained steady over the lifespan of the study (Peterson, Prasse, Shinn, & Swerdlik, 2007).

The measurement of the fidelity of implementation was attempted by Telzrow, McNamara, and Hollinger (2000). In the study, the Ohio intervention-based assessment system was examined to determine the level of fidelity associated with implementation of key elements of the system. The study employed the use of a respondent checklist and an evaluation team

report. The results were variable with regard to the fidelity of implementation (Telzrow, McNamara, & Hollinger, 2000).

Results

In order to address research question two, the schools were assigned scores in each of the five NCRTI domains based on participant responses. The responses were calculated based on the NCRTI Integrity Rubric (2011). The rubric assigns scores on a scale from one through five with responses receiving a score based on the survey response. For example, a score of one was assigned to a response of *never*; a score of two was assigned to a response of *rarely*, a score of three was assigned to a response of *sometimes*, a score of four was assigned to a response of *frequently*, and a score of five was assigned to a response of *always*. The scores for Likert scale questions were tabulated for mean response by the survey instrument, Survey Monkey. Open ended questions were calculated by the researcher in accordance with the NCRTI Essential Components Integrity Worksheet Rubric.

Response Rate

The overall response rate for this study was 66.1 %. Sixty two surveys were emailed to the principals, RtI coordinators, and teachers from the three participant schools and 51 surveys were returned. Three of the respondents declined, and seven were disqualified by the survey instrument for incomplete answers. All three principals and all three RtI coordinators from each campus participated in the survey. Overall, 56 teachers were asked to complete the survey and 32 completed it. The overall response rate for the leadership positions of principal and RtI coordinator was 100 %. The teacher response rate was 57.1 %. The teacher response rate was the following: school one, 42.1 %; school two, 41.6 %; and school three, 76.0 %.

Open-Ended Survey Responses

Several questions in the study are presented in the open-ended format. Open-ended or unstructured questions were included in the study to allow the respondents freedom to offer deeper explanations relating to the survey question. As stated by Gay et al. (2011):

An unstructured item format, in which the respondent has complete freedom of response (i.e., questions are posed and the respondent must construct a response), is sometimes defended on the grounds that it permits greater depth of response and insight into the reasons for the responses” (Gay et al., 2012, p. 187).

The respondents were asked to complete a total of eleven open-ended survey questions throughout the survey. The open-ended questions were scored by matching the responses with the criteria listed in the NCRTI Integrity Rubric. The scoring guidelines of the NCRTI instrument were followed strictly by the researcher. Open-ended responses are illustrated in table six.

Table 6

Open-Ended Questions

Question Number	Question
2	What is your current position?
3	At which elementary school do you currently work?
13	What is the maximum small group size?
25	What is the maximum small group size for tier III?
31	What specific tools are used for progress monitoring?
33	How often is the progress of students at the secondary level (tier II) monitored?
34	How often is the progress of students at the secondary level (tier III) monitored?
35	Describe how decisions are made to move students between levels.
36	Who is involved in decision making relating to tier movement?
37	What data are used to inform those decisions and how are they used?

Possible answers to the open-ended questions ranged from simply inputting a number response to the describing of a process. There are several recurring themes in relation to responses by the three positions examined in the study. The overarching theme was variance. For example, in response to question 35 - describe how decisions are made to move students between levels, responses are illustrated in table 7.

Table 7

Open-Ended Response Variance - Question 35- “Describe how decisions are made to move students between levels”.

Position	Response
<i>Principal</i>	<i>Principal Responses</i>
School One	RtI and staffing
School Two	Collaborative conference with staff and data
School Three	Data analysis by RtI committee
<i>RtI Coordinator</i>	<i>RtI Coordinator Responses</i>
School One	Educational history, retention, work samples
School Two	Performance/progress based on student data
School Three	RtI collaborative conferences
<i>Teachers</i>	<i>Examples of Teacher Responses</i>
School One	Failure or consistent slow growth
School Two	Not familiar with process, admin takes care
School Three	Assessments

While many responses reflected a clear understanding of tier movement procedures, there were responses that left questions regarding student tier-to-tier movement. Obviously, the response from “Not familiar with process, admin takes care” is a reflection of this predicament.

Description of Results in Terms of Population Sample

School One Implementation Score

School one had the highest rate of learning disability identification with a rate of 1/25 respectively. The responses were calculated, and means were found for principal, RtI coordinator, and teacher responses. According to the NCRTI instrument, responses of 1.00 – 2.99 suggest limited evidence of implementation integrity, responses ranging from 3.00 – 4.99 suggest medium evidence of implementation integrity, and responses of 5.00 suggest strong evidence of implementation integrity. The responses by position are illustrated in table 8.

Table 8

RTI Essential Components Integrity Score

	Principal	RtI Coordinator	Teachers	Overall Score
Screening	4.60	1.66	3.61	3.27
Prevention	4.86	4.31	4.15	4.44
Monitoring	1.66	1.66	2.54	1.95
Decision making	3.83	4.16	3.75	3.91
Overarching	4.50	5.00	3.94	4.48
Factors				

The response data from the screening domain shows a considerable difference in the responses of the principal, RtI coordinator, and teachers. The principal rated the school's screening procedures as medium (4.60) while the mean of the response of the RtI coordinator fell in the limited range (1.66). The teacher cohort was more aligned with the principal revealing medium score of 3.61. Overall, the mean domain score for the school fell in the medium evidence of implementation range at 3.27.

The response data from the multi-level prevention/intervention domain demonstrated a higher level of agreement between the positions. The principal rated the school's multi-level prevention/intervention systems at 4.86 within the medium range. The RtI coordinator response was 4.31 falling within the medium range. Finally, the teacher cohort responses rated a score of 4.15, again falling within the medium range. The overall mean domain score was in the medium range with a score of 4.44.

The response data from the progress monitoring domain demonstrated the lowest scores in any domain for school one. The principal rated the school's progress monitoring efforts at 1.66 falling within the limited range. The RtI coordinator's responses were equally low at 1.66. The teacher cohort rated the school somewhat higher at 2.54 yet still in the limited range. It should be noted that the progress monitoring scores were generated entirely from open-ended responses. However, these responses were scored rigorously in accordance with the standards outlined in the NCRTI Integrity worksheet rubric. The overall domain score for progress monitoring was 1.95, which falls within the limited range.

The response data from the data-based decision making domain depict another cluster of responses in the medium range. The principal responses were rated as 3.83 falling in the medium range. The RtI coordinator responses were also in the medium range with a score of 4.16 on the scale. The teacher cohort revealed a score of 3.75 and (like the other scores) was within the medium range. The overall domain score for data-based decision making was 3.91.

Finally, the response data from over-arching factors such administrative involvement, staff training, professional development, and efforts to accommodate cultural and linguistic differences in students were also in the medium range. The principal responses were rated as 4.50 allowing for a medium evidence implementation rating. The RtI coordinator responses

culminated with a score of 5.00 for a rating in the strong evidence of implementation. Finally, the teacher cohort ranked over-arching factors as 3.94 falling in the medium range. The overall domain score for over-arching factors is 4.48. Table 8 illustrates the overall implementation rating for school one in each domain. The overall domain mean score was calculated by adding the individual scores from each position and dividing those scores by three.

Table 9

Implementation Fidelity Rate - School One

Domain	Mean	Level of Evidence
Domain I- Screening	3.27	Medium
Domain II- Prevention	4.44	Medium
Domain III- Monitoring	1.95	Limited
Domain IV- Decision Making	3.91	Medium
Domain V- Overarching factors	4.48	Medium

Statistically Significant Differences in Fidelity of Implementation

In order to address research question two- is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of the five NCRTI domains? - The respondent data was analyzed across positions. Each domain was analyzed across the positions of principal, RtI coordinator, and teacher.

The principal rated the overall implementation at 3.86. The RtI coordinator rated the overall implementation at 3.34. Finally, the teacher cohort rated the overall implementation at 3.59. All positions scored the overall implementation fidelity within the medium range on the NCRTI instrument. Tables 10 - 14 illustrate the positional perceptions of implementation fidelity for school one and the statistical significance by each domain of the NCRTI instrument.

Table 10

ANOVA - School One - Test for Statistical Significance by Position

Domain One -	n	M	SD	F	P	Significance
Screening						
Principal	1	4.667	0.5774	11.76	0.008397	Yes
RtI	1	1.667	1.1547			
Coordinator						
Teachers	8	3.6133	0.4600			

Note. n= sample size, M=Mean Score, SD=Standard Deviation, F=F Value, P=P Value, NSD= No Statistical Difference

Table 11

ANOVA - School One - Test for Statistical Significance by Position

Domain Two-	n	M	SD	F	P	Significance
Prevention						
Principal	1	4.8636	0.4676	5.23	0.007918	Yes
RtI	1	4.3182	1.1705			
Coordinator						
Teachers	8	4.1577	0.3748			

Note. n= sample size, M=Mean Score, SD=Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

Table 12

ANOVA - School One - Test for Statistical Significance by Position

Domain	n	M	SD	F	P	Significance
Three-Monitoring						
Principal	1	1.666667	1.154701	0.86	0.469464	NSD
RtI	1	1.666667	1.154701			
Coordinator						
Teachers	8	2.553333	0.254231			

Note. n= sample size, M=Mean Score, SD= Standard Deviation, F= F Value, P= P value, NSD= No Statistical Difference

Table 13

ANOVA - School One - Test for Statistical Significance by Position

Domain Four-Decision Making	n	M	SD	F	P	Significance
Principal	1	3.83	0.2404	0.7	0.562993	NSD
RtI	1	4.165	0.2333			
Coordinator						
Teachers	8	3.755	0.5445			

Note. n= sample size, M=Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

Table 14

ANOVA - School One - Test for Statistical Significance by Position

Domain Five- Overarching Factors	n	M	SD	F	P	Significance
Principal	1	4.50	0.5774	7.61	0.011623	Yes
RtI Coordinator	1	5.00	0			
Teachers	8	3.94	0.3314			

Note. n= sample size, M=Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

The ANOVA data for school one demonstrated statistically significant data in domain one (screening), domain two (prevention systems), and domain five (overarching factors). In domain one (screening), the overall p-value was 0.00897. A p-value less than 0.05 are statistically significant. Within domain one, M1 (principal) versus M2 (RtI coordinator) had a p-value of < .01 and M2 (RtI coordinator) versus M3 (teachers) had a p-value of < .05. M1 (principal) versus M3 (teachers) was insignificant.

The ANOVA data for domain two (prevention systems) was also found to be statistically significant. The overall p-value for domain two was 0.007918. Within domain two (prevention systems), M1 (principal) versus M2 (RtI coordinator) and M2 (RtI coordinator) versus M3 (teachers) were insignificant. However, M1 (principal) versus M3 (teachers) were found to have a p-value of < .01. The ANOVA data for domain five (overarching factors) was also statistically significant. The overall p-value for domain five was 0.011623. Within domain five (overarching factors), M1 (principal) versus M2 (RtI coordinator) and M1 (principal) versus M3 (teachers)

were insignificant. However, M2 (RtI coordinator) versus M3 (teachers) was found to have a p-value of $< .01$.

School Two Implementation Score

School two, with a student rate of 1/76, has the lowest rate of learning disability identification. The responses were calculated and means were found for principal, RtI coordinator, and teacher responses. As per the NCRTI instrument, responses of 1.00 – 2.99 are considered to have limited evidence of implementation integrity, responses ranging from 3.00 – 4.99 are considered to have medium evidence of implementation integrity, and responses of 5.00 are considered to have strong evidence of implementation integrity. The responses by position are illustrated in table 15.

Table 15

RtI Essential Components Integrity Score

	Principal	RtI Coordinator	Teachers	Overall Score
Screening	3.66	4.66	3.88	4.06
Prevention	3.86	4.54	4.46	4.29
Monitoring	4.33	4.33	2.52	3.73
Decision making	4.00	5.00	4.28	4.42
Overarching	4.00	4.00	4.30	4.10
Factors				

The response data from the screening domain shows considerable agreement in the responses of the principal, RtI coordinator, and teachers. The principal rated the school screening procedures as medium (3.66) while the mean of the response of the RtI coordinator was noticeably stronger (4.66). The teacher cohort was more aligned with the principal,

revealing a medium score of 3.88. Overall, the mean domain score for the school fell in the medium evidence of implementation range at 4.06.

The response data from the multi-level prevention/intervention domain again demonstrated a high level of agreement between the positions. The principal rated the school multi-level prevention/intervention systems at 3.86, within the medium range. The RtI coordinator response was 4.54 falling within the medium range. Finally, the teacher cohort responses rated a score of 4.46, again falling within the medium range. The overall mean domain score was in the medium range with a score of 4.29.

The response data from the progress monitoring domain demonstrated the lowest scores in any domain for school two. The principal rated the school's progress monitoring efforts at 4.33, falling within the medium range. The RtI coordinator's responses also came in at 4.33. The teacher cohort rated the school progress monitoring substantially lower at 2.52. This is the only individual score in the limited range. The overall domain score for progress monitoring was 3.73, which fell in the medium range.

The response data from the data-based decision making domain ranged from 4.0 to 5.0. The principal responses were rated as 4.0 falling in the medium range. The RtI coordinator responses were in the strong range with a score of 5.0 on the scale. The RtI coordinator responses to the data-based decision making domain reflected the highest individual score for school two in any domain. The teacher cohort revealed a score of 4.28 and fall in the medium range. The overall domain score for data-based decision making was 4.42.

Finally, the response data from over-arching factors exhibited considerable agreement. The principal responses were rated as 4.00, allowing for a medium evidence implementation rating. Similarly, the RtI coordinator responses were 4.00 for a rating in the medium evidence of

implementation. Finally, the teacher cohort ranked over-arching factors as 4.30, also falling in the medium range. The overall domain score for over-arching factors was 4.10. Table 16 illustrated the overall implementation rating for school two in each domain. The overall domain mean score was calculated by adding the individual scores from each position and dividing those scores by three.

Table 16

Implementation Fidelity Rate - School Two

Domain	Mean	Level of Evidence
Domain I- Screening	4.06	Medium
Domain II- Prevention	4.29	Medium
Domain III- Monitoring	3.73	Medium
Domain IV- Decision Making	4.42	Medium
Domain V- Overarching Factors	4.10	Medium

School two response data reflected significant agreement between the three positions of principal, RtI coordinator, and teachers. In fact, the ranges of responses in three of the five domains were between 3.66 and 4.41. Furthermore, in three of five domains, the response data fell in the medium evidence range. In addition, only one data point (the teacher progress monitoring score) fell into the limited range.

Interestingly, of the three positions for school two, the principal scores were lower than the RtI coordinator or the teachers. The principal rated the overall implementation at 3.97. The RtI coordinator rated the overall implementation at 4.50. Finally, the teacher cohort rated the overall implementation at 3.88, which was closely aligned with the principal's scores.

The domain with the lowest overall score for school two was the domain of progress monitoring. This was a consistent phenomenon across the three schools. However, the score for progress monitoring for school two was the highest score in the study. It is worth noting that the teacher cohort was the lowest score in the progress monitoring domain for school two. In fact, the teacher cohort score in the progress monitoring domain was the only score in the limited range for school two.

Statistical Differences in Fidelity of Implementation by Position

In order to address research question one - is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of the five NCRTI domains? The respondent data was analyzed across positions. Each domain was analyzed across the positions of principal, RtI coordinator and teacher.

The principal rated the overall implementation at 3.97. The RtI coordinator rated the overall implementation at 4.50. Finally, the teacher cohort rated the overall implementation at 3.88. All positions scored the overall implementation fidelity within the medium range on the NCRTI instrument. Table 17-21 illustrate the positional perceptions of implementation fidelity for school two and the statistical significance by each domain of the NCRTI instrument.

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Table 17

ANOVA - School Two - Test for Statistical Significance by Position

Domain One -	n	M	SD	F	P	Significance
Screening						
Principal	1	3.6667	0.5774	3.12	0.117790	NSD
RtI	1	4.6667	0.5774			
Coordinator						
Teachers	19	3.8867	0.3592			

Note. n= sample size, M=Mean Score, SD=Standard Deviation, F=F Value, P=P Value, NSD= No Statistical Difference

Table 18

ANOVA - School Two - Test for Statistical Significance by Position

Domain Two	n	M	SD	F	P	Significance
- Prevention						
Principal	1	3.8636	0.8888	7.68	0.001036	Yes
RtI	1	4.5455	0.5958			
Coordinator						
Teachers	19	4.4655	0.2195			

Note. n= sample size, M = Mean Score, SD= Standard Deviation, F= F Value, P= P Value NSD= No Statistical Difference,

Table 19

ANOVA - School Two - Test for Statistical Significance by Position

Domain	n	M	SD	F	P	Significance
Three - Monitoring						
Principal	1	4.3333	1.1547	3.4	0.102997	NSD
RtI	1	4.3333	1.1547			
Coordinator						
Teachers	19	2.5267	0.460			

Note. n= sample size, M= Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

Table 20

ANOVA - School Two - Test for Statistical Significance by Position

Domain Four- Decision Making	n	M	SD	F	P	Significance
Principal	1	4.00	1.4142	0.63	0.590973	NSD
RtI	1	5.00	0.00			
Coordinator						
Teachers	19	4.285	1.4142			

Note. n= sample size, M= Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

Table 21

ANOVA - School Two - Test for Statistical Significance by Position

Domain Five- Overarching Factors	n	M	SD	F	P	Significance
Principal	1	4.0	0.8165	0.25	0.784034	NSD
RtI Coordinator	1	4.0	0.8165			
Teachers	19	4.3025	0.3798			

Note. n= sample size, M=Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

School two identified students as learning disabled at a rate of 1/76. School two's rate of learning disability identification was the lowest rate in the study. School two had only one statistically significant domain (prevention systems), while the other study schools had three (school one) and one (school three) respectively. The domain of multi-level prevention systems was found have a p-value of 0.001036. M1 (principal) versus M2 (RtI coordinator) was found to be significant with a p-value of <.01. Likewise, M1 (principal) versus M3 (teachers) was also found to be significant with a p-value to <.01. Finally, M2 (RtI coordinator) versus M3 (teachers) was found to be insignificant statistically.

The major variances in domain two were found the responses of: evidence of fidelity measures, adequacy of training for the interventionist, consistent implementation of the criteria employed to judge student responsiveness, and maximum group size for tier three interventions. The variances for domain two were very similar for school one and school two. Both schools one and school two had noteworthy variances in the responses in the questions of evidence of fidelity measures and consistent implementation of the criteria employed to judge student responsiveness.

School Three Implementation Score

School three had the second highest rate of learning disability identification. The school identified students at a rate of 1/51 respectively. The responses were calculated and means were found for principal, RtI coordinator, and teacher responses. Based on the NCRTI instrument, responses of 1.00 – 2.99 are considered to have limited evidence of implementation integrity, responses ranging from 3.00 – 4.99 are considered to have medium evidence of implementation integrity, and responses of 5.00 are considered to have strong evidence of implementation integrity. The responses by position are illustrated in table 22.

Table 22

RtI Essential Components Integrity Score

Domain	Principal	RtI Coordinator	Teachers	Overall Score
Screening	5.00	5.00	4.60	4.86
Prevention	4.95	4.77	4.44	4.72
Monitoring	1.66	1.66	2.96	2.05
Decision making	3.83	4.16	4.00	3.99
Overarching Factors	4.50	4.35	4.35	4.61

The response data from the screening domain showed a considerable agreement in the responses of the principal, RtI coordinator, and teachers. The principal rated the school's screening procedures as strong (5.0). Likewise, the mean of the response of the RtI coordinator fell in the strong range (5.0). The teacher cohort was in the medium range, revealing a medium score of 4.6. Overall, the mean domain score for the school fell in the medium evidence of implementation range at 4.86.

The response data from the multi-level prevention/intervention domain demonstrated a high level of agreement between the positions. The principal rated the school multi-level prevention/intervention systems at 4.95 within the medium range. The RtI coordinator response was 4.77 falling within the medium range. Finally, the teacher cohort responses rated a score of 4.44, again falling within the medium range. The overall mean domain score was in the medium range with a score of 4.72.

The response data from the progress monitoring domain demonstrated the lowest scores in any domain for school three. The principal rated the school's progress monitoring efforts at 1.66 falling within the limited range. The RtI coordinator's responses were equally low at 1.66. The teacher cohort rated the school somewhat higher at 2.96, yet still in the limited range. The overall domain score for progress monitoring was 2.05, a score which fell in the limited range.

The response data from the data-based decision making domain demonstrated responses in the medium range. The principal responses were rated as 3.83 falling in the medium range. The RtI coordinator responses were also in the medium range with a score of 4.16 on the scale. The teacher cohort revealed a score of 4.00 and like the other scores was within the medium range. The overall domain score for data-based decision making was 3.99.

Finally, the response data from over-arching factors such administrative involvement, staff training and professional development, and efforts to accommodate cultural and linguistic differences in students was examined. The principal responses were rated as 4.50 allowing for a medium evidence implementation rating. The RtI coordinator responses culminated with a hefty score of 5.00 for a rating in the strong evidence of implementation. Finally, the teacher cohort ranked over-arching factors as 4.35 falling in the medium range. The overall domain score for over-arching factors was 4.61. Table 10 illustrates the overall implementation rating for school

three in each domain. The overall domain mean score was calculated by adding the individual scores from each position and dividing those scores by three.

Table 23

Implementation Fidelity Rate - School Three

Domain	Mean	Level of Evidence
Domain I- Screening	4.86	Medium
Domain II- Prevention	4.72	Medium
Domain III- Monitoring	2.05	Limited
Domain IV- Decision Making	3.99	Medium
Domain V- Overarching Factors	4.61	Medium

The response data from school three reveal four of five domains that fell in the higher end of the medium range. The range of scores in those four domains is 4.06 – 4.84, respectively. The response data reflected strong staff perception of screening procedures (4.86), multi-level prevention systems (4.72), and overarching factors (4.61). The lowest score of the four domains was found in the data-based decision making domain (3.99). The only domain that fell out of the medium range was the progress monitoring domain (2.05) falling in the limited range. Interestingly, school one and school three have both higher rates of learning disability identification and the lowest rating in the progress monitoring domain.

Statistical Differences in Fidelity of Implementation by Position

In order to address research question one; is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of

the five NCRTI domains? The respondent data was analyzed across positions. Each domain was analyzed across the positions of principal, RtI coordinator and teacher.

The principal rated the overall implementation at 3.97. The RtI coordinator rated the overall implementation at 4.10. Finally, the teacher cohort rated the overall implementation at 4.05. All positions scored the overall implementation fidelity within the medium range on the NCRTI instrument. Table 24-28 illustrate the positional perceptions of implementation fidelity for school 3 and the statistical significance by each domain of the NCRTI instrument.

Table 24

ANOVA - School Three - Test for Statistical Significance by Position

Domain One -	n	M	SD	F	P	Significance
Screening						
Principal	1	5.00	0.0	0.0	1.0000	NSD
RtI	1	5.00	0.0			
Coordinator						
Teachers	5	4.60	0.0			

Note. n= sample size, M=Mean, SD=Standard Deviation, F= F Value, P = P Value, NSD= No Statistical Difference

Table 25

ANOVA - School Three - Test for Statistical Significance by Position

Domain Two – Prevention	n	M	SD	F	P	Significance
Principal	1	4.9545	0.2132	7.57	0.001132	Yes
RtI Coordinator	1	4.7727	0.6119	0.4072		
Teachers	5	4.4432				

Note. n= sample size, M=Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

Table 26

ANOVA - School Three - test for Statistical Significance by Position

Domain Three – Monitoring	n	M	SD	F	P	Significance
Principal	1	1.666667	1.154701	1.64	0.270277	NSD
RtI Coordinator	1	1.666667	1.154701			
Teachers	5	2.966667	0.650641			

Note. n= sample size, M= Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

Table 27

ANOVA - School Three - Test for Statistical Significance by Position

Domain Four	n	M	SD	F	P	Significance
– Decision Making						
Principal	1	3.83	0.2404	0.88	0.500347	NSD
RtI	1	4.165	0.2333			
Coordinator						
Teachers	5	4.0	0.2828			

Note. n= sample size, M= Mean Score, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

Table 28

ANOVA - School Three - Test for Statistical Significance by Position

Domain Five	n	M	SD	F	P	Significance
– Overarching Factors						
Principal	1	4.5	0.5774	3.09	0.095141	NSD
RtI	1	5.0	0.0			
Coordinator						
Teachers	5	4.35	0.3416			

Note. n= sample size, M= Mean, SD= Standard Deviation, F= F Value, P= P Value, NSD= No Statistical Difference

School three identified students as learning disabled at a rate of 1/51. School three was found to have statistically significant p-values in only domain two (prevention measures). In domain two school three had a p-value of 0.001132. In a comparison of position means, M1 (principal) versus M2 (RtI coordinator) was found to be insignificant. However, M1 (principal) versus M3 (teachers) was significant with a p-value of < .01. In addition, M2 (RtI coordinator) versus M3 (teachers) was significant with a p-value of < .05.

Based on response data, specific areas of variance from domain two were: decision making based on student final status for tier two, decision making based on student final status for tier three, and max group size for tier-three interventions. Each area is of importance in relation to the overall level of implementation fidelity.

School Comparison

The overall fidelity of implementation score based on the NCRTI instrument was measured across the three feeder schools. The schools received composite scores based on the mean responses from each school's principal, RtI coordinator, and teachers. Table 29 illustrates the mean responses across schools and domains of the NCRTI instrument.

Table 29

Composite NCRTI Implementation Fidelity Score Across Schools

Domain	School One	School Two	School Three
Screening	3.27	4.06	4.84
Prevention	4.44	4.29	4.72
Monitoring	1.96	3.73	2.05
Decision Making	3.91	4.42	3.99
Overarching factors	4.48	4.10	4.61

The correspondence between a lower fidelity of implementation score and a higher rate of learning disability identification is present in the first NCRTI domain of screening. School one identifies students at a rate of 1/25 and has the lowest screening rating of the three schools in the study. The response data does not; however demonstrate a correspondence between the rates of learning disability identification and lower fidelity of implementation scores for school two

and school three. School three identifies at a rate of 1/51, yet has the highest implementation score in the study. The range of scores in domain one is 3.27 through 4.84.

The domain of multi-level prevention and intervention systems reveals all schools performed in the medium range of implementation. School one scored are in the medium range (4.44) but is only slightly higher than school two (4.29). Additionally, school three identified at a 1/51 rate and had the highest implementation score of each study school. The range of scores for domain two was 4.29 through 4.72.

The domain of progress monitoring suggested a relationship between the fidelity of implementation score and the rate of learning disability identification. School one progress monitoring score in domain three was the lowest of the three study schools at 1.95. School one also had the highest rate of learning disability identification at 1/25. School three had a domain score of 2.05 and a rate of learning disability identification of 1/51. Finally, school two had a domain score of 3.73, the highest domain score of any study school. School two also had the lowest identification rate for specific learning disabilities. The range of scores for domain three was 1.95 through 3.73.

The domain of data-based decision making was also linear in nature, yet less significant statistically. School one held a domain score in the medium range of implementation at 3.91. The domain score for school one was the lowest score in the study for domain four, albeit only slightly. School three had a domain score of 3.99, likewise falling in the medium range. Finally, school two had the highest domain score in the study at 4.42. The range of scores for this domain was 3.91 through 4.42.

Domain five was the domain relating to overarching factors. In domain five, school two had the lowest score at 4.1. School one had a score of 4.48 and school three scored the highest

rating of 4.61. Domain five did not demonstrate a relationship between low domain scores and higher rates of learning disability identification. The range of scores for domain five was 4.1 through 4.61.

Conclusion

Specific Learning Disability Connections

Proper implementation is vital to the success of RtI frameworks. In fact, Keller – Margulis (2012) argues; "It is imperative that our efforts to implement and evaluate RtI models are completed by equally rigorous efforts to engage in implantation fidelity monitoring" (Keller-Margulis, 2012, p. 350). The question is; can evidence of limited fidelity of overall implementation of an RtI framework be associated with an increase in specific learning disability identification?

Gersten and Dimino (2006) make the case directly associating fidelity of implementation and identification specifically arguing; "A child could be a nonresponder due to the teacher's lack of skill or training or failure to implement the RTI system regularly and with fidelity" (Gersten & Dimino, 2006, p. 103). The contention made by Gersten and Dimino is clear, skill and fidelity associated with RtI implementation matter. In addition, a student labeled as a non-responder is on the path to learning disability identification.

Kreider (2010) studied the effects of RtI on rates of specific learning disabilities in one Pennsylvania school district from 2001 – 2008. The study focused on learning disability identification rates before and after RtI implementation. Kreider discovered there had been a 28% decrease in learning disability referral rates after RtI was fully implemented. A key point in the study was the examination of implementation fidelity of RtI within the district. The district RtI practices were found be partially to fully implemented with fidelity (Kreider, 2010).

State education agencies have also found value in evaluating the connection between RtI implementation and special education referral rates. For example, in 2009, the state of Washington commissioned an evaluation of state RtI programs. Specifically, the Washington study was designed to, “Assess the effectiveness of implementing RTI and the impact of RTI implementation on the referral of students in special education programs” (Evaluation Research Services, 2010, p. 4). The Washington study (2009) was endorsed by the NCRTI.

Chapter V

Introduction

Response to intervention frameworks were created in an effort to reduce to number of students identified as learning disabled through prevention of early learning difficulties (Lipson, Chomsky-Higgins, & Kanfer, 2011). The overall concept of RtI is associated with student response to evidence – based interventions and the student’s response or lack of response can help determine the next step in the intervention process. As stated by VanDerHeyden, Witt, and Gilbertson (2007): “The basic concept of RTI is that when provided with effective intervention, a student can be determined to have responded or not responded adequately to that intervention and such information can be used to guide service delivery decisions” (p. 226). There is also a great deal of variance in the manner with which RtI programs are executed in schools. This variance can have implications on the rate of learning disability identification from school to school (Mellard, Stern, & Woods, 2011). Variance in RtI practices and procedures is the focus of this study.

Specifically, this study was completed in to examine the practices and procedures of three elementary schools’ Response to Intervention programs in relation to each school’s rate of learning disability identification. Based on 2011-2012 archival data, the three schools identified students as learning disabled at significantly different rates. The study was completed using an on-line survey instrument, and the survey questions were based on the RTI Essential Components Integrity Worksheet and were scored in accordance with NCRTI standards.

The study was designed to answer two research questions:

“Is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of the five NCRTI domains”? And “What is the overall fidelity rate of the five domains on each campus”? To answer both research questions, the researcher scored the survey responses from each participant and each school and input the scores into a five domain spreadsheet. Each domain score was assigned by position and by school.

After completing the study, the researcher noted several interesting findings. There were many statistically significant findings. Relevant findings include the domains of screening, multi-level prevention systems, and overarching factors for school one. Significant findings for schools two and three were limited to domain two - multi-level prevention systems. The researcher also found data of interest in domain three (progress monitoring) for all three schools.

Discussion of the Results

Research question one was “Is there a statistical difference between the perceptions of the principal, RtI coordinator, and teachers regarding fidelity measures in each of the five NCRTI domains”? Research question one was designed to determine if there was a significant difference in statistical terms in participant responses. By determining the statistical significance in the perception of each participant, the findings for each domain are legitimized. Further, the overall findings, statistically significant or not are identified in terms measurable by statistics.

The results indicate that there were statistically significant differences in the perceptions of the principal, RtI coordinator, and teachers, particularly at school one. Data derived from participant responses at school one identified three statistically significant areas in RtI practices and procedures: Domain one (screening), domain two (multi-level prevention systems), and domain three (overarching factors). The low screening score was due largely to the RtI

coordinator responses to survey questions relating to frequency of screening, the cut-score used, and whether a follow up assessment was given to students prior to placing them in tier II interventions. The frequency of screening is vital since screening measures performed only at the beginning of the school year produce more false-positive results (Johnson & Mellard, 2009). Too many student false-positives can result in a higher learning disability rate. School One had the highest rate of learning disability identification in the study.

In addition, the use of a well-defined cut-score is an important element in the screening process. A well-defined cut score can reduce misdiagnosis and over-identification of students (Compton et.al, 2006). Finally, follow-up screening is crucial, particularly if the initial screening measure identifies an at-risk student. According to the campus RtI coordinator, the school never conducts follow-up assessments. This is an area of concern. This situation is particularly relevant as poor screening measures can result in the over-identification of students who do not require additional support (Hughes & Dexter, 2008c) while monopolizing limited resources for those in true need of assistance.

Another important factor relating to the response data is the range of responses. In the area of screening, the principal responses are divergent from those of the RtI coordinator. The principal responses to screening frequency and cut-score reflect a strong level of implementation, scoring 5.0 (always) on the scale. The RtI coordinator responses were 1.0 (never) and 3.0 (sometimes) to the same questions. The follow-up assessment question was also divergent as the principal scored 4.0 (frequently) and the RtI coordinator scored 1.0 (never). The statistical significance in the individual means of the responses for domain is also interesting. The principal mean (M1) versus the mean of the RtI coordinator (M2) were found to be

significant with a p-value of, < .01. The mean of the RtI coordinator (M2) versus the mean of the teachers (M3) was also significant with a p-value of < .05.

The second area of statistical significance is domain two (multi-level prevention systems). This domain encompassed the largest data set in the study with 22 questions devoted to multi-level prevention systems. Within domain two (multi-level prevention systems), M1 (principal) versus M2 (RtI coordinator) and M2 (RtI coordinator) versus M3 (teachers) were insignificant. However, M1 (principal) versus M3 (teachers) were found to have a p-value of < .01. Based on response data, specific areas to address from domain two are evidence of fidelity measures, consistent implementation of the criteria employed to judge student responsiveness, interventions supplementary to core instruction, duration of tier-three interventions and maximum group size for tier three interventions. Each area is related to the overall level of implementation fidelity.

The responses for question ten, “Is there evidence that the interventions were implemented with fidelity?” ranged from 5.0 (always) for the principal, to 3.63 for the teachers. The RtI coordinator scored the question at 4.0 (frequently). The monitoring of fidelity is necessary for an RtI framework and demonstrates that interventions are being implemented as they were designed (Keller-Margulis, 2012). For this question, the principal (5.0) had more confidence in the evidence of fidelity than did the teachers (3.63).

Question 17 asked, “Are the criteria for determining student responsiveness implemented accurately and consistently?” The responses varied from the principal rating of 5.0 (always) to the teachers 3.63. The RtI coordinator response was 4.0 (frequently). The consistent application of student response criteria is an important element in the process and aids in decision making.

As argued by Lipson et.al (2011), “It should be a very high priority for teachers and specialists to gather specific information about individual students to make appropriate decisions” (p. 205).

Question 18 also demonstrated variance in respondent answers. The question asked, “Are secondary level interventions implemented as a supplement to the core curriculum?” The range of responses started with the principal response of 5.0 (always) and ended with the RtI coordinator response of 1.0 (never). The teacher responses were more aligned with the principal at 4.38. Interventions supplementary to core classroom instruction are a fundamental RtI construct (TEA, 2008).

The next question in domain two illustrating variance was question 20, which asked, “Are tertiary (tier-three) level interventions longer in duration (more minutes) than the secondary level intervention?” The principal response was 3.0 (sometimes), the RtI coordinator response was 1.0 (never), and the teacher response was 4.13. Interestingly, the teacher group data showed that tier three interventions are of greater duration while the principal and RtI coordinator did not share the same level of confidence. Throughout education literature, it is generally understood that tier three interventions are of greater duration than interventions performed in tier two (Hoover & Love, 2011). In fact, Hamilton (2010) makes the case that, “Instruction in tier - three is characterized as intense” (p. 5). Several questions come to the fore: what data is being used from tier three to inform learning disability identification? Has the student had a chance to benefit from “intense” tier three instruction? Is that data valid? As stated by Whitelock (2010):

The school reform effort means that school professionals collaboratively look at data to identify students in need of interventions, inform instruction, differentiate in the classroom, and identify students for special education. Schools who

implement core and intervention curriculums with fidelity while also differentiating based on student performance data ensure that all students learn (p. 26).

The overarching factors in domain five were also a statistically significant area for school one. Areas identified by response data include the adequacy of current staff training and the opportunities for staff development. Interestingly, the teacher group rated the adequacy of staff training at 3.75, while both the principal and RtI coordinator responses were a perfect 5.0. In addition, professional development opportunities were rated by the teacher group as 3.63, while the principal and the RtI coordinator rated professional development opportunities at 4.0 and 5.0. Within domain five (overarching factors), principal (M1) versus RtI coordinator (M2) and (M1) principal versus (M3) teachers were insignificant. However, RtI coordinator (M2) versus teachers (M3) was found to have a p-value of $< .01$.

The final area of interest is found in the domain of progress monitoring. While not statistically significant, all position scores fell in the limited evidence range for progress monitoring measures. The domain included three open-ended questions, and the scoring of the responses is aligned with the NCRTI Integrity Rubric. The questions for this domain pertain to progress monitoring tools and the frequency of progress monitoring in tier II and tier III. The NCRTI Integrity Rubric requires the following for a rating of Strong Evidence (5.00):

Selected progress monitoring tools meet all of the following criteria: (1) has at least nine alternate forms of equal and controlled difficulty; (2) specifies minimum acceptable growth; (3) provides benchmarks for minimum acceptable end-of-year performance; (4) reliability and validity information for the performance level score are available (*RTI ECI Worksheet*, 2011, p. 5).

The schools' ratings for the use of specific progress monitoring tools ranged from 3.0 (medium) to 2.5 (limited) with the principal and RtI coordinator responses rating 3.0 and the teacher cohort responses rating 2.5 (limited). The overall domain score for progress monitoring is 2.83 (limited).

The frequency of progress monitoring recommended is at least monthly for tier two interventions (*RTI ECI Worksheet, 2011*). The school's scores for the frequency of progress monitoring at tier-two all fell in the limited range. The principal score reflected a 1.0 (limited) rating, the RtI coordinator score reflected 1.0 (limited) rating, and the teacher cohort score showed a 2.83 (limited) rating. The overall school rating for tier two progress monitoring was 1.61.

The frequency of progress monitoring is recommended at least weekly for tier - three interventions (*RTI ECI Worksheet, 2011*). The schools' scores for frequency of progress monitoring at tier - three all fell within the limited range. The principal score reflected a 1.0 (limited) rating, the RtI coordinator score reflected 1.0 (limited) rating, and the teacher cohort score showed a 2.33 (limited) rating. The overall school rating for tier - two progress monitoring was 1.44.

The use of appropriate progress monitoring procedures is critical for the success of an RtI framework. In fact, progress monitoring practices and procedures can lead to more accurate special education referrals (TEA, 2008). Therefore, the lack of effective progress monitoring practices and procedures can lead to an increase in the rate of students identified as learning disabled.

Research question two was, "What is the overall fidelity rate of the five domains on each campus?" When compared across the three schools, school one had the lowest scores in three of

the five domains. School one's composite score for domain one (screening) was 3.27, while school two scored 4.06, and school three scored 4.84. School one also had the lowest score in domain three (progress monitoring) with a score of 1.96. Finally, school one also had the lowest score in domain four (data-based decision making) with a score of 3.91.

Based on survey responses, a large variance in the responses of the Principal, teachers, and the RtI coordinator was found in domain one (screening). The principal response was 4.6, the teacher response was 3.61, and the RtI coordinator response was 1.66. The greatest variance in responses in the questions for domain two was found in questions relating to evidence of fidelity measures, adequacy of training for interventionist, consistency of criteria used to judge responsiveness, and maximum group size for tier three interventions.

Specifically, variance in responses was found for question 10, "Is there evidence that the interventions were implemented with fidelity?" The principal response was 3.0 (sometimes) while the RtI coordinator scored the question at 4.0 (frequently). Finally, the teachers scored evidence of fidelity measures highest at 4.16. Evidence of fidelity measures is critical for the success of an RtI program (Keller-Margulis, 2012) and should be thought of in terms of the total RtI program. As stated by VanDerHeyden et.al (2007), "In theory, if the components are effective, then the overall process would be expected to produce results; however, the question of whether the overall process is effective must also be addressed (p. 226).

Variance was also found in question 11, "Are interventionist adequately trained to deliver secondary interventions?" The principal scored the question at 3.0 (sometimes), and the RtI coordinator scored the question at 4.0 (frequently). Finally, the teacher group had the highest score at 4.56. Adequate training for personnel is an important element for RtI programs. Furthermore, Harlacher and Siller (2011) argue that professional development is the primary

factor associated with successful RtI implementation (Harlacher & Siler, 2011). In addition, positive professional development can increase the fidelity levels of the overall program (Mellard et al., 2010).

Based on survey responses, the implications for school leadership at school one include an examination of the school's screening measures and progress-monitoring procedures. The variance in responses for the screening domain indicates a lack of communication and coordination as to the specific screening procedures employed at school one. Further, the scores for progress monitoring domain reveal a legitimate need for an increased understanding of progress monitoring. This can be accomplished through a focused professional development effort.

Research question two was, "What is the overall fidelity rate of the five domains on each campus"? Research question two was designed to identify each school's self-identified strengths and weaknesses in RtI implementation. The leaders at each campus can use the information obtained as a guide to address the areas of weakness that were identified through the use of the NCRTI instrument. In fact, by focusing on the identified weak areas, leaders can avoid wasting time and effort on areas that have already been identified as viable.

School leaders can compare results across the three schools and across domains and take appropriate action. For example, school two has the lowest overall score in two domains: domain two (multi-level prevention systems) and domain three (overarching factors). School two leaders can take action to directly address those areas of low performance. It should be noted that the range of scores in domain two reflect close scores overall. The range for domain two is 4.29 to 4.72. The scale is also close for domain five (overarching factors) showing a 4.1 to 4.61 range.

Variance in responses to specific questions is demonstrated in question 16 “Are the decisions made based on the student’s final status at the end of secondary level prevention?” Variance is also demonstrated in question 25, “What is the maximum small group size in tier III?” The final example of substantial variance in responses for school two was found in question 28, “Are the decisions relating to student responsiveness made based on the student’s final status at the end of tertiary (tier III) level prevention?”

Based on survey responses, the implications for school leadership at school two surround an examination of progress monitoring procedures. Although school two had two domains identified as significant, the overall scores for those domains fall into the medium implementation range. The school’s progress monitoring procedures, while not statistically significant, demonstrate significant variance between the principal (4.33), the RtI coordinator (4.33), and the teachers (2.52). This phenomenon indicates a lack of communication and coordination as to the specific progress monitoring procedures employed at school two. A specific and targeted professional development program could be used to target these issues at school two.

School three scored highest of the three schools in three of five domains, including domain one (screening), domain two (multi-level prevention systems) and domain five (overarching factors). School three scored 4.84 in domain one, 4.72 in domain two, and 4.61 in domain five. Plus school three rated 2.05 in domain three (progress monitoring) and was only slightly ahead of school one, which had the lowest score of 1.96.

Based on survey responses, the implications for school leadership at school three are similar to the implications at the other two schools. The domain of progress monitoring is an area in need to attention. The campus scores for domain one (4.84), domain two (4.72), domain

four (3.99) and domain five (4.61), all fall in the medium implementation range. Domain three, progress monitoring, is the lowest score for school three (2.05). Like school two, there is a significant variance between the scores of the leadership and the teachers. The principal rates domain three at 1.6, the RtI coordinator at 1.6, and the teacher's rate is 2.96. This signals to leadership a possible lack of communication and coordination in progress monitoring procedures.

Implications for School Leaders

After completing this study, the researcher recommends specific areas for improvement for all three schools participating in the study. Areas for improvement include the following: measures of fidelity, professional development, and overall communication/leadership systems associated with RtI implementation. These recommendations are not confined to the participant schools and may be applicable to a wider education cohort.

Fidelity

The concept of fidelity of implementation is an important construct in any enterprise and especially relevant in the successful deployment of an RtI framework. As illustrated through the study, measures of fidelity have been challenge for the participant schools. As stated by VanDerHeyden, Witt, and Barnett (2005):

Poor integrity may be caused by many factors, including response effort of the intervention, poor classroom management, lack of motivation or “buy-in,” a belief that no one will follow up, lack of support for implementation, and failure to provide trial periods to adjust interventions (p. 342).

Specific recommendations for the participant schools include the implementation of a fidelity system that includes the use of observations by administrators, checklists, and the development of a collaboratively created campus RtI handbook.

The use of observations by administrators is well documented in RtI literature and can be employed in multiple ways. Furthermore, observations are often considered the best and most reliable method of measuring fidelity (Bianco, 2010). The administrator in charge of RtI should monitor the intervention instruction on a daily basis. In addition, the observations should be both announced and unannounced.

There are multiple resources available for guidance in terms of data collection documentation. For example, the state of Florida in cooperation with the University of South Florida, has created the Problem Solving/Response to Intervention Evaluation Tool Technical Assistance Manual. This manual provides a checklist for observations in both tier one and tier two of the RtI framework (Castillo et al., 2012). In addition, the University of Texas provides on-line tools for the observation of RtI interventions (The University of Texas/Texas Education Agency [UT/TEA], 2011). Observations are considered to be a “direct assessment” of fidelity while checklists are considered “indirect assessment” (Mellard, 2010).

The use of checklists is also common in RtI frameworks. A teacher self-checklist is the most common method of measuring the fidelity of implementation (Schulte, 2009). Also, checklists are considered to be indirect assessments (Mellard, 2010). It is recommended that the participant schools develop and implement a daily teacher self-checklist to confirm that the key components of the intervention have been completed. The key components are; date and duration, specific intervention provided, size of the group, and who provided the intervention.

Finally, RtI handbooks developed by campus stakeholders would be beneficial to improving the fidelity of implementation in the three schools. Handbooks are used for a variety of educational pursuits and can be applied to RtI with relative ease. As stated by McIntosh et al. (2009):

One simple task is to create durable products that can be reused over time, such as handbooks and training schedules. Permanent products such as these require little effort to maintain after their creation, and they maximize the likelihood that training and information about the practice is delivered efficiently, but with high fidelity (McIntosh, Filter, Bennett, Ryan, & Sugai, 2009, p. 13).

Most districts provide RtI handbooks of varying length and detail to their member schools; however, many are simple guideposts to define terms and basic procedures. Campus handbooks can provide a more detailed roadmap for each campus that accounts for the individual operations of each campus.

The notion of individual RtI handbooks can also involve as many stakeholders as possible in the RtI program. By involving multiple stakeholders, teamwork can be reinforced on each campus. In relation to stakeholder involvement, Fitzpatrick et al. (2011) states, “Their needs and views must be sought and considered. Foster a spirit of teamwork, negotiation, and compromise” (pg. 77). Also, the involvement of multiple stakeholders enhances the chances for successful implementation because people generally support what they help to create (Wilmore, 2010).

Understanding the vital elements of RtI implementation is critical (Keller-Margulis, 2012). The use of the current PLC format in each of the study schools could serve as a vehicle for stakeholder involvement. As argued by Burns et al. (2013):

Within RtI, teachers in grade-level teams comprise the PLCs. Teachers on a grade – level teamwork together to adopt specific aspects of RtI. As new aspects of RtI are adopted, the likelihood that a teacher will successfully implement new RtI components is increased if it is done in the context and with the support of the other teachers on the grade – level team (Burns et al., 2013, p. 85).

The power of the group problem solving teams can also help to make more informed RtI decisions that are of benefit to all students (Hoover, 2011). In fact, it is important to use multiple methods to monitor the fidelity of RtI implementation (Sanetti & Kratochwill, 2009).

Professional Development

The concept of better professional development is an ongoing issue in the field of education. Professional development activities are also important factors in an RtI framework (Kratochwill, Volpiansky, Clements, & Ball, 2007) and are prerequisite to accurate fidelity of implementation (Mellard et al., 2010). There are also connections between student achievement and appropriate professional development in RtI systems (Kratochwill et al., 2007). Clearly, a healthy professional development program is a major factor in determining the success or failure of an RtI program (Harlacher & Siler, 2011).

Professional development was not identified as a significant domain in the statistical analysis within the study, at the same time, professional development is germane to the overall effective function of the three RtI programs examined in this study. Specific areas of focus for professional development activities for the study schools should include appropriate screening measures, progress monitoring, fidelity measures, and the overall multi-level prevention system that is at the heart of the RtI framework.

In fact, the researcher recommends that staff receive professional development that addresses the proper use of student data in relation to screening, progress monitoring, fidelity measures, and the overall multi-level prevention system. As stated by Hall and Mahoney (2013):

Professional development opportunities for all teachers, paraprofessionals, and administrators involved in the RTI process should first include facilitating the understanding of the data collection process, the data sources, and the data analysis that are necessary to meet the needs of struggling students (pg. 275).

It is also important that the professional development plan for each school be addressed in general-to-specific terms. That is, to present an overview of the basic systems associated with effective RtI frameworks and apply those frameworks to systems currently in place. Kratochwill et al. (2007) make the case that there are challenges associated with RtI and professional development including, “(a) the conceptual, methodological, and practical aspects of RTI; (b) the systematic change factors that influence the process of implementing any new innovation (p. 619).

The researcher further recommends the use of multiple examples of successful implementation in other schools. The successful implementation at other campuses offers a roadmap to implementation that can be applied to the individual schools. Burns et al. (2013) state:

Providing educators with a variety of examples of these core components, as well as examples of successful RtI models in other schools or districts, can allow educators to adapt and adopt an ideal model for the situations their setting presents, leading to a much greater probability of sustaining RtI within a given school (p. 83).

In offering examples and options for service delivery, the respective faculties might be more willing to buy-in to the program change, rather than perceiving a “top-down” directive circumstance.

Leadership

The final recommendation falls in the area of leadership, which has been examined for centuries in a multitude of ways by a multitude of authors. The attempt of any successful implementation of an RtI framework rises and falls with the leader of the school. In this study, the three campus principals are the leaders. It is important to note that these recommendations are based on the studies’ literature review and data from the study. As affirmed by Compton et al. (2012), “Trying to find more successful solutions should not imply a lack of respect for the many teachers and administrators who have worked very hard to make RTI work” (Compton et al., 2012, p. 276). The researcher is of like mind. The final recommendations for the school leaders surround the concepts of collaboration, generating buy-in, and the overall support for the program through standard operating practices and procedures.

The campus principal can enhance the successful implementation by committing to collaborative planning and implementation of the RtI framework. In seeking ways to increase collaboration, the campus leaders can address the communication issues personified by the many statistically significant responses that demonstrate a large variance in perception between positions. Further, collaborative efforts leak into other key areas of RtI such as data-based decision making (Whitelock, 2010).

In a study of five schools implementing RtI, Bean and Lillenstein (2012) found that collaboration was an essential practice and state: “RTI is a collaborative effort, and time and resources must be allocated for collaboration to occur” (p. 500). In tandem, the resource

allocation to enhance successful collaborative efforts extends to professional development opportunities (Wilcox, Murakami-Ramalho, & Urick, 2013). Wilcox, Murakami-Ramalho, and Urick (2013) studied Michigan and Texas teacher perceptions relating to RtI implementation and found that teachers perceived collaboration as a critical element for RtI to succeed. The principal and leader should expect difficulties in implementation or re-implementation; however, collaborative efforts are essential to the success of the program.

The principal-leader can enhance implementation efforts through generating “buy-in” from staff members. Staff “buy-in” was identified by Harlacher and Siler (2011) as the second most important factor in successful RtI implementation (Harlacher & Siler, 2011). To gain the support of staff, the principal leader must articulate a clear vision of what the RtI program will look like and what will be required for successful implementation (Putnam, 2008). The principal can further develop support for the RtI efforts through the involvement of collaborative teams that seek collective solutions to problems (Hoover & Love, 2011).

The overall “buy-in” from staff members could require a change in the overall climate of the schools, a systems change. Foster-Fishman, Nowell, and Yang (2007) define systems change as; “an intentional process designed to alter the status quo by shifting and realigning the form and function of a targeted system” (p. 197). In fact, RtI frameworks are essentially a “paradigm shift” (Richards et al., 2007, p. 60). Hamilton (2010) argues that changing the culture or climate of a school is a difficult undertaking and requires a systematic approach:

In simplistic terms, a system is a process and a program is an event. It is critical that process-driven change replace event-driven change in a project of this magnitude where strategies must continuously alter to fit changing student needs and context (p. 3).

In driving the systems change, the principal should also be a knowledgeable resource in RtI implementation (Harlacher & Siler, 2011). This could require additional professional development for the campus leader.

Finally, the principal leader should support for the program through standard operating practices and procedures. In supporting the implementation of RtI, the principal leader should spearhead the creation of collaborative designed practices and procedures. As stated by Nellis (2012), “Regardless of which of the many purposes the team is fulfilling, clear procedures, decision rules, and documentation requirements are needed to guide their actions and support consistent implementation” (p. 251). The building of campus practices and procedures requires elements of strategic planning and managerial leadership (Staff Development for Educators [SDE], 2008).

Whitelock (2010) states that successful implementation requires that leaders study school structures. Among the required structures were the following: structures in place to make certain all students receive core instruction, at-risk students receive interventions, the appropriate rigor is present, identification of interventionists, and funding structures (Whitelock, 2010).

Additionally, the principal needs to set-up the conditions for RtI success. Through the development of practices and procedures established by campus-based teams, the principal leader can erode the natural human resistance to change.

The leadership of the principal leader is vital to the success of RtI in schools. As argued by Putnam (2008), “Without question, the leadership provided-or not provided-by building administrators can make or break an RTI initiative. Principals are the pivotal point of contact between a great idea and the functional changes in how business is done in schools” (p. 15). The leadership role is indeed a challenge. The challenge stems from the multiple roles that the

principal must play in RtI implementation. Basically, the principal must be a facilitator and a consensus builder (Hamilton, 2010), a collaborator and be willing to share leadership (Bean & Lillenstein, 2012). Ultimately, the principal is responsible for the success of the students in his/her charge.

Implications for Further Research

The researcher has specific recommendations for further analysis within the realm of RtI, and specifically, the identification of practices associated with higher rates of learning disability identification. Further research could be expanded to include both quantitative and qualitative data. The pursuit of data from qualitative sources such as interviews of school leaders and focus groups including teachers could lead to a greater understanding of RtI implementation at the study sites.

The researcher's findings also have implications for leadership at both the district and campus level. As stated by O'Connor and Freeman (2012), "Successful, efficient, and effective RtI systems require district-level leadership and support. Although bottom-up efforts at the individual building level can go quite far, explicit support from the district-level administration is clearly a necessary factor" (p. 299). In evaluating the study school's level of RtI implementation by domain, the researcher and the NCRTI have provided a blueprint for district and campus leadership to evaluate RtI structures in their schools. Through this evaluation, leadership has the potential to pinpoint areas of potential improvement within the RtI frameworks. This data-driven identification of areas in need of improvement, can enable leaders can make more informed instructional and intervention decisions.

Interestingly, the impetus for RtI programs is found in the accountability heavy NCLB legislation of 2001 (*South Carolina- RTI*, 2014, p. 1). Included in NCLB are provisions for

annual yearly progress (AYP) toward student achievement goals. Many in the field of education argue that RtI can assist schools in meeting AYP targets, “RtI is a dramatic redesign of general and special education; both need to change and the entire system needs reform if schools are going to make AYP targets and meet the needs of all students. Tweaking will not be sufficient” (East, 2006, p. 1). In essence, because of increased accountability, schools are faced with the challenge of increasing capacity in the systems of educational delivery (Sansosti & Noltemeyer, 2008).

District and campus leaders should consider RtI as an effective tool for addressing accountability concerns. This situation is particularly evident in Texas. The Texas accountability system was changed recently to include measures of student achievement, student progress, and closing achievement gaps (Texas Education Agency [TEA], 2013). This dynamic enhances the need for schools to embrace an intervention program that addresses the needs of struggling students. Response to intervention can be that program.

In fact, states across the country are beginning to recognize the potential of RtI frameworks. As stated by the Tom Torlakson (2013), the California state superintendent of public instruction:

As we face the fiscal challenge of managing diminishing fiscal resources while maintaining the rigor and high expectations set for learning, it is more important than ever to innovate and collaborate to maximize the results from our efforts. The RtI approach offers just such a compelling possibility (p. 1).

The concerns relating to accountability are also evident in districts across the United States. In Orange County, California, the Orange Unified School District identified RtI as a core initiative to address student achievement where meeting AYP was a consistent issue (Hansen, 2011).

The presence of accountability measures has served to create a sense of urgency in educational systems. The leaders of schools are searching for ways to address deficits in student achievement and many have turned to RtI.

Conclusion

Topics from the study requiring further attention are numerous. In fact, the entire construct of RtI requires further examination. Through the research, it is clear that RtI is a beneficial framework. In fact, VanDerHeyden et al. (2005) state, “RTI has the potential to quantify the dynamic nature of major contextual variables that may impact child performance and program interventions designed to maximize the degree of fit between child and environment” (p. 359). Despite such endorsements, significant challenges to the implementation of RtI programs do remain.

The major topic of study requiring further attention includes the implementation of RtI with fidelity. In fact, the overarching theme of the study deals with measuring the level of fidelity of RtI implementation on three campuses. For schools to demonstrate successful implementation of RtI, fidelity to practices and procedures must be present. Moreover, Kovaleski (2007) makes the case, “LEAs should not imagine that they are sufficiently implementing RTI until all the components are in place and operating in an efficient manner” (Kovaleski, 2007, p. 644).

While completing this quantitative research study, the researcher has learned a great deal about the inherent difficulties of proper implementation. Furthermore, I recognize that RtI has real value for real students. To describe the value of RtI, I echo the words of Ikeda (2012) who asserted, “This is the real power of RtI: having ambitious goals, implementing rigorous instruction, and using data to judge effect” (p. 276). Basically, I believe in and support the RtI

framework and have concluded that RtI frameworks are effective tools for the improvement of primary and secondary education.

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