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Response to Intervention Implementation and Special Education Eligibility in Rural Wisconsin Schools

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This is to certify that the doctoral dissertation by

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Abstract

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BS, University of Wisconsin-River Falls, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Educational Psychology

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Abstract

The purpose of this quantitative study was to investigate differences among special education enrollments for specific learning disabilities (SLD) and other disabilities within districts using school-wide response to intervention (RTI). Differences between rural and suburban school districts during the phases of the insufficient criterion rollout for SLD identification were explored as were environmental factors' impact on RTI fidelity. Systems theory framed how concerns in rural districts impact the ability to use RTI data for special education enrollment. The research questions examined prevalence rates of SLD and other disabilities, compared RTI implementation fidelity in rural and suburban districts, and explored environmental factors' impact on RTI fidelity. A repeated measures ANOVA, a series of ANOVAs, and a multiple regression analysis were used with archival data (274 cases) to examine the relationships between the variables. Results indicated rural schools are increasing identification of students with other disabilities and decreasing identification of students with SLDs. Compared with suburban schools, rural schools' SLD rates are not declining as quickly, while other disabilities increased to rates similar to that found in suburban settings. There were no significant differences between rural and suburban districts in RTI implementation fidelity; however, overall staff salary appears to impact RTI fidelity rates, especially in rural districts. Further research is needed to explore changes in special education enrollment practices and environmental factor's role in these changes. This study provides groundwork for positive social change by recognizing differences between school districts in identifying disability areas and obtaining necessary resources to implement new educational initiatives.

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Dedication

I would like to dedicate this dissertation to my family. First, to my husband, Brandon, who encouraged me to embark upon the process of obtaining my Ph.D. and helped take care of the kids and house while I locked myself away to do school work. Second, to my children Kylie, Zoey, and Miles, who unknowingly sacrificed their time with me so I could achieve my goals. I look forward to many future "workless" hours to play with you and continue to watch you grow. Kylie, I wish you could have helped me complete this dissertation as you so often offered to do. To my brother Joe, who once told me to do what makes me happy, but who also said I don't need to go to school to be what I want to be. I only followed half of his advice. I think of you daily, and I know you'd be proud. Also, to my mother who always encouraged me to embark upon new adventures and has always been supportive of my new educational pursuits, even through the tears they often cause. Lastly and certainly not leastly, to my dad, who may not always understand why I keep going back to school, but he has always gone out of his way to help me with both big and little things so life continues to roll as smoothly as possible. I thank all of you for your continued support, not just through the process of completing this dissertation, but through life in general. I love you all more than I can say.

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Chapter 1: Introduction to the Study

Introduction

Researchers focusing on academic achievement in rural school districts have shown differences in implementation of new educational initiatives and academic achievement rates compared to suburban school districts (Graham & Provost, 2012; Johnson & Howley, 2015). Concerns unique to rural districts include employees experiencing lower salary rates, threats of consolidation, and geographical isolation, making it more difficult to attract and retain highly-qualified teachers than suburban districts (Graham & Provost, 2012).

The Wisconsin Department of Public Instruction (DPI) began, in 2010, to embrace the mission for response to intervention (RTI) implementation at school-wide levels (Evers, 2010). Through RTI, students are provided additional instruction and intervention when they are not performing at grade level; or, are provided with various enrichment activities when achieving at or above grade level.

In an effort to provide early interventions to meet student needs, a roll-out program was implemented in 2010 to change a piece of the eligibility criteria for students being evaluated for a specific learning disability (SLD) and special education eligibility within Wisconsin. This criterion was changed from the ability-achievement discrepancy model to an insufficient progress model. The roll-out phases gave districts the opportunity to develop and try RTI/intervention methodology for three years before being required to utilize these strategies for special education eligibility decision-making. The insufficient progress criterion operates similarly to the RTI model. In a review of data

and policies, Johnson and Howley (2015), found that standardized approaches to education, such as new program provisions and implementation, are often ineffective and even potentially harmful for student education in rural school districts. As such, educators within Wisconsin rural school districts may struggle to implement the new SLD insufficient progress criterion with accuracy, leading to inaccurate disability identification for special education services, such as finding students eligibility for other disabilities (i.e. speech or language impairment, autism, emotional or behavioral disability, or other health impairment) instead of SLD. Further research is needed to determine how the unique concerns within rural school districts are impacting RTI implementation and special education enrollment practices within Wisconsin public schools. These concerns impact the 44% of Wisconsin's pre-kindergarten through 12th grade public-school students and educators currently assigned to rural schools (Hicken, n.d.). As such, all public schools located in Wisconsin are identified as the population of interest for this study.

This study could lead to positive social change in helping identify the ways in which special educational programming and meeting overall student needs are impacted by the unique needs of rural school districts. This knowledge could help improve statewide programming, training, and resource allocation to promote educational development within rural communities. Additionally, the results of this study could provide further insight into a rural school district's ability to implement any new educational initiative similar to suburban school districts in all locales, which would provide increased knowledge for districts in the process of implementing RTI

programming or changes in SLD eligibility criteria and those choosing to initiate any new educational initiative at a school- or district-wide level.

The remainder of this chapter will outline the background information, provide a problem statement, review the research questions and hypotheses, provide a discussion of the theoretical framework of the study, identify the nature of the study, list definitions relevant to the study, outline assumptions, identify the scope and delimitations, identify limitations, and discuss the potential significance of this study.

Background

Researchers have identified the effectiveness of RTI to increase overall achievement levels and thereby has decreased the rates at which students are identified with SLDs (Marston, Muysken, Lau, & Canter, 2003; Torgesen, 2009; VanDerHeyden, Witt, & Gilbertson, 2007). However, researchers do not specifically address the effectiveness of utilizing RTI data to determine special education eligibility. Additionally, researchers have not addressed the impact of environmental influences on a district's ability to implement new educational initiatives, such as RTI, with fidelity to accurately identify students with special education needs.

Learning Disability (LD) Identification Practices

As part of the 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA), updated procedures were recommended regarding the eligibility process for children with SLDs. Individual states must allow districts to identify an eligibility process that takes into account the student's rate of academic progress when provided scientific, research-based interventions (U.S. Department of Education, 2006). These updated

procedures allow states to begin including the implementation of RTI to identify at-risk children and meet their individualized needs through general education programming.

RTI and Special Education

While IDEA (2004) encourages schools to utilize the RTI model, the precision of recognizing SLDs with the RTI process has been debated among researchers, educators, and other practitioners. Researchers have noted a number of differences in the ways in which RTI is implemented across various schools. Some of these differences can include the number of tiers, who provides services and intervention, when special education referrals are made, or if RTI in itself is the process for eligibility for special education purposes (Fuchs, Mock et al., 2003).

Additional researchers have explored the overall impact of RTI upon special education enrollment rates and changes in disability proportions over time. Zirkel (2013) noted decreased levels of SLD identification and increased other health impairment (OHI) and autism identification, with the total number of students identified for special education services remained stable. Zirkel (2013) hypothesized one of the reasons trends for special education enrollment changed was due to increased implementation of RTI for SLD identification. Scull and Winkler (2011) also noted, in a longitudinal study, declines in SLD enrollment in conjunction with RTI implementation, but noted significant increases in the areas of OHI and autism identification rates. Overall, researchers have not fully examined changes in special education enrollment trends or prevalence rates across multiple disability areas since RTI has been recommend as a method of SLD identification; thus, indicating a need for the present study.

Limitations Within Rural School Districts

Researchers focusing on academic achievement in rural school districts have noted a number of issues that impact the ability to implement new educational initiatives and maintain similar academic achievement rates compared to suburban school districts (Barrett, Cowen, Toma, & Troskey, 2015; Brownell, Bishop, & Sindelar, 2005; Dexter, Hughes, & Farmer, 2008; Graham & Provost, 2012; Shepherd & Salembier, 2011; Williams, 2003). Frequently rural schools have lower rates of budget allocation by federal funds than urban and suburban schools. Additional concerns unique to rural districts include employees experiencing lower salary rates, threats of consolidation, and geographical isolation, making it difficult to attract and retain highly-qualified teachers than suburban districts and provide adequate professional development to district staff (Barrett, Cowen, Toma, & Troskey, 2015; Brownell, Bishop, & Sindelar, 2005; Dexter, Hughes, & Farmer, 2008; Graham & Provost, 2012; Shepherd & Salembier, 2011; Williams, 2003).

Researchers have investigated the needs of rural districts and noted these unique concerns often make it difficult to implement strong schoolwide initiative and policies, such as RTI. Limited resources and staffing interfere with rural school districts' abilities to properly implement RTI procedures, such as building and maintaining multidisciplinary teams and identifying intervention resources that will appropriately address student need prior to special education referrals (Berry, Petrin, Gravelle, & Farmer, 2011; Brendle, 2015; Vaughn & Swanson, 2015). According to Hicken (n.d.) these concerns impact the 44% of Wisconsin's pre-kindergarten through 12th grade

public-school students and educators currently assigned to rural schools. The needs of rural school districts in Wisconsin are greatly impacted by the factors discussed. Due to these factors, it is likely that changes in special education practices and procedures within the state will also have a noted impact within rural school districts.

While significant research has been completed investigating the impact of RTI on overall student achievement, few researchers have addressed the impact of RTI implementation on overall special education enrollment practices. Likewise, minimal research has been conducted to determine the ability of rural school districts to implement RTI with fidelity and use the data to evaluate the need for specialized services through special education. Moreover, researchers have not focused on the difficulties to implement educational initiatives, such as RTI due to the limited resources inherent in rural districts.

In this study I investigated whether the environmental factors noted in rural schools (for example, lack of resources and funding, and difficulty in maintaining high-quality staff) impact RTI implementation fidelity by comparing overall special education enrollment rates across various disability areas both before and after RTI implementation. This study will add to the literature in the area of RTI as a method used to identify students with possible disabilities, including whether rural school districts, with limited resources and environmental specific challenges when implementing new educational initiatives, are able to obtain results similar to suburban districts, where resource limitations are not noted within the literature.

Problem Statement

A multitude of studies have been completed to determine the effectiveness of using RTI to meet students' needs prior to making a referral for special education services. Most researchers have focused on how RTI has led to a reduction in the number of students identified with SLDs (Marston, Muysken, Lau, & Canter; Torgesen, 2009; VanDerHayden, Witt, & Gilbertson, 2007). In rural school districts, special education decision makers, such as school psychologists or special education directors, may lack the resources and training to gather the data necessary to accurately identify students for special education. This suggests that while SLD enrollments decline, other disability areas may present evidence of growth (Boe et al., 2013). For example, Wisconsin does not require a medical diagnosis for a student to meet OHI criteria and become eligible for special education. As such, teams may determine a student exhibits various condition-like behaviors (such as attention deficit hyperactivity disorder [ADHD]), and qualify the student for services under OHI criteria, without the child being formally diagnosed with a medical condition by a physician. These factors could lead to inaccurate disability identification and an increase in special education enrollments across other disabilities areas. Concomitantly, SLD enrollments may decline, especially since the mandate of the insufficient progress criterion (Zirkel, 2013). As such, rural IEP teams and school teachers may find it easier to identify a student with an alternative disability in order to receive special education sooner, when they struggle to collect the required data through the RTI process for SLD qualification (Boe et al., 2013).

The current literature does not provide a sufficient exploration of changes in prevalence rates of special education eligibility, across all disabilities, with the implementation of RTI. Furthermore, there is a lack of research exploring the impact of environmental educational factors on a school district's ability to implement educational initiatives, such as RTI, and how this impacts special education enrollment practices. Therefore, the problem investigated in this study is that, while there is copious research investigating the use of RTI to improve overall achievement scores and decrease the overall number of students identified with SLDs, it is unknown how RTI has impacted overall special education identification across multiple disability areas, particularly within rural school districts.

Purpose of the Study

The purpose of this quantitative study was to examine whether the prevalence of special education enrollments for suspected SLDs and other disabilities within the state of Wisconsin (including: speech or language impairment, emotional or behavioral disability, other health impairment, and autism as a combined variable), differs between suburban and rural school districts. In this study, I explored whether schoolwide RTI implementation levels (as measured by the WI School-Wide Implementation Tool) differed between rural and suburban school districts, which may impact special education enrollments. While incidence ratings would have provided more precision in understanding changes in special education identification practices aligned with the insufficient progress criterion; at this time, such specific data were neither collected nor reported on an on-going basis by the Wisconsin Department of Instruction. This makes

the use of prevalence data the only information readily available for the focus of this study. Furthermore, in this study, I aimed to investigate how special education prevalence rates differ between rural and suburban school districts during the three phases of the insufficient criterion rollout for SLD identification within Wisconsin (i.e., before the criterion rollout, 2007-2010; during criterion rollout, 2010-2013; and after criterion full implementation, 2013-2016). Additionally, in this study I aimed to examine if environmental factors unique to rural school districts impact the proper implementation RTI and thus impacts overall special education enrollment patterns. The results from this study provide knowledge to help improve statewide programming, training, and resource allocation to promote educational development within rural communities.

Definitions

Autism (ASD): Autism refers to a developmental disability impacting a student's interaction and communication skills, which adversely affects learning and academic performance. Characteristics may include repetitive or stereotyped activities, resistance to change, and uncommon responses to sensory stimulus (Wisconsin Department of Public Instruction [WI DPI], 2009a).

Child count: Data collected on students enrolled special education programs to meet federal requirements (Wisconsin Department of Public Instruction, n.d.a).

Child find: the process of screening and evaluating young children to identify and refer those with potential disabilities (WI DPI, n.d.).

Emotional or behavioral disability (EBD): Social, emotional, or behavioral skills and functioning that is drastically different from expected behaviors and adversely

impacts a student's performance in one of the following areas: academics, relationships, adjustment, self-care, and/or vocational skills (Boreson, 2010).

Fidelity: refers to whether the instruction, program, or intervention provided to students is delivered how it was intended to be delivered, maintaining high levels of reliability and validity with program delivery, typically measured as a percentage or a numerical value indicating to what extent an implemented intervention aligns with a specifically designed program or curriculum (Wisconsin RTI Center, 2016).

Insufficient progress criterion: the inability of a student to meet academic grade-level expectations within a practical amount of time after receiving multiple intensive interventions with high levels of fidelity targeted at the student's specific skill deficits (Wisconsin Department of Public Instruction, 2013b).

Insufficient progress criterion rollout phases: the three phases of the insufficient criterion rollout for SLD identification include the following: before the insufficient progress criterion rollout (2007-2010 school years), during the insufficient progress criterion rollout (2010-2013 school years), and after insufficient progress criterion full implementation (2013-2016 school years).

Other disabilities: a combined factor of three disability areas recognized within the state of Wisconsin including, other health impairment, autism, speech or language impairment, and emotional or behavioral disability.

Other health impairment (OHI): limited alertness, vitality, or strength, as a result of a health problem, which adversely impacts a student's educational performance (Wisconsin Department of Public Instruction, 2009b).

Response to intervention (RTI): a data-based framework to help organize and guide school-wide implementation of tiered supports for academic and behavioral concerns to promote success for all students (Wisconsin RTI Center, 2016).

Rural school district: a school district located within a community that is five or more miles from an urbanized area, and a community that is greater than 2.5 miles from an urban cluster. Districts are considered fringe, distant, or remote based upon the community's distance from an urban cluster or urbanized area (Office of Management and Budget, 2000).

Scientific research or evidence-based interventions (SRBIs): interventions that have been subject to research procedures to obtain valid and reliable knowledge regarding the effectiveness of the application of the specific intervention instructional technique or program (United States Department of Education, 2009).

Significant developmental delay (SDD): refers to a child aged 3 through 9 years who exhibits a significant delay two or more of these areas: physical (gross or fine motor), cognitive, communication (expressive or receptive language), emotional or social, or adaptive (Wisconsin Department of Public Instruction, 2015).

Specific learning disability (SLD): a delay in psychological processes, which may manifest itself in an inability to learn in one of the following academic areas: oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, reading fluency skills, mathematic calculation, and mathematics problem solving (Wisconsin Department of Public Instruction, n.d.b).

Speech or language impairment (SLI): difficulty in speech or sound production, language, or fluency that significantly impacts educational performance (Freiberg, Wicklund, & Squier, 2003).

Suburban school district: a school district that is located outside a city, but inside an urbanized area. Districts are considered small, midsized, or large based upon overall population of the suburb (Office of Management and Budget, 2000).

Research Questions and Hypotheses

Four research questions guided this investigation.

Research Question 1: Does the prevalence of special education enrollments (number of cases divided by the total district enrollment) for SLD and Other disabilities, as measured by child count data, significantly change between each of the phases of the insufficient progress criterion rollout in rural Wisconsin school districts?

$H_0$1: The prevalence of special education enrollments, as measured by Wisconsin child count data, will not differ between each of the phases of the insufficient progress criterion rollout in Wisconsin rural schools.

H_a1: The prevalence of special education enrollments for SLD and Other disabilities, as measured by Wisconsin child count data, will differ between Phases 1 and 2 and Phases 2 and 3, but not between Phases 1 and 3, with SLD enrollments declining and Other disability enrollments increasing during the second phase of the insufficient progress criterion rollout in Wisconsin rural school districts.

Research Question 2: Does the prevalence or proportion of special education enrollments (number of cases divided by the total district enrollment) for SLD and Other

disabilities, as measured by child count data, significantly differ between rural and suburban Wisconsin school districts during the three phases of the insufficient progress criterion?

$H_0$2: The prevalence or proportion of special education enrollments for SLDs and Other disabilities, as measured by Wisconsin child count data, will not differ between rural and suburban school districts during each of the three phases of the insufficient progress criterion.

H_a2: The prevalence or proportion of special education enrollments for SLDs and Other disabilities, as measured by Wisconsin child count data, will differ between rural and suburban school districts during the second phase of the insufficient progress criterion and be balanced during the first and third phases.

Research Question 3: During each of the three phases of the insufficient progress criterion implementation, did the level of school-wide RTI implementation fidelity, as measured by the school-wide implementation tool (SIR), significantly differ between rural and suburban school districts?

$H_0$3: During each of the three phases of the insufficient progress criterion implementation the level of school-wide RTI implementation fidelity, as measured by the SIR, will not differ between rural school districts and suburban school districts.

H_a3: During the second and third phases of the insufficient progress criterion implementation, the level of school-wide RTI implementation fidelity, as measured by the SIR, will differ between rural school districts and suburban school districts.

Research Question 4: Do environmental factors; including certified staff salary,

geographical isolation, retention of highly qualified instructors, and federal funding as measured by demographic data collected and reported as part of public record by Wisconsin DPI, impact a school's ability to implement school-wide RTI with fidelity?

$H_0$4: Environmental factors; including certified staff salary, geographical isolation, retention of highly qualified instructors, and federal funding, as measured by demographic data collected and reported as part of public record by Wisconsin DPI**,** do not impact a school's ability to implement school-wide RTI with fidelity.

H_a4: Environmental factors; including certified staff salary, geographical isolation, retention of highly qualified instructors, and federal funding, as measured by demographic data collected and reported as part of public record by Wisconsin DPI, impacts a school's ability to implement school-wide RTI with fidelity.

Theoretical Framework of the Study

General systems theory was utilized for the theoretical framework of this study. General systems theory provided a framework for looking at how systems are in constant interaction with their surrounding environments (von Bertalanffy, 1968). System theory has been considered vital to the continued study of various social systems (Kast & Rosenzweig, 1972). In this study, school districts were considered social systems impacted by their environment, such as rural or suburban settings. Von Bertalanffy (1950) stated that organizations are in constant interaction with the surrounding environment. The environmental factors associated with rural school districts include lower rates of budget allocation by federal funds than urban schools, employees experiencing lower salary rates, threats of consolidation, and geographical isolation, and

difficultly attracting and retaining highly-qualified teachers (Graham & Provost, 2012). These specific environmental factors may impact program implementation such as RTI and the mandated insufficient progress criterion for SLD identification. For the purpose of this research, systems theory helped frame how the unique concerns found in rural school districts impacts special education decision makers' ability to utilize RTI data in conjunction with the insufficient progress criterion for accurate special education enrollment decision-making. Overall, applying the ideas of systems theory to the research helped to better understand the effects RTI program implementation and special education enrollment practices, as related to the unique needs of rural school districts compared to suburban school districts.

Nature of the Study

The nature of this study was quantitative. Quantitative research was deemed appropriate for examining the relationship between the school-wide implementation of RTI, the required use of insufficient progress as a criterion used to qualify students with SLDs for special education, and overall special education enrollment rates within rural school districts and suburban districts. The independent variables in this study were type of community (rural or suburban) and environmental factors. The dependent variables were (a) students enrolled in special education, in two categories: SLD and Other disabilities found in each district; and (b) level of RTI implementation and fidelity, as measured by ratings on the SIR, which is comprised of a single number based upon overall SIR score. Variables were assessed during each phase of insufficient progress criterion rollout (e.g. pre-rollout, during rollout, and full implementation). Data were

collected from archival records available from the Department of Public Instruction's public records of special education enrollment and child count data (information reported by individual school districts related to the number of student qualified for special education services ages 6-21 years, as SLDs are most likely to be identified within this age range) for rural and suburban districts in the state (WI DPI, n.d.). RTI fidelity data were collected via the Wisconsin RTI Center's archived of SIR data, which was completed by RTI leadership teams housed in each school district in Wisconsin. RTI fidelity data collected through the use of the SIR is not publicly accessible; therefore, the Wisconsin RTI Center agreed to release data via a data use agreement. Demographic data of each district was collected through Wisconsin DPI archival data available through various public portals. For research question one an ANOVA was completed to determine if the independent variable of phases of insufficient criterion rollout impact prevalence of special education eligibility in SLD compared to other disability areas (autism, OHI, SLI, and EBD combined) in rural school districts (i.e., within group comparisons) within the state of Wisconsin. A Bonferroni correction was also utilized to account for multiple comparisons within the sample. An ANOVA with a Bonferroni correction was also conducted for research question two. This analysis was used to determine whether there was a significant change and difference in the prevalence of students enrolled in the above listed disability areas between rural and suburban school districts during the three phases of insufficient criterion rollout, measured separately (i.e., three between groups comparisons). One analysis was performed for each of the three phases of rollout. A repeated measures analyses of variance (ANOVA) was performed

for research question three, to ascertain whether or not there was a significant difference in RTI implementation and fidelity between rural and suburban school districts, with the type of school district being the repeated measure. Lastly, a regression analysis was performed, for research question four, to determine the extent to which environmental factors impacted a school district's ability to implement school-wide RTI with fidelity. See Table 1 for illustration of the data analyses and variables for each research question. Chapter three will outline specific information related to methodology of the study.

Table 1

Research Questions, Data Analysis, and Variables

Research Questions	Data Analysis	Variables
RQ 1	ANOVA	Phases (3) x Disability (2) rural school prevalence (DV)
RQ 2	ANOVA	Phases (3) x School Districts (2) x Disability (2) prevalence (DV)
RQ 3	ANOVA	Phases (3) x School Districts (2-repeated measure) RTI fidelity (DV)
RQ 4	Multiple Regression Predictors (IV)	Staff Salary, Geographic Isolation, Staff Retention, Federal Funding -> School Wide RTI Fidelity (outcome-DV)

Assumptions

For this study, it was assumed that all school districts utilize data gathered through RTI processes to meet the requirements of the insufficient progress criterion for SLD identification. It was also assumed that participants accurately reported their

district's level of RTI implementation and fidelity on the SIR. It was additionally assumed that the SIR accurately measures fidelity of RTI implementation when the staff are trained to use the SIR and rate their practices accurately. Finally, it was assumed Wisconsin DPI databases accurately reflect the demographic and special education data collected from school districts within the state, and the districts accurately reported their data to DPI. In short, all archival records and data were assumed to be accurate and valid.

Scope and Delimitations

The scope of the study was limited to the influence of type of community, the phases of insufficient criterion implementation, and fidelity of RTI implementation on special education enrollment rates in five recognized disability areas. The five disability areas were chosen because they are commonly identified disability areas and data for eligibility can often be more subjectively applied through observation and interview rather than through standardized testing and strict data analysis. In contrast, other disability areas, such as visual impairments, deaf/hard of hearing, or intellectual disabilities, are more clearly defined with specified standardized testing cut scores within the state of Wisconsin, making them inappropriate for inclusion within this study. Additionally, the disability area of significant developmental delay is only used for students aged 3 through 9 years, making it an inappropriate comparison variable to other disabilities which can be identified throughout a student's compulsory educational career. Additionally, the sample of the study was limited to students enrolled in 3rd through 5th grades, as this is the ages at which most students are being, or have already been,

identified for special education services. According to the Center for Disease Control and Prevention (CDC, 2017) approximately 93.6% of students identified with a SLD will be identified by the time they are 12 years of age, or at the end of their 5th grade year. The study was confined to examining school districts located within suburban and rural communities only. Additionally, only districts that participated in RTI implementation and data collection through the WI RTI Center were included in the sample size for research questions 3 and 4. The focus of this study was the impact of RTI implementation on special education enrollment rates in rural districts. Suburban districts were chosen as a comparison group.

Limitations

There were limitations that could have potentially impacted the results of this study. One such limitation of this study was that data were collected through archival databases through the Wisconsin DPI and RTI Center. While districts are required to report specific special education data to DPI, at this time there is no requirement for districts to participate in data collection through the RTI Center. This includes data surrounding RTI implementation and fidelity checks, including participation in the SIR questionnaires. Data were only available from districts that chose to use RTI techniques and reported their progress through the RTI Center. Therefore, these data might be biased towards districts that were more committed to having successful RTI frameworks. This bias may have resulted in limited accuracy and validity of the data collected, thereby, may not truly represent rural and suburban school district's overall RTI implementation fidelity over time. Another limitation of utilizing SIR data to identify

level of RTI implementation and RTI fidelity is that the SIR is a questionnaire including a Likert-type scale. This characteristic may limit the scope of participant's answers and the conclusions drawn from these responses. Additionally, districts are not required to submit SIR ratings in specified intervals, this resulted in a number of schools being excluded from the sample, because they had not provided ratings during each of the three phases of this study. The recency of reported ratings may also limit the conclusions and generalizability of the study. To address these concerns, data sources were aligned by year and with annual DPI reporting dates to ensure all data were collected within the same school year. School districts with no SIR data were excluded from the study for Research Questions 3 and 4.

The archival data utilized for this study was provided by both the WI DPI and the WI RTI Center; however, the databases available were not easily transferrable to create data sets within the SPSS software. Data were required to be keyed by hand and were not easily copied. While data checks were performed to ensure accuracy, it is possible some data were entered incorrectly, thus potentially impacting the overall results of the study.

The database (WISEdash) that was utilized for this study to collect information regarding special education disability classification for school districts only reports prevalence data for each school year. This was an additional limitation to the study. These data were reported twice a year, allowing such information to be utilized for the purpose of this study; however, the rate of disability incidence (or newly identified cases of disability) would have been ideal for the study. Incidence ratings would have provided more precision in understanding changes in special education identification practices

aligned with the insufficient progress criterion. At the time of this study, however, such specific data were neither collected nor reported on an ongoing basis by the Wisconsin Department of Instruction.

A convenience sampling strategy was used in this study, which may limit the ability to determine a potential causal relationship. Additionally, this sampling strategy may have led to bias results, as districts not actively engaged in the RTI process through the RTI center were excluded from the study. The last limitation of this study was the lack of reported validity and reliability of the SIR in measuring RTI implementation fidelity. Despite these limitations, the finding of the study contributes to the professional knowledge base for determining the impact of school community and RTI implementation on special education eligibility.

Significance

With the results of this research, I helped fill a gap in current understanding by focusing on how the level of schoolwide implementation of RTI relates to the change in the eligibility criteria for a SLD evaluation (the introduction of the insufficient progress criterion) and overall special education enrollment in various types of communities (e.g. rural and suburban), while taking into consideration the previously noted decline in overall SLD identification rates prior to the criterion change. This project was unique because it addressed the current gap in the literature concerning how the implementation of RTI impacts how decision makers are identifying students for special education services across various disability areas besides SLD (Zirkel, 2013). With the results of this study, I was able to provide information to determine if concerns frequently

identified in such rural districts, such as lack of resources and highly qualified educators, can impede accurate program implementation (such as RTI) and can contribute to inaccurate of student disabilities and enrollment in special education services (Glover & Diperna, 2007). Additionally, insights into a rural school districts' ability to adequately implement any new education initiative as compared to their suburban school counterparts were provided within this study. Understanding how concerns common in rural school districts impact educational initiative implementation is imperative to understand the extent to which special education decision makers are able to effectively and accurately identify student for special education.

Summary

Identifying children for special education eligibility is vitality important to ensuring students receive free and appropriate education. A significant component of this process is also ensuring the techniques used to make eligibility determinations are reliable, valid, and used appropriately across all school districts, regardless of the school district's environmental factors. In Chapter 2, current research was explored as it relates to the background of special education, the history of SLD diagnoses, information regarding overall RTI implementation techniques, how RTI works in conjunction with special education services, an exploration of the various limitations of rural school districts to meet educational demands, and Wisconsin public-school practices and policies as related to RTI and special education.

Chapter 2: Literature Review

Introduction

This literature review delineated continued need for research in the area of special education enrollment practices in rural school districts upon the integration of RTI methods by the U.S. Department of Education identifying of children with SLD. While the Wisconsin Department of Public Instruction (DPI) has not yet mandated the use of RTI in school districts, the state superintendent strongly encourages districts to implement RTI as the school-wide level to meet all students' needs and prevent the need for future special education services (WI DPI, 2013).

While RTI is not directly required in Wisconsin for identification of students with disabilities, the Wisconsin RTI Center (n.d.) noted that school districts with specific RTI structures in place will be better equipped than districts not using RTI techniques to meet the data requirements of Wisconsin's eligibility criteria of a new SLD rule, enacted in 2013 requiring the use of two scientific research-based interventions (SRBIs). While researchers have agreed to the benefits of the using the RTI model, how this process works within rural school districts, in relation to the insufficient progress criterion and special education eligibility in conjunction with the unique needs of rural school districts; such as, lack of professional development and funding, and difficulties maintaining highly qualified educators, has not been well researched.

The purpose of this study was to investigate differences among special education enrollments for students identified with SLD compared to other disability areas (i.e., speech or language impairment, emotional or behavioral disability; other health

impairment; autism; and significant developmental delay), between districts that have properly implemented schoolwide RTI (i.e., those that have reached 80% implementation according to the WI School-Wide Implementation Tool) and those that have not within rural versus suburban school districts in the state of Wisconsin. Additionally, in this study, I examined if concerns frequently identified in rural districts, such as lack of resources and highly qualified educators can impede accurate program implementation (such as RTI) and thereby contribute to misidentification of student disabilities and enrollment in special education services (Glover & Diperna, 2007). Understanding how concerns common in rural school districts impacts educational initiative implementation is imperative to understand the extent to which special education decision makers are able to effectively and accurately identify student for special education services.

This chapter provides a review of systems theory as it relates to the ways in which the environment, such as rural or suburban communities, can impact the ways a public school operates and the overall ability of the district to maintain high levels of academic success. A historical account of special education and the Individuals with Disabilities Education Act (IDEA) as it relates to current educational practices is provided. This chapter will also briefly explore the history of learning disabilities and diagnosis for special education. An overview of RTI models and implementation are reviewed. Ways in which RTI have been implemented historically and the educational benefits and weaknesses will be explored in this chapter. Research will be presented that explores the challenges often faced by rural schools when asked to implement new educational initiatives, such as RTI models. Lastly, information is presented to connect the current

research to Wisconsin's present educational practices and need for additional investigation related to how proper RTI implementation impacts special education enrollment and SLD identification in rural Wisconsin school districts. The conclusion includes a discussion of the shortages found in the present body of research and the how this study will fit in that body of literature.

Literature Search Strategy

This literature review is a culmination of research from current professional educational and psychology journals, peer-reviewed articles, books, aggregated databases such as the Wisconsin Department of Public Instruction, WISEdash, regional educational reports, and the Wisconsin RTI Center, and the works of several system theorists. Online databases such as Google scholar, ERIC, SAGE Premier, PsycINFO, and PsycARTICLES were used to search for relevant literature. Examples of key terms researched included *special education, educational disabilities, IDEA, Response to intervention, RTI, rural districts, achievement, learning disabilities, specific learning disability, special education rates, rural schools, rural districts, suburban school districts, MTSS, tiered supports, education reform, educational initiatives, systems theory,* and *RTI model*. Saturation of the articles was achieved through keyword searches. The literature reviewed was limited to publication within the last 10 years (2006-present), with the vast majority of literature having been published within the past five years (2011-present). There was not extensive research related to how RTI implementation impacts overall special education disability identification. The majority of the literature focuses upon the relationship between RTI implementation and SLD identification.

Additionally, minimal research in the literature focused specifically on the relationship of these variables in rural school settings. Thus, the content of this literature review aims at identifying how concerns common in rural school districts impacts the ability of these schools to implement program initiatives, with high levels of fidelity, as a measure of reliability and validity in program implementation, which can impact overall student achievement levels and fidelity of special education enrollment rates and practices, specifically related to RTI implementation and the SLD criterion change to address insufficient progress.

Theoretical Foundation

General systems theory was utilized as this study's theoretical framework. General systems theory provided a framework for looking at how systems are in constant interaction with their surrounding environments (von Bertalanffy, 1968). System theory has been considered vital to the continued study of various social systems and has been used to guide practices and research in a variety of social services disciplines (Kast & Rosenzweig, 1972; von Bertalanffy, 1968). Von Bertalanffy (1950) stated that organizations are in constant interaction with the surrounding environment. The environmental factors associated with rural school districts include; lower rates of budget allocation by federal funds than urban schools, employees experiencing difficulty attracting and retaining highly-qualified teachers (Graham & Provost, 2012). These specific environmental factors may impact program implementation such as RTI and the mandated insufficient progress criterion for SLD identification.

In relation to systems theory, Senge (2006) noted growth in a system helps maintain balance in the system. Furthermore, Senge indicated that the purpose of systems thinking is intended change the pattern of thinking surrounding the development of a problem, not to solve the problem itself. The use of systems theory allows for an examiner to notice patterns or common themes in various situations and further determine what types managerial or structural techniques will work within an institution or system (Senge, 2006). Hammond (2003) described systems theory as a relationship between discreet factors that, when put together form a pattern that can maintain itself. Overall, systems theory is described as a framework for seeing interrelationships between factors, and a way for noticing patterns within the systems derived from the patterns created by the relationships between these factors (von Bertalanffy, 1969; Senge, 2006).

Von Bertalanffy's (1950) general systems theory has been utilized in previous research related to program implementation and effective educational systems. Collectively, current research indicates student performance and outcomes is influence by community, family, and institutional factors. According to the systems theory framework, all of these factors can collectively be part of a larger system.

Zaff, Donlan, Jones, and Lin (2015) investigated the relationship between comprehensive community initiatives (CCI) and overall youth development, including an investigation of system and community factors that may impact overall youth development. The researchers concluded that when youth strengths and needs, as noted through a systems model, increased the likelihood of CCI having a positive impact on children and youth. This study takes into consideration the impact of environmental

factors, social systems, and family structures in coordination with CCI to determine youth outcomes. This study helps explain how the system of a child's community or environmental system can play a role in program implementation success.

Similarly, other researchers have noted how system structures, in educational environments, can impact overall work performance, student success, and program or overall system changes. Edmondson, Higgins, Singer, Weiner (2016) identified student learning can be impacted by the experience of their teachers within their work, or system, environments. Some of these factors included overall work climate, leadership supports, intra-school communication, student population, and teacher experience. Using systems theory, the researchers investigated these factors in association with overall psychological safety. They determined the previously mentioned factors impacted overall psychological safety and in turn had a direct impact on student overcoming learning barriers. Thereby, concluding system factors may directly influence student success and learning. Kagan, Araujo, Jaimovich, and Aguayo (2016) agreed pieces of a system cannot be separated and operate independently of each other. They investigated early childhood education under the lens of systems theory. They found many aspects of the school, as a system, impact the quality and sustainability of an early childhood program. Some of these factors include equitable distribution of funds and access to services, ability to change the thinking styles of staff, and data-based decision-making. The ability to change the paradigm of how services should be delivered was integral to effective program delivery. Many of the factors impacting service deliver, noted by Kagan, et al. (2016) are similar to

those frequently noted in rural school districts and in structuring new program delivery within school districts.

Previous researchers have also discussed factors that can contribute to difficulties in making changes to systems, as related to systems theory. According to Bates (2012) when proposing changes to a system, organizations will not follow steps towards changes as proposed by administration. Instead, steady change will be made through conversations, gossip, regulation implementation, and acts of resistance. These characteristics were noted when attempting implement a self-improving system within UK public education (Bates, 2012). Due to these factors, it was found the overall quality of the education system began to erode. The system was unable to implement new programming as presented by policy makers. Instead, it was hypothesized schools that have more internal control, in which change can be fostered by staff conversations and system specific factors, would result in a more successful program implementation (Bate, 2012). Bate (2012) indicated that successful program implementation should be fostered within a given system, rather than enforced by an outside entity that potentially lacks knowledge of the inner workings of the given system.

In the case of the present study, school districts were considered social systems impacted by their environment, such as being a rural or suburban community. Netting, Kettner, and McMurtry (2004) agreed the environmental location in which a person works, lives, and learns has an impact on shaping the person's life. This indicates the environment or community in which a school is located within will influence not only the school system, but also the students and teachers within that system. Likewise, Powers,

Bowen, and Rose (2005) argued the environmental and social factors associated with communities and schools are factors that play a role in students' academic success. The application of general systems theory means it would extremely difficult to isolate an individual from a system in which he or she lives or studies. Some of these systems include family systems, neighborhoods, schools, and general cultural practices. Based on this argument it could be postulated it would be equally difficult to separate larger systems, such as a school or school district, from a larger environment, such as the overall community (Netting, Kettner, & McMurtry, 2004).

In terms of the school district being part of the overall community, general systems theory helped frame how the impact of the environment, including the community of the school district, impacts overall student academic performance (Bowen, 2007). An important aspect of how a setting or community can impact the ability of a public-school district to address the needs of their students is compounded by additional external factors associated with the community in which the district is located.

For the purpose of this research, systems theory helped frame how the unique concerns noted in rural school districts impacts special education decision makers' ability to utilize RTI data in conjunction with the insufficient progress criterion for accurate special education enrollment decision-making. Overall, applying the ideas of systems theory to this research helped to better understand the effects RTI program implementation and special education enrollment practices, as related to the unique needs of rural school districts compared to suburban school districts. Additionally, exploring how different types of public school experience success with RTI program

implementation helped to build upon general systems theory, as it will help further explain how factors within a given system can either help or hinder changes and advancement within that system.

Background on Special Education

Educational provisions for children with disabilities have changed drastically over the past few decades. Public Law-94-142, the Education for all Handicapped Children Act (EHA), was enacted in 1975. This act ensures that all children, aged 3-21 years, are guaranteed a free and appropriate public education (FAPE) regardless of disability status (U.S. Department of Public Education, 2007). Additionally, this act ensured all students, including those with disabilities, received their education in the least restrictive environment (LRE) possible while maintaining adequate progress and educational benefit (U.S. Department of Public Education, 2007). Meaning students with disabilities should be educated in the same setting, as much as possible, with their typically developing peers.

In 1990, EHA reauthorized and renamed the Individuals with Disabilities Education Act (IDEA). The IDEA is built upon six pillars of foundation to ensure appropriate educational opportunities are provided to students with disabilities. These six pillars include: Individualized Education Plan (IEP), LRE, FAPE, participation of teachers and parents, evaluation, and procedural safeguards (IDEA, 2004). The six pillars are essential to ensuring students with disability are provided an appropriate education free from stigma and criticism.

To provide students with FAPE and identify a student's LRE, appropriate evaluation needed to be completed to a) identify if the presence of a disability requiring special education and b) identify the student's individual strengths and needs. This is completed through a comprehensive educational evaluation. This identifying process is ongoing and may begin at birth and continue until a student is age 21 years. Part of this evaluation process requires school districts to adhere to certain criteria and assessment procedures to identify a disability under IDEA. While these procedures can vary from state to state, general guidance for definitions and overall eligibility criteria are provided at the federal level.

History of Learning Disability Diagnosis

Students who are identified as struggling academically or noted to be at-risk for academic failure are often first and foremost considered students with potential learning disabilities. Specific learning disability (SLD) was a federally designated as a disability category for special education in the 1960's (National Association of Special Education Teachers, 2007). At that time, learning disabilities were described as a delay in psychological processes, which may manifest itself in an inability to learn (PL-94-142). Overall, learning disabilities have been used to describe the neurological differences of a person with average intelligence that experiences difficulty with gaining new academic skills (National Association of Special Education Teachers, 2007). A significant part of this definition includes the noted discrepancy between an individual's measured cognitive ability, or intelligence quotient (IQ) and academic achievement, which is a major factor in the historical criteria for a SLD requiring special education services (Fuchs, Mock,

Morgan, & Young, 2003). This interpretation of the SLD definition and its special education criteria is referred to as the discrepancy model. This mode of SLD identification; however, has been subject to much criticism.

The discrepancy model of identifying students with SLDs has become riddled with criticisms regarding the appropriateness, validity, and reliability of the discrepancy model of identification. Fuchs, Mock, Morgan, and Young (2003) discussed some of these concerns in their investigation into SLD identification and implications of future changes to SLD criteria and identification practices. They noted variances in prevalence ratings and inconsistencies with the definition of the IQ-achievement discrepancy amongst states as two major concerns associated with the SLD identification practices as that time. Additionally, they pointed out the discrepancy model failed to distinguish between those with learning disabilities and student that are viewed as low achievers, who may be just as deserving of special education services. Specifically, they noted children from low-income families with relatively low IQ scores, who obtain achievement scores similar to those students with average IQ. These students will not receive special education services, due insufficient IQ-achievement gap. This model has been labeled as the "wait-to-fail" method; indicating, for children to reach a significant IQ-achievement discrepancy, they must first reach an unnecessary level of academic failure over the course of many school years (Fletcher, Coulter, Reschly, & Vaughn, 2004; Kavale, Holdernack, & Mostert, 2005; Lyon, et al., 2001). This resulted in many students not being identifying as having SLD until the 3rd or 4th grade; thus, negating the benefits of early intervention (Miller, Maricle, Jones, 2016). Additionally, this approach

did not lead to successful interventions to remediate academic difficulties often noted in children suspected of an SLD (Fletcher et al., 2004; Kavale et al., 2005; Lyon et al., 2001). These concerns have lead many researchers to reject the IQ-achievement discrepancy as a valid indicator of SLDs and search for alternative methods to properly identify learning disabilities and need for special education services (Fuchs et. al., 2003; Gresham, 2002).

The reauthorization of IDEA, in 2004, also brought about changes regarding the federally required methods of identifying students with SLDs. These changes were formally placed into effect in August 2016 and were further clarified by the Office of Special Education and Rehabilitative Services (OSERS) a division of the U.S. Department of Education. As part of the updated processes for recognizing children with SLDs, IDEA indicates that states must implement criteria to determine if a student has an SLD; however, states must not require the severe discrepancy method be utilized. Additionally, criteria must allow for a process, which identifies how a student progresses with the use of a scientific, research-based intervention. RTI is a model that can be used to identify an SLD under the new mandate (U.S. Department of Education, 2006). The changes to the methods of identifying students with SLDs encouraged states to investigate alternative methods of special education eligibility, including the implementation of RTI to identify struggling students and meet their individualized needs through general education programming.

Response to Intervention (RTI) Basics

RTI is an instructional support provided through general education initiatives to identify student academic needs and provide them with intensive early intervention services to address these needs. The National Center on RTI (NCRTI, 2010), reports the goal of RTI is to utilize instructional resources to decrease the long-term impact of low achievement or poor learning to improve student outcomes and reduce the likelihood of the student being identified with a disability that requires special education programming. The National Association of State Directors of Special Education (NASDSE, 2007) described RTI as a problem-solving process by which a school and educators provides quality interventions aligned to student specific need and utilize progress monitoring methods and data collection to help make important educational decisions to address specific student concerns. Procedures commonly included in RTI practice include screening practices, monitoring academic growth related to interventions, and determining the plan of future educational action for individual students (Buffman, Mattos, & Weber, 2009; Fuchs & Fuchs, 2005; Kavale, Holdnack, & Mostert, 2005). Additionally, the three-tiered model of intervention services is often associated with RTI and utilized in most school districts.

The philosophy of tiered instruction is based upon the percentage of students who should require additional supports above and beyond the general curriculum presented to all students. Three tiers are often represented in RTI models as a triangle divided into three distinct subparts indicated the tiers of service (Batsche et. al., 2006). The driving distinction between these tiers is the level of intensity, frequency, and duration of the

additional interventions (if any) that students receive during the school day (Fuchs & Fuchs, 2006; Gerzel-Short & Wilkins, 2009). Students who are found to be unsuccessful with tier I instruction alone will begin to receive additional interventions and supports, at a more explicit and intensive manner, through tier II and tier III services (Christo, 2005; Jenkins & Johnson, 2014; Johnson & Smith, 2008; VanDerHeyden & Burns, 2010; Vaughn, 2003).

Tier III services in some RTI models may vary in terms of special education services. While most RTI models are in agreement that tier III services are reserved for those requiring the most intensive supports and interventions, some models indicate tier III services as reserved for students receiving special education programming, many do not (Buffum et al., 2009; Fuchs & Fuchs, 2007; Gerzel-Short & Watkins, 2009; Searle, 2010; Tully, 2010). However, if students continue to demonstrate lack of progress through tier III interventions, a special education referral is often warranted (Searle, 2010; Tully, 2010). Typically, data from previous interventions at all tiered levels will be taken into consideration by an intervention, grade-level, or IEP team to determine the next steps to meet the struggling student's needs (Brown-Chidsey, 2007).

Overall, the underlying concept that leads to effective RTI implementation is effective development and use of a problem-solving team approach to student learning and educational decision-making (VanDerHeyden, 2010). Researchers have noted the success of RTI is dependent upon a fixed application and interpretation of data analysis and criteria used to move students between the various tiers of intervention. When interventions have clearly defined phases and rules surrounding how data are used to

determine student needs, successful student outcomes will be observed (Fuchs, Fuchs, Mathes, & Simmons, 1997). Without clear regulations on how a school will implement RTI procedures misapplication can occur, which will impact the positive effects often observed when using this model (Burns & Symington, 2002; Lau, Sieler, Muyskens, Cater, VanKeuren, & Marston, 2006). McMaster, Fuchs, Fuchs, and Compton (2005) observed additional components that impact the effectiveness of service delivery though an RTI model. They noted difficulties in RTI implementation can arise in some settings when the resources necessary to do so with fidelity are not available. This is an important factor to note when RTI models are used in conjunction with special education evaluation procedures.

RTI and Special Education

The reauthorization of IDEA included a provision requiring students with disabilities to meet the same standards as their typically developing peers (NCLB, 2002; U.S. Department of Education, 2007). These new provisions also paved way for districts to begin utilizing alternative methods, such as RTI, to identify children with SLDs requiring special education services. While the language used in the new law did not refer to RTI specifically, it incorporated concepts that are closely aligned with the RTI vision. Some of these concepts included the use of scientifically researched procedures, interventions, and the child's response to the interventions as tracked through means such as progress monitoring. All of these concepts are similar to those proposed in most RTI models (Coleman, Buyssee, Neitzel, 2006).

The utilization of RTI was believed to prevent children from experiencing years of failure prior to special education intervention. Instead, the conceptualization of RTI aimed to identify students needing additional supports earlier to help them become more successful academically (Jenkins & Johnson, 2014). Additionally, the new federal law made more strict references to exclusionary factors in special education eligibility. Specifically, the law mandated the need to prove students had access to high quality instruction, including interventions, before being considered for special education services. IDEA states students cannot be considered for special education if they have not previously received a quality education, which should be addressed at the tier I level of the RTI model (U.S. Department of Education, 2007).

Even though IDEA (2004) has encouraged school districts to adopt the RTI model, the accuracy of identifying SLDs with the RTI process has been debated amongst educators and researchers. Much of this debate surrounds the fact that the RTI process is not yet systematically developed and implemented, making it look drastically different from school district to school district (Fuchs, Mock et al., 2003). Some of these differences can include the number of tiers, who provides services and intervention, when special education referrals are made, or if RTI is the comprehensive evaluation for special education eligibility purposes (Fuchs, Mock et al., 2003). Other concerns included the difficulty associated with implementing RTI with fidelity, which can result in false negatives and positives when identifying students with SLDs for special education services.

Researchers have explored the various aspects of RTI implementation including implementation fidelity and the effectiveness of RTI to identify students in need of special education programming. Hill, King, Lemons, and Partanen (2012) examined 22 empirical studies to identify methods in which fidelity was monitored at the tier II level. They found that many districts appear to monitor fidelity at the tier II level; however, the methods with which fidelity are monitored are not often explicitly stated. While fidelity checks are reported at this level, it is unclear what those techniques consist of and how often they occur. Moreover, it was found that there is an overwhelming neglect by districts to report of the fidelity of tier I instruction; thus, limiting the claims made regarding the effectiveness of tier II interventions. The results of this study indicate a discrepancy between a school's reports of implementing and effective RTI program, and the checks and balances performed when determining the fidelity of the program implementation. Without proper implementation and proof of fidelity, districts may find it difficult to accurately identify students needing additional services, including those potentially eligible for special education programming.

Additional researchers have discussed the concerns related to mandating interventions in special education eligibility with minimal focus of overall intervention implementation fidelity. Keller-Marguilis (2012) discussed that after the reauthorization of IDEA, RTI has been introduced as a mechanism for SLD identification with the primary focus on RTI application; as such, minimal focus has been provided to guide effective implementation and program fidelity. Keller-Marguilis (2012) indicatd the rapid pace at which schools have begun implementing RTI in response to the federal

legislation has left a need for further support schools embracing RTI implementation and guide consistent monitoring of fidelity to improve student performance. Likewise, Shinn (2007) argued that RTI models, and other models that monitor student improvement rates, have not been utilized properly in education. While it is recognized that RTI is effective in identify student needs and is helpful in determining special education eligibility, teachers are undertrained to fully implement RTI models accurately and effectively (Shinn, 2007).

Many techniques have been explored regarding the way in which to implement RTI effectively within schools. Researchers have explored the necessity of school districts to be flexible and change staff roles in order to properly implement RTI. Training is necessary to ensure school staff utilize and comprehend data effectively to help guide instruction and decision-making related to special education eligibility using an RTI model (Mastropieri & Scruggs, 2005; Werts, Lambert & Carpenter, 2009). Under the RTI model, educational needs, as defined by performance discrepancies compared to peers, are not sufficient for special education eligibility (Shinn, 2007). Therefore, it is necessary for the teacher to have proper training and understanding of the RTI model and ability to adequately analyze data to determine future educational needs.

As districts began to shift from utilizing the discrepancy model for SLD identification towards an RTI model researchers also focused on the necessary aspects of disability identification. Kavale, Kauffman, Bachmeier, and LeFever (2008) determined that RTI is ineffective to address remedial services. They argued that overall the RTI model is conceptually flawed and proposed that it was politically rather than scientifically

motivated. Instead, RTI in conjunction with comprehensive psychometric assessment was necessary to obtain reliable and valid SLD identification under IDEA.

Despite concerns regarding implementation fidelity, proper staffing, and teacher training, researchers have found RTI to be an effective means of addressing student academic concerns early and is a useful preventative for special education services. Guy, Fields, and Edwards (2015) examined the RTI system in an elementary school. They examined student outcomes over the course of seven years. In this school's RTI system the bottom 20% of students were targeted for intervention based upon universal screening data. These students received intensive research-based interventions either during small group intervention pulled out from the classroom, or during identified intervention times consistent across the grade level. Progress monitoring was utilized frequency to determine student growth and identify additional needs to address through intervention. Progress monitoring data was also utilized as part of strict exit criteria. The researchers noted that with strict implementation guidelines and procedures, the school noted great improvement in overall reading progress school-wide. Likewise, other researchers have noted improvement in reading outcomes with the implementation of RTI programming.

In a study completed by Catts, Nielsen, Bridges, Liu, and Bontempo (2015) the effectiveness of tier II interventions were investigated across 366 kindergarten students. The kindergarten students were administered a battery of screeners and progress monitors over the course of one year. The students that showed initial risk of a reading disability received intensive tier II interventions. The findings of the study indicated the students' response to intervention at tier II was a significant predictor of reading outcomes. Those

that showed improvement were much less likely to be identified later with a disability. These results indicate RTI is effective for early intervention and improving student reading skills, specifically for identifying students at-risk for an SLD.

In a four-year longitudinal study, O'Connor, Bocian, Beach, Sanchez, and Flynn (2013) SLD explored identification rates. The researchers compared the number of students that were identified SLD during the years in which RTI was implemented school-wide verses previous years in which RTI was not used within the school. They noted a decrease in students identified with SLD during the years in which RTI was utilized verses the years RTI was not implemented. However, this difference was not noted as statistically significant (381 students without RTI verses 377 students with RTI). The researchers of this study found that students identified with SLD using the RTI model had more significant impairments than those previously identified. The researcher also noted a decline in English Language Learner (ELL) students identified with an SLD once the RTI model was implemented. Overall, this study indicates the use of the RTI model for SLD identification may not drastically improve overall identification rates; however, it may help in identifying students with more significant needs and eliminate ELL students from being improperly identified for special education.

Additional research has focused on the overall impact of RTI upon special education enrollment rates and changes in disability incidence over time. Parks (2011) completed a mixed methods study to compare administrator and teacher views how special education identification and actually special education eligibility rates is impacted by RTI implementation over a period of six school years. The first three years of data

were prior to RTI implementation within an elementary school and the last three years were after RTI implementation at the school. The results of the study showed that while administrators and teachers felt the number of students eligible for services since RTI implementation had decreased, the data analysis reflected no significant changes in special education eligibility rates. However, what Parks failed to investigate was whether the number of special educating referrals and evaluations had changed since RTI was implemented, thereby impacting the accuracy of teacher's ability to recognize children requiring special education services. Additionally, the researcher did not examine if proportion of disability types remained the same or changed significantly post RTI implementation.

In a study analyzing U. S. Department of Education data, Zirkel (2013) noted various trends in special education enrollment over the past decade. While overall special education proportions, compared to the all students enrolled in school, remained consistent over the span of this review, the rate of students identified with SLD dropped in comparison to general school enrollment numbers and in proportion to the number of student enrolled in special education. Opposite trends were noted in the disability areas of OHI and autism. Both showed increased rates of identification. The percentage of students identified with either of these disabilities increased in overall school enrollments and also in proportion to the special education population. In sum, Zirkel noted decreased levels of SLD identification and increase OHI and autism identification, with the overall number of students identified for special education remaining stable.

While Zirkel's research is not based on RTI implementation, the time during which data was collected included the reauthorization of the IDEA in which provisions for alternative methods to the discrepancy model for SLD identification was included, which, as previously discussed, included many districts adopting RTI programming for special education eligibility purposes. Zirkel (2013) hypothesized one of the reasons trends for special education enrollment changed was due to increased implementation of RTI for SLD identification.

Scull and Winkler (2011) discussed similar trends as Zirkel (2013) when reporting trends in special education enrollment form 2000-2010. They reported special education enrollment peaked, after decades of incline, in 2004-05, and has steadily been on a decline since. They noted SLD as the most prevalent disability type and it has also been on a decline. Other disability areas noted to be decreasing included mental retardation (now known as intellectual disability) and emotional disturbances (known as Emotional or Behavioral Disability in the state of Wisconsin). Like Zirkel (2013), they noted significant increases in the areas of autism and OHI. Specifically, the number of students qualified for service with autism had quadrupled in the ten-year span and students with OHIs more than doubled. Scull and Winkler (2011) also reached similar conclusions as Zirkel (2013), while they could not definitively determine the cause of changes in special education trends; they suggested further research needs to focus on the impact of RTI upon these trends.

The RTI model was designed to deliver early interventions to help struggling students succeed academically after receiving high quality universal instruction (Jenkins

& Johnson, 2014; U.S. Department of Education, 2007). Despite the U.S. Department of Education's (2007) support of the utilization of RTI for SLD identification, the process is not yet quantified across the nation and the rapid rollout of implementation has caused RTI to look drastically different across school districts (Fuchs, Mochs, et al., 2003). Due to implementation differences, methods of monitoring fidelity across tiers of support and interventions, program development, and teacher training to properly implement RTI are current areas of concern (Hill et al., 2012; Keller-Marguilis, 2012; Shinn, 2007). While RTI has been recognized as an effective means to remediate basic academic skills, especially in reading, (Guy et al., 2015; Catts et al., 2015) proper implementation of RTI has not shown a significant impact in decreasing the number of students identified with SLDs (O'Connor et al., 2015). Furthermore, researchers have noted a change in special education enrollment trends associated with RTI implementation. Zirkel (2013) and Scull and Winkler (2011) noted that while the prevalence of SLD seems to be declining, other disability areas, such as autism and OHI, were increasing significantly. Overall, studies currently available and reviewed in this section examined the impact of RTI on special education enrollment. However, researchers have not fully examined changes in special education enrollment trends across multiple disabilities since RTI has been recommended as a method of SLD identification. This indicates a need for the present study.

Limitations of Rural Public Schools

Research focused on academic achievement in rural school districts noted a number of issues that impact the ability to implement new educational initiatives and

maintain similar academic achievement rates compared to suburban school districts. Graham and Provost (2012) discussed that frequently rural schools are tolled with lower rates of budget allocation by federal funds than urban and suburban schools. Additional concerns unique to rural districts included employees experiencing lower salary rates, threats of consolidation, and geographical isolation, which made it difficult to attract and retain highly-qualified teachers than suburban districts (Graham and Provost, 2012). Due to these concerns, professional development is viewed as the most important factor in improving education in rural districts, especially when highly-qualified teachers are difficult to find and maintain. However, as previously mentioned budgetary concerns make providing adequate professional development difficult in these regions (Barrett, Cowen, Toma, & Troskey, 2015; Brownell, Bishop, & Sindelar, 2005; Dexter, Hughes, & Farmer, 2008; Shepherd, Salembier, 2011; & Williams, 2003).

Vaughn and Swanson (2015) noted that previous educational research had identified the most important aspects of RTI, instructional practices, and developing interventions for students with disabilities to meet their specific needs. They noted much of this research has also produced favorable outcomes for students with disabilities but has been largely reliant upon individual school district's ability to appropriately fund and maintain resources to continue program implementation and provide appropriate staff development. Furthermore, Vaughn and Swanson (2015) stated that continued funding is important to ensure appropriate techniques are utilized and education of the community is effective to continue to help improve student outcomes; however, as noted above, rural school districts struggle with maintaining funding and high enough budgets for programs

such as RTI to be implemented as designed to obtain positive student outcomes as noted in the research.

In addition to low funding to continue to implement and develop educational initiatives, rural schools also struggled to find and maintain highly qualified teachers. Berry, Petrin, Gravelle, and Farmer (2011) investigated the needs of rural school districts in terms of staffing and professional development. They discovered many rural administrators report struggling to fill vacant positions, which often results in less qualified teachers being hired. Berry et al. (2011) also reported that less qualified teachers often report less commitment to their position; thus, making it difficult to implement strong school wide initiatives and polices, such as RTI, due to the lack of staff commitment and buy-in. Brendle (2015) also reported that limited resources and staffing interfered with rural school district's abilities to properly implement RTI procedures, such as building and maintaining multidisciplinary teams and identifying intervention resources that will appropriately address student need prior to special education referrals. Upon interviewing general and special education teachers in rural school settings, Brendle (2015) reported varying degrees of knowledge surrounding intervention practices and team processes between these two groups. Brendle (2015) suggested that rural districts would benefit from on-going professional development in the areas of effective team interventions and processes. However, as previously discussed, multiple funding concerns often interfere with a rural district's ability to provide continued professional development to staff.

In a review of data and policies, Johnson and Howley (2015), found that standardized approaches to education, such as new program provisions and implementation, such as RTI, are often ineffective and even potentially harmful for student education in rural school districts. The Wisconsin DPI (n.d.) also acknowledged there are specific challenges, similar to those noted in the studies discussed above, currently facing WI rural schools including: revenue caps, high-cost programs, declining enrollment rates, and increased transportation costs. As such, educators within Wisconsin rural districts may struggle to implement the new SLD insufficient progress criterion with accuracy, leading to inappropriate disability identification for special education services. According to Hicken (n.d.) these concerns impacted the 44% of Wisconsin's pre-kindergarten through 12th grade public school students and educators currently assigned to rural schools. The needs of rural school districts in Wisconsin are greatly impacted by the factors discussed. Due to these factors, it is likely that changes in special education practices and procedures within the state will also have a noted impact within rural school districts.

Wisconsin Public School Practices and Policies

The Wisconsin Department of Public Instruction (DPI) began, in 2010, to embrace the mission for school-wide implementation of RTI (Evers, 2010). Through RTI, students are provided additional instruction and intervention when they are not performing at grade level; or, are provided with various enrichment activities when achieving at or above grade level. As an early intervening service, RTI aids in preventing children from requiring special education services in the future (Evers, 2010). While DPI

has not yet mandated the use of RTI in school districts, it is strongly recommending districts implement RTI at the school-wide level to meet all students' needs (WI DPI, 2013).

In an additional effort to provide early interventions to meet student needs, a roll-out program was implemented in 2010 to change a piece of the eligibility criteria for students being evaluated for an SLD to receive special education services. This criterion was changed from the ability-achievement discrepancy model to an insufficient progress model. The insufficient progress criterion operates similarly to the RTI model. This criterion requires the use of a minimum of two scientific research or evidence-based interventions (SRBIs) and progress monitoring to determine student growth in a targeted academic skill area, as compared to same-aged peers (WI DPI, 2013). A student's measured progress, in relation to the implementation SRBIs, is used to determine that sufficient instruction and varied instructional techniques were provided to students with suspected learning difficulties prior to, or during the evaluation process.

While RTI is not directly required in Wisconsin in order to identify students with disabilities, the Wisconsin RTI Center (n.d.) noted that school districts with specific RTI structures in place will be better equipped than districts not using RTI techniques to meet the data requirement of the insufficient progress criterion of the SLD rule. If the interventions implemented through the RTI system are aligned with insufficient progress criteria (i.e., are scientific/research-based and are implemented with 80% fidelity) the interventions, including progress monitoring data, collected in conjunction with RTI implementation can be applied to the SLD insufficient progress criterion. These RTI

interventions can be utilized whether they are implemented before a special education referral or completed as part of the comprehensive evaluation in making an eligibility determination for SLD qualification. While researchers agree to the benefits of the using the RTI model, how this process works within rural school districts, in relation to the insufficient progress criterion and special education eligibility, has not been well researched.

An additional concern with using SRBIs or RTI to identify disabilities is how this criterion impacts special education decision makers' ability to accurately and consistently identify students for special education in the correct disability area. For example, Wisconsin does not require a medical diagnosis in order to meet eligibility requires for other health impairment (OHI). As such, teams may determine a student exhibits various condition-like behaviors (such as attention deficit hyperactivity disorder [ADHD]), and qualify the student for special education under OHI criteria, without the child being officially diagnosed with a medical condition by a physician.

Likewise, for students to be identified with an emotional or behavioral disability (EBD), the Wisconsin eligibility handbook suggests a functional behavior assessment (FBA) and behavioral interventions be completed as part of the evaluation, however, this is not a requirement for eligibility. As such, an evaluation team could bypass completing an FBA and determine if a student needs special education due to behavioral needs, even if the behavioral concerns stem from academic incompetency and was not appropriately addressed through an RTI or other intervention system. Other examples, such as these, can be found within the eligibility criteria for multiple disability areas in the state of

Wisconsin. These factors could lead to inaccurate disability identification and an increase in special education enrollments across other disabilities areas, while SLD enrollments decline, especially since the mandate of the insufficient progress criterion (Zirkel, 2013).

Summary

Many studies have been conducted to determine the impact of using RTI to meet students' needs prior to making a referral for special education programming. The vast majority of the literature has focused on how RTI leads to a decrease in the rate of special education referrals and students identified with SLDs (Marston, Muysken, Lau, & Canter; Torgesen, 2009; & VanDerHayden, Witt, & Gilbertson, 2007). In rural school districts, special education decision makers, such as school psychologists or special education directors, may lack the resources and training to gather the data necessary to correctly identify and qualify students for special education. Additionally, the eligibility criteria across disability areas, other than SLD, can be perceived as more subjective and less quantitatively data-based, than the SLD criteria. Among those that are less familiar with RTI implementation, such as rural IEP teams and school teachers, it may be easier to have a child identified with an alternative disability to receive special education services sooner, rather than collecting the required data through the RTI process for SLD qualification. This suggests that while SLD enrollments decline, other disability areas may present evidence of growth (Boe et al., 2013).

This review of literature has found information exploring the basics of RTI implementation, the usefulness of RTI in SLD identification and prevention, the unique

needs and challenges of rural school districts which may prevent them from implementing RTI as designed, and procedures in Wisconsin for identify students for special education services. However, there is minimal information available in the literature regarding how RTI impacts special education enrollment rates in disability areas other than SLD, or how the limited resources available in rural school districts may hinder their ability to adequately implement RTI for special education decision making purposes. Chapter 3 offers a comprehensive description this study's methodology, research design, and procedures for data collection and analysis.

Chapter 3: Research Method

Introduction

The purpose of this study was to investigate differences among special education enrollments for suspected SLD compared to other commonly identified disability areas (other disabilities), between districts that have properly implemented school-wide RTI and those that have not within rural verses suburban school districts in the state of Wisconsin. Additionally,, in this study, I examined if concerns frequently identified in rural districts, such as lack of resources and of highly qualified educators can impede accurate program implementation (such as RTI) and thereby contribute to misidentification of student disabilities and enrollment in special education services.

To identify special education enrollment practices and explore how this is related to the type of school district and level of RTI implementation with fidelity, I used a quantitative research design. A series of ANOVAs with a Bonferroni correction, a repeated measures ANOVA, and a multiple regression analysis was completed and allowed for the determination of the influence of types of communities, environmental factors, and school-wide RTI fidelity on special education enrollment practices through the three phases of insufficient criterion implementation. This chapter includes discussion of this study's research design and approach, setting and sample selection procedures, and descriptions of instruments and materials that were utilized in this study. A review of the procedures for data collection and analysis was provided. Lastly, ethical considerations to protect participant rights are also explored within this chapter.

Study Design and Rationale

A quantitative approach and causal-comparative research design was used in this research investigation. This methodology was believed to be suitable for this research, because the purpose of this study was to examine quantitative data to analyze variable relationships including non-manipulated independent variables in order to test various hypotheses.

Research Approach

According to Creswell (2014), a quantitative study design is appropriate when data are collected and analyzed to test, support, or refute preexisting theories and hypotheses. The nature of this study was quantitative. Quantitative research is appropriate for examining the relationship between the schoolwide implementation of RTI, the required use of insufficient progress as a criterion used to identify and qualify students with SLDs for special education services, and overall special education enrollment rates within rural school districts and suburban school districts. Quantitative data was collected and analyzed to further investigate these relationships. Furthermore, quantitative research was considered appropriate, because the purpose of the study involved understanding and describing the relationship between multiple variables. The independent variables were types of community (rural or suburban) and environmental factors. The dependent variables were fidelity of school-wide RTI implementation, as measured by ratings on the SIR, and proportion of special education enrollments for students identified with SLDs and other disabilities, including: speech or language impairment (SLI), other health impairment (OHI), autism (ASD), and emotional

or behavioral disability (EBD), as a combined factor, found in each school district. The dependent variables were sampled during three, time periods during the insufficient progress criterion rollout. These samplings were taken prior to the criterion implementation (2007-2010), during criterion implementation (2010-2013), and after full implementation of the criterion (2013-2016).

Research Design

Of the multiple types of quantitative research designs, non-experimental research designs do not involve study sample manipulation when assigning groups (Belli, 2008). Belli (2008) noted these types of research designs are often useful when researchers would like to study a sample as it exists in the natural environment, the focus of the study includes a social construct which cannot be manipulated, and when randomizing sample groups would be considered unethical. The sample in this study, rural and suburban school districts, naturally existed and the focus of the study involved factors that cannot be manipulated (such as RTI implementation fidelity, and total special education enrollments in rural and suburban school districts), therefore a nonexperimental design was appropriate for the study.

Furthermore, a causal-comparative research design was deemed appropriate for investigating the relationship between types of communities, RTI fidelity, and proportion special education enrollments during the three phases of the insufficient progress criterion rollout. In this study, I used a correlational design to explore the impact of the independent variables; type of community (rural or suburban) and environmental factors upon the dependent variables of proportion special education enrollments across various

disabilities and fidelity of RTI implementation. Because the researcher primarily wished to explore the differences between rural and suburban districts in RTI practices and special education enrollments, a causal-comparative study was considered appropriate (Lohmeier, 2010).

This design allowed for a repeated measures ANOVA, ANOVAs with Bonferroni correction, and multiple regression analysis. Research questions one and two were addressed through ANOVAs with a Bonferroni correction, research question three was addressed through a repeated measures ANOVA, and the final research question used a multiple regression analysis. These analyses provided more information than a descriptive or correlational design, because predictive relationships can be identified between the types of school district communities, phases of the insufficient progress criterion, fidelity of RTI implementation, and special education enrollment rates across various disabilities.

There were minimal time constraints with the design of this study. As archival data was collected, the only time constraint was the rate at which a data use agreement and data dissemination occurred with the WI RTI Center. Additionally, the research design was needed to advance knowledge by offering a quantitative data analysis regarding the relationship between type of school district, the insufficient progress criterion, special education enrollment rates across disabilities, and RTI implementation and fidelity. This information is a valued addition to the literature, as there is currently limited research on this topic.

Methodology

Population

Archival data previously collected from special education leadership personnel and members of RTI leadership teams in rural and suburban school districts in Wisconsin was utilized. All data sources for this study were archival; no new data was collected for this study. The population for this study was rural and suburban school districts actively engaged in actively engaged in meeting RTI implementation requirements as designed by the Wisconsin RTI Center within the state of Wisconsin. The state of Wisconsin has 426 school districts (of which 44% are considered rural districts) from which the sample for data collection was drawn.

Research Sample

Rural and suburban school districts from Wisconsin were utilized in this study and were drawn from the population of all public-school districts within Wisconsin. Additionally, only districts currently actively engaged in meeting the RTI implementation requirements as designed by the Wisconsin RTI Center were included in the study. Not all school districts in Wisconsin have implemented the RTI requires as designed by the RTI center; therefore, the archival dataset used for this study did not include all Wisconsin school districts. All districts were required to have submitted school-wide Implementation Review (SIR) data to the Wisconsin RTI Center to be included in the study sample. For the purpose of determining prevalence of disability areas throughout the three phases of the insufficient progress criterion, only the archival data obtained for 3rd through 5th grades in rural and suburban school districts were utilized; therefore, the

sample for research questions one and two consisted of only 3rd through5th grade students enrolled in rural and suburban school districts within Wisconsin. Lastly, only public schools were selected to be included in the study. The sample size of 92-198 rural and suburban school districts were aimed for from throughout the state of Wisconsin. The sample size varied depending upon the research question, the data source utilized, and whether letters of agreement or cooperation were necessary to access archival data. Calculations to determine these sample sizes are presented later in this chapter.

Procedures for Recruitment and Participation

The research population for this study was public school districts for all Research Questions. For Research Questions one, two, and four, publicly accessible data bases were utilized; therefore, participants or cooperating agencies did not need to be recruited to obtain these datasets. The Wisconsin RTI Center was the resource utilized to gain access to necessary archival database for research questions three and four. Only districts actively engaged in RTI implementation through the Wisconsin RTI Center were included in the study for the final two research questions. The Wisconsin RTI Center collects and houses data related to RTI implementation fidelity, through the use of the school-wide Implementation Review (SIR), which was vital in measuring one of the independent variables of this study. Additionally, only rural and suburban school districts were utilized for the purposes of this study. School districts located in metropolitan or urban areas were omitted from the study, as the focus of the study related to rural school needs with suburban districts as a comparison group. Data from metropolitan or urban districts was not needed for the purpose of this study.

Data Collection

Data were abstracted from the Wisconsin DPI public records portal for child count and district mandated reporting data. Wisconsin public schools are mandated to report a variety of information to the DPI, such as school enrollment, number of district staff, staff experience, salaries, special education enrollments by grade level, and primary disability areas for special education. This data is readily available to the public; therefore, no informed consent is necessary to obtain this information. Additional RTI implementation fidelity data was abstracted from the Wisconsin RTI Center SIR database. School districts that did not utilize the Wisconsin RTI Center Implementation Review (SIR) to monitor program implementation and fidelity were excluded from research questions three and four of the study. The SIR, developed by the Wisconsin RTI Center collects data regarding quality of instruction at the universal, selected, and targeted levels (i.e. tiers I through III); assessments available and utilized at all three RTI levels for decision making; ability for collaboration regarding service delivery at all three RTI levels; and the organizational and leadership structures available to support full implementation of an RTI system. A copy of the SIR is reproduced in Appendix B. SIR data is not considered public knowledge; therefore, a data use agreement was utilized between the researcher and the Wisconsin RTI Center. A copy of the data use agreement is in Appendix A.

Instrumentation

For this study, I used archival data collected through the Wisconsin DPI and the Wisconsin RTI Center. The data obtained through the Wisconsin DPI were collected on

an annual basis through various web portals accessible to public school administrators and personnel. Additionally, the data collected were reported through public access portals annually. These digital records have been maintained for the past 19 years. The data obtained through the Wisconsin RTI Center were collected with the use of the School-Wide Implementation Review (SIR). The SIR (see Appendix B) was designed to assess the level at which a school or school district has implemented various aspects related to RTI fidelity and success. This tool is aligned with the Wisconsin RTI framework (Wisconsin RTI Center, n.d.). The Wisconsin RTI Center encourages RTI/school leadership teams to complete the SIR annual to determine implementation progress and create action steps towards full implementation (Wisconsin RTI Center, n.d.). On the SIR each item was rated as one of five categories: full implementation, initial implementation, infrastructure, purpose-building, and not in place (Ryder et. al, 2012). Total scores for implementation and fidelity ranged from 0 to 100 (based on percentage of implementation, determined by the Wisconsin RTI Center), with the maximum possible score indicating RTI has been fully implemented across all aspects with complete fidelity.

Operationalization of Constructs

Dependent/Criterion Variables

This study had two criterion variables (i.e., dependent variables) including a) the prevalence of special education disability for SLD and other disabilities (OHI, SLD, ASD, and EBD combined), and b) level of RTI implementation and fidelity. The first pair of dependent variables were special education disability areas (SLD and other

disabilities, as described above); which are continuous variables measured by the proportion of students in special education enrolled the two categories listed above (SLD and other disabilities) in relation to all students enrolled within the school district. This was measured via Wisconsin annually reported child count data. School districts are required by federal law to report child count data on an annual basis and ensure that data are made available to the public. Each category of the dependent variable has a ratio scale of measurement. It indicated the proportion, or percentage, students enrolled in special education, in each school district, in the two categories identified for this study (SLD and other disabilities) during three different time periods (i.e., phases of insufficient criterion rollout).

The second criterion variable was level of RTI implementation and fidelity. This was measured with the use of the SIR, developed by the Wisconsin RTI Center. The SIR questionnaire consists of 61 items to be rated by school leadership teams regarding their level of implementation for factors the Wisconsin RTI Center determined as vital to full RTI implementation with fidelity. Each item is rated as one of five categories: full implementation, initial implementation, infrastructure, purpose-building, and not in place (Ryder et. al, 2012). Total scores for implementation and fidelity will range from 0 to 100, with the maximum possible score indicating RTI has been fully implemented across all aspects with complete fidelity. The SIR reports high levels of reliability through an analysis of internal consistency using Chronbach's alpha = 0.91(Ryder et al., 2012). Reliability ratings for the eight subscales of SIR were also completed with alpha ranging from 0.76 to 0.94 (Ryder et. al, 2012). A complete factor analysis was performed to

determine internal validity of the SIR. A promax rotation of the subscales indicated eight factors, which aligns with the division of the subscales on the measure, which indicated an appropriate level of internal validity (Ryder et. al, 2012). Lastly, convergent validity found that schools utilizing the SIR and implementing RTI at "full implementation" showed higher rates of student outcomes on the reading section of the Wisconsin Knowledge and Concepts Examination (WKCE) over four years as compared to schools with SIR ratings of "not in place" (Ryder et. al, 2012). These results provide evidence that schools were rating themselves accurately with the SIR (Ryeder et. al, 2012). Specific psychometric data regarding the validity of the SIR is not currently available through the WI RTI Center.

Independent/Predictor Variables

There were two sets of predictor or independent variables in this study: type of community and environmental factors. The categorical independent variable of type of community had two levels: rural and suburban. Districts were identified in one level based upon community demographics and the Wisconsin DPI designation for school districts.

The final set of predictor variables were environmental factors, which were broken down into multiple categories. These categories included the following factors: certified staff salaries, geographical isolation of districts (as defined by the Office of Management and Budget related to the overall town population and distance from a metropolitan area), retention of highly qualified instructors (all school staff holding professional licenses in WI are defined as "highly qualified;" retention were measured by

number of years a staff member has remained at the same district), amount of federal and state education funding received by the district each school year, and years of staff experience. This was measured with archival data retrieved from the Wisconsin DPI public data portal. Each level of this independent variable was measured on a continuous scale, indicating the numerical value for each of the above listed measures, with the exception of geographical isolation, which is a categorical variable. Geographical isolation was broken into two categories of rural and suburban. There is not a maximum value that can be assigned to each of the factors; the minimum number for each factor could theoretically be zero.

Sample Size and Data Analysis Plan

Data was analyzed through various repeated measures analyses during the three phases of insufficient progress criterion rollout; pre-rollout, rollout, and post-rollout years as designated by the Wisconsin DPI plan for the implementation the insufficient progress criterion for SLD identification. Each phase consisted of three school years, as the insufficient criterion was put into place in 2013 and school districts were notified of the upcoming change in 2010 (Evers, 2013). Data were collected during the pre-rollout phase began in 2007 in order to obtain equal data sets for each phase.

Four research questions were investigated and analyzed in this research study. The research questions and hypotheses are presented below.

Research Question 1: Does the prevalence of special education enrollments (number of cases divided by the total district enrollment) for SLD and Other disabilities, as measured by child count data, significantly change between each of the phases of the

insufficient progress criterion rollout in rural Wisconsin school districts?

$H_0$1: The prevalence of special education enrollments, as measured by Wisconsin child count data, will not differ between each of the phases of the insufficient progress criterion rollout in Wisconsin rural schools.

H_a1: The prevalence of special education enrollments for SLD and Other disabilities, as measured by Wisconsin child count data, will differ between Phases 1 and 2 and Phases 2 and 3, but not between Phases 1 and 3, with SLD enrollments declining and Other disability enrollments increasing during the second phase of the insufficient progress criterion rollout in Wisconsin rural school districts.

Research Question 2: Does the prevalence or proportion of special education enrollments (number of cases divided by the total district enrollment) for SLD and Other disabilities, as measured by child count data, significantly differ between rural and suburban Wisconsin school districts during the three phases of the insufficient progress criterion?

$H_0$2: The prevalence or proportion of special education enrollments for SLDs and Other disabilities, as measured by Wisconsin child count data, will not differ between rural and suburban school districts during each of the three phases of the insufficient progress criterion.

H_a2: The prevalence or proportion of special education enrollments for SLDs and Other disabilities, as measured by Wisconsin child count data, will differ between rural and suburban school districts during the second phase of the insufficient progress criterion and be balanced during the first and third phases.

To address the research questions 1 and 2, an ANOVA, including a Bonferroni correction, was used. See Table 2 for a summary of the data analyses, variables, and calculated projected sample sizes associated with each of the study's research questions. This analysis was appropriate to test whether there is an equality of proportions of special education enrollments for SLD and other disabilities (four disability areas combined as one factor), changes over the course of the three phases of the insufficient progress criterion implementation a) within rural school districts and b) between rural and suburban school districts. This analysis allowed for the comparison of the proportion students enrolled in special education during the three distinct periods in time associated with the insufficient progress criterion rollout, consisting of separate analyses during each time period. The added post hoc Bonferroni correction analysis was used to help protect against a Type I error by adjusting the *p* values necessary to identify statistical significance between the variables. Thereby, the alpha level was divided by six and set at .0083, instead of .05, to account for two dependent variables and comparisons at each of the three phases of the insufficient progress criterion rollout (.05 divided by 6 total comparisons). This was necessary, because multiple statistical analyses were performed on a single data set to properly answer research questions one and two. These analyses included a comparison of two dependent variables (SLD and Other disabilities) during the three phases of the insufficient progress criterion rollout, for a total of six comparisons for research questions one and two. Additionally, the use of the Bonferroni correction assisted in confirming differences amongst individual variables as opposed to only analyzing between group differences. It was hypothesized that there would be a

difference between the independent variables (type of community; rural and suburban, and insufficient progress criterion rollout phase) and the dependent variables (proportion of students identified in two categories: SLD and other disabilities), which made a series of ANOVA analyses an appropriate method to test these research question.

A sample size analysis was completed for a two-group one-way ANOVA using G*Power 3.1 with the statistical power set at .80, the alpha at .0083, to account for two dependent variables measured over three, time periods, making six total comparisons via Bonferroni correction. A moderate effect size of .25 was selected. Based on these calculations this project required a minimum sample size of 198 participating school districts.

Research Question 3: During each of the three phases of the insufficient progress criterion implementation, did the level of school-wide RTI implementation fidelity, as measured by the school-wide implementation tool (SIR), significantly differ between rural and suburban school districts?

$H_0$3: During each of the three phases of the insufficient progress criterion implementation the level of school-wide RTI implementation fidelity, as measured by the SIR, will not differ between rural school districts and suburban school districts.

H_a3: During the second and third phases of the insufficient progress criterion implementation, the level of school-wide RTI implementation fidelity, as measured by the SIR, will differ between rural school districts and suburban school districts.

The third research question was analyzed with a repeated measures ANOVA. An ANOVA measures for a statistically significant difference between the means of two

sample groups during three distinct time periods (the three phases of the insufficient criterion roll-out). For the third research question, the mean score on the SIR was compared between rural school districts and suburban school districts. Similarly, to research question 2, this question requires a repeated measures analysis, because scores during all three phases of the insufficient progress criterion rollout were compared. It was determined that if the data collected for this research question was not normally distributed, a nonparametric repeated measures ANOVA, or the Friedman's test, would be utilized. Significance was determined at the .05 confidence level. A sample size analysis for ANOVA, with two groups and three measures, was completed using G*Power 3.1 with a statistical power set at .80, the alpha at .05, and a correlation among repeated measures of .5. A moderate effect size (*f*) of .25 was selected. Based on these calculations, this project required a minimum sample size of 86 participating school districts.

Research Question 4: Do environmental factors; including certified staff salary, geographical isolation, retention of highly qualified instructors, and federal funding as measured by demographic data collected and reported as part of public record by Wisconsin DPI, impact a school's ability to implement school-wide RTI with fidelity?

$H_0$4: Environmental factors; including certified staff salary, geographical isolation, retention of highly qualified instructors, and federal funding, as measured by demographic data collected and reported as part of public record by Wisconsin DPI**,** do not impact a school's ability to implement school-wide RTI with fidelity.

H_a4: Environmental factors; including certified staff salary, geographical isolation, retention of highly qualified instructors, and federal funding, as measured by demographic data collected and reported as part of public record by Wisconsin DPI, impacts a school's ability to implement school-wide RTI with fidelity.

The fourth, and final, research question was analyzed through a multiple regression analysis. Multiple regression analysis is most often used with continuous predictor variables. In the present study multiple, continuous predictor variables (i.e., environmental factors consisting of: certified staff salaries, geographical isolation, retention of highly qualified instructors, amount of federal and state funding, and years of staff experience) were evaluated, making multiple regression an appropriate analysis. An advantage of utilizing a multiple regression analysis for this research question is this approach helped determine whether any of the measured environmental factors are responsible for predicting level of school-wide RTI implementation by calculating beta values for each of the predictor variables. A sample size analysis for multiple regression analysis was completed using G*Power 3.1 with the statistical power set at .80, the alpha at .05, and five predictors. A moderate effect size (f^2) of .25 was selected. Based on these calculations, this project required a minimum sample size of 92 participating school districts.

Table 2

Research Questions, Data Analysis, Variables, and Sample Sizes

Research Questions	Data Analysis	Variables	Sample Size
RQ 1	ANOVA with Bonferroni Correction	Phases (3) x Disability (2) rural school prevalence (DV)	198 School districts
RQ 2	ANOVA with Bonferroni Correction	Phases (3) x School Districts (2) x Disability (2) prevalence (DV)	198 School districts
RQ 3	Repeated Measures ANOVA	Phases (3) x School Districts (2-repeated measure) RTI fidelity (DV)	86 School districts
RQ 4	Multiple Regression Predictors (IV)	Staff Salary, Geographic Isolation, Staff Retention, Federal Funding -> School Wide RTI Fidelity (outcome-DV)	92 School districts

Since research questions 3 and 4 required recruitment of a cooperating agency (the others are based on publicly accessible archival data), as the SIR (RTI fidelity) and archival data is not publicly accessible, the sample size for research question 4 was utilized for this study since it requires the highest number of participants. A minimum sample size of 92 was the aim for these research questions. Roughly half the sample (46 districts) were drawn from rural school districts and the other half were from suburban school districts through convenience sampling. For research questions 1 and 2 198 school districts, with roughly half (99 districts), being drawn from rural school districts,

were sampled through the public access data bases, as determined appropriate by the sample size analysis for research questions two; which requires the largest sample size.

Following data collection, all data was entered into and analyzed using SPSS 21 (IBM: SPSS, 2014). Data was cleaned and screened through the use of the SPSS software. Descriptive statistics were calculated for this study. This provided information on all dependent and demographic variables in the forms of standard deviations, ranges, means, and frequencies. These variables included the following: proportion or percentage of students enrolled in special education in school districts classified in two categories: SLD and other disabilities (including EBD, SLI, autism, and OHI), RTI implementation fidelity as measured by the SIR, staff salaries, retention of highly qualified instructors, and federal and state funding provided to individual school districts.

The explore feature on the SPSS software was used to search for any missing data. This analysis was completed for each of the variables entered for the study. Once this analysis was run, the number of missing data were identified. Missing data were handled in one of three ways; the researcher checked for errors in entering data into the SPSS software and input the correct data that may have originally been overlooked, data sets were deleted from the program if excessive data regarding one school district is missing, or missing data were replaced using the SPSS regression method. The minimum and maximum values were checked to determine if they are in range for variables entered. This data were compared to the measures utilized to ensure range accuracy.

The analyses completed in this study include a multiple regression, a repeated measures ANOVA, and a series of ANOVAs including a Bonferroni correction. These

analyses carry the following assumptions: independence, normality, homogeneity, linear relationships, multivariate normality, absence of multicollinearity, homoscedasticity, and expected frequencies. To ensure study data were aligned to these assumptions the data were tested for skewness to determine if the data entered is within the average error range. Tests for normality, or homoscedasticity, were reviewed to determine if data were within range. This was examined through SPSS with Levene's test of equality; thereby, noting whether values were within the significant range, indicating data were not normally distributed or do not display equal variance. Additionally, a histogram, and other charts, were reviewed to determine if data were normally distributed for the variables within the study. If it was found that data were outside the appropriate range, non-normal, or skewed, data from outliers or participants with missing information were removed. The assumption of linearity was also examined through the scatterplot feature of SPSS. This feature allows for a visual representation of the data, and it can be easily determined if the variables exhibit a linear relationship, no relationship, or a curved linear relationship; thus, indicating whether this assumption was met. Lastly, a series collinearity diagnostics analyses were run with the independent variables, in SPSS, to determine absence of multicollinearity. Specifically, the VIF statistic was examined to determine presence of multicollinearity. If presence of collinearity were found, it was addressed by removing one of the highly correlated predictors from the model. This information helped ensure accuracy and completeness of data entered within SPSS for the study variables. Additionally, these processes helped ensure the data were aligned with data analyses assumptions.

Threats to Validity

Threats to internal validity reflect study design limitations. Threats occur when study procedures, treatments, or experiences by the subjects of the study prevent the researcher from drawing reliable and valid conclusions. Type of school community, level of RTI implementation and fidelity, and the occurrence of the insufficient progress criterion rollout cannot be manipulated or controlled, and participants cannot be randomly assigned; thereby, indicating the presence of a possible selection threat. While a causal-comparative design does not lend itself to control for the selection threat; however, it was determined this design has the highest level of constraints in regard to the nature of the independent variables. Another threat to validity included the current data trend, which indicates a secular decline in SLD identification overtime in Wisconsin prior to implemented SLD eligibility criteria changes. To account for this decline, SLD identification data was collected once for each year the study covers and averaged over each phases of the insufficient progress criterion rollout. Intermittent, rather than on-going data collection, should adjust for secular trends noted in the data. Other strategies to mitigate other threats to internal validity were used. Archival data was utilized, which controlled for experimental mortality, instrumentation, design contamination, statistical regression, and history threats to internal validity.

External validity threats typically occur when researchers apply the conclusions of the study inaccurately through generalization (Creswell, 2014). Many of the threats to external validity are reflected in the limitations of the study. Studies utilizing random sampling have strong external validity. This study utilized convenience sampling, which

could weaken external validity. The results of this study may not generalize to populations outside of Wisconsin. Further research would be necessary to determine if the results of this study are reflected in other regions or populations.

Construct validity is the extent to which an instrument measures the concept it is designed to measure (Creswell, 2014). Since archival data were utilized in this study, the original measures with which data were collected were well aligned with the concepts to be measured. Because the collected data were aligned to Wisconsin state standards and expectations, the results of this study may not be valid for additional populations.

Ethical Procedures

Efforts were made to ensure ethical treatment of the participants. The procedures of the study were assessed and approved by the Walden University Internal Review Board (IRB) before data collection and study implementation. As archival data were utilized in this study, the risk of harm to participants was minimal.

The data associated with each school district (participants) were numerically coded, so district identification would remain confidential. The study data were stored electronically and will remain on the researcher's personal computer in password protected files. Any collected records will be stored in a locked file for a minimum of five years. Any identifying information will be redacted from study paperwork and kept confidential.

Summary

The purpose the present research project was to identify the relationship between (a) the type of school district community and (b) fidelity of RTI implementation and

special education enrollments for various disabilities during the three phases of rollout of the insufficient progress criterion. Additionally, the relationship between environmental factors and RTI implementation and fidelity was explored. To do this, I conducted a causal-comparative quantitative study using archival data collected from the Wisconsin DPI and the Wisconsin RTI Center. The archival data related to disability identification and school enrollments were collected through public school district reporting portals and made available to the public via the WI DPI website public portals (WISEdash). RTI implementation data were collected and collated by the Wisconsin RTI Center through annual district self-assessments with the SIR. Repeated measures analyses and ANOVAs were utilized to evaluate the research questions and hypotheses. Sections of this chapter included information on sampling, recruitment, instrumentation, operational definitions variables, plans for data collection and analysis, and threats of validity. Ethical procedures were outlined to guarantee confidentiality and safety of the study participants. Included in chapter 4 is a description of data analysis procedures and the results of the study as related to the research questions and hypotheses.

Chapter 4: Results

Introduction

The purpose of this study was to investigate differences among special education enrollments for suspected specific learning disabilities (SLD) compared to other commonly identified disability areas (other disabilities), between rural and suburban school districts in the state of Wisconsin. Additionally, this study examined if concerns frequently identified in rural districts, such as lack of resources and highly qualified educators can impede accurate program implementation (such as RTI) and thereby contribute to misidentification of student disabilities and enrollment in special education services.

To address the research questions, two ANOVAs with Bonferroni Corrections, a repeated measures ANOVA, and a multiple regression analysis were conducted. The dependent variables included special education enrollment proportions in specific learning disabilities (SLDs) and other disabilities (a combined factor made up of the following disability areas: autism, speech or language impairment, emotional or behavioral disability, and other health impairment), and response to intervention (RTI) implementation fidelity, as measured by the School Wide Implementation Tool (SIR) developed by the Wisconsin RTI Center. The independent variables for the analyses of variance were type of community (rural or suburban school district), and the phases of the insufficient progress criterion rollout (pre-rollout 2007-2010 school years, rollout 2010-2013 school years, and post-rollout 2013-2016 school years), the dependent variables were proportion of students identified with SLDs or other disabilities. The

independent variables for the repeated measures ANOVA were the three phases of the insufficient progress criterion rollout and type of community. The dependent variable was RTI implementation fidelity. The independent variable for the multiple regression analysis was RTI implementation fidelity; the predictor variables for the multiple regression analysis were and environmental factors (including certified staff salary, district locale, retention of highly qualified instructors, federal funding, and years of staff experience).

In the remainder of Chapter 4 the research questions and hypotheses will be discussed. Additionally, the data collection procedures will be identified, and the results of the data analysis will be discussed.

Data Collection

Walden University IRB approval (#11-06-17-0431332) was granted for data collection. Archival data were used to answer each of the four research questions. The Wisconsin RTI Center was contacted as a community partner and agreed to share SIR data for Wisconsin school districts identified by locale code. The WI RTI Center shared SIR scores for the years 2011-2016. The remainder of the data collected were obtained via the Wisconsin Department of Public Instructions (WI DPI) public data portal called WISEdash located on the WI DPIs website. Wisconsin rural and suburban school districts were sampled through this portal. School districts that had redacted or incomplete data sets during at least one of the three phases of the insufficient criterion rollout or had schools within their districts qualified as being located within a town or city were eliminated from the sample. In Wisconsin, there were 74 suburban school

districts that could have been sampled through the WISEdash portal; however, one district only services high school students. This district was eliminated from the sample, as the sample was limited to 3rd through 5th grade for disability area data. There was a total of 350 rural school district in Wisconsin; however, 149 districts had redacted or incomplete data sets during at least one of the three phases of the insufficient criterion rollout or had schools within their districts qualified as being located within a town or city. These districts were also eliminated from the sample. Sufficient sampling and data collection were obtained through these methods to appropriately answer the research questions.

Descriptive Statistics

A total of 183 school district SIR scores were sampled through the Wisconsin RTI Center; of those school districts, 179 districts provided SIR scores for the 2015-2016 school year, which was needed to ensure all data analyzed for the final research question was gathered from a single point in time for the participants; 108 rural school districts were sampled, and 73 suburban schools were sampled. Data were also collected via the Wisconsin Department of Public Instructions (WI DPI) public data portal called WISEdash located on the WI DPIs website to obtain special education disability data and environmental factor data. A total of 274 Wisconsin school districts were sampled through this portal, 201 of which were rural school districts and 73 were suburban school districts. See Tables 3 and 4 for further information regarding descriptive statistics.

Table 3

Means and Standard Deviations by Locale of SIR Scores, and Disability Proportions by Phase and Type.

Locale	Variables	*N*	*M*	SD	% of Study Sample
Rural	SIR Scores Phase 1	108	42.58	22.83	51.2%
	SIR Scores Phase 2	108	41.45	23.90	51.2%
	SIR Scores Phase 3	108	65.01	20.75	51.2%
	SIR Scores 2015-2016	109	65.74	22.47	59.3%
	SLD Phase 1	201	.90	.42	73.5%
	SLD Phase 2	201	.80	.40	73.5%
	SLD Phase 3	201	.82	.48	73.5%
	Other Disabilities Phase 1	201	.96	.45	73.5%
	Other Disabilities Phase 2	201	1.76	.68	73.5%
	Other Disabilities Phase 3	201	1.88	.63	73.5%
Suburban	SIR Scores Phase 1	73	44.12	16.12	48.8%
	SIR Scores Phase 2	73	46.95	16.99	48.8%
	SIR Scores Phase 3	73	73.44	12.49	48.8%
	SIR Scores 2015-2016	74	73.57	18.71	40.7%
	SLD Phase 1	73	.84	.39	26.5%
	SLD Phase 2	73	.74	.41	26.5%
	SLD Phase 3	73	.56	.31	26.5%
	Other Disabilities Phase 1	73	1.81	.39	26.5%
	Other Disabilities Phase 2	73	1.84	.43	26.5%
	Other Disabilities Phase 3	73	1.86	.56	26.5%

Table 4

Means and Standard Deviations of Environmental Factors for the Sample

Variables	*N*	*M*	*SD*
Total Experience (years)	182	13.97	2.11
Local Experience (years)	182	11.55	1.90
Staff Salary	182	$52290	6177
Federal Funding	182	$1992606	3764057

Results

Research Question 1: Phase Differences in Implementation of Insufficient Progress Criterion Rollout in Special Education Enrollment in Rural Schools

Does the prevalence of special education enrollments (number of cases divided by the total district enrollment) for SLD and Other disabilities, as measured by child count data, significantly change between each of the phases of the insufficient progress criterion rollout in rural Wisconsin school districts?

To address research question 1 a Phases (3) by Disability (2) ANOVA, including a Bonferroni correction in the pairwise comparisons of any significant interactions assessed the relationship between the independent variable of insufficient progress criterion rollout phases and the dependent variables of proportion of special education enrollment in the areas of SLD and Other Disabilities in rural school districts. A post hoc Bonferroni correction with alpha adjusted to .0083 (for potentially conducting six pairwise comparisons) was utilized to correct for multiple data points on the same sample and help reduce the risk of obtaining a Type I error.

Before conducting the ANOVA, the assumptions of normality and homogeneity of variance were assessed, as described below. A review of histogram graphs was completed to determine both variables (SLD, and other disabilities) appeared to have normal distributions across the three phases of insufficient progress criterion rollout, despite there being a statistical significance for skewness, as shown in Table 5, which outlines overall normality test results regarding skewness and kurtosis and indicates significance effects for lack of normality in the data (Cramer & Howitt, 2004). However, the Shapiro-Wilks and kurtosis results were rejected as floor and ceiling effects were noted in the data, as observed by maximum and minimum scores within the data sets. This would have contributed to the significant results according to the Sharpiro-Wilk test of normality. Cramer and Howitt (2004) note that data with floor and/or ceiling effects can still be deemed to have normal distribution despite significant results according to the Sharpiro-Wilk test based upon visual inspection of histogram graphs. Furthermore, Cramer and Howitt (2004) indicate parametric analyses can be utilized on such data, as was applied to the data set for this research question. Few outliers were noted via SPSS boxplot outputs for this data, however, with a large sample size it was determined these data points did not need to be removed for the purpose of this analysis. Field (2013) noted sample sizes of 30 and larger will often result in normalized distributions. Furthermore, Field (2013) indicated outliers need not be removed when histograms do not seem to show scores as being out of the ordinary, as was noted in the histograms and P-P plots for this study. Therefore, all data were kept intact for analyses. The assumption of homogeneity of variances was upheld, as assessed by Levene's test for equal variance

when comparing each of the three phases. This indicated there was equal variance for SLD [$F(2, 600) = .43$, $p = .65$] and other disabilities [$F(2, 596) = 1.12$, $p = .33$] amongst the three phases (or comparison groups) of the insufficient criterion rollout.

Table 5

Shapiro-Wilks Test of Normality: Rural School Districts

Disability Type	Phase	Kurtosis	Shapiro-Wilks	*p*
SLD	Phase 1	1.19	.96	<.001
	Phase 2	.57	.97	<.001
	Phase 3	.17	.91	<.001
Other Disabilities	Phase 1	3.15	.92	<.001
	Phase 2	1.95	.96	<.001
	Phase 3	.17	.99	.07

Results from the one-way ANOVA indicated a statistically significant difference in the proportion of students identified with SLDs during the three phases of rollout, $F(2, 600) = 4.603$, $p = .010$. Results also indicated a statistically significant difference in the proportion of students identified with other disabilities during the three phases of rollout, $F(2, 596) = 5.550$, $p = .004$.

A post hoc Bonferroni correction was conducted with adjusted alpha levels of .0083. The alpha level was divided by six and set at .0083, instead of .05, to account for two dependent variables and comparisons at each of the three phases of the insufficient progress criterion rollout (.05 divided by 6 total comparisons). Results indicated there were no significant differences in the proportion of students identified with SLDs between Phase 1 and Phase 2 ($p = .605$). There was not a significant difference between Phase 2 and Phase 3 ($p = .245$). There was, however, a significant difference, based upon

the corrected alpha level of .0083, between Phase 1 and Phase 3 (p = .008). Statistically significant results were not found for the proportion of student with other disabilities between Phase 1 and Phase 2 (p = .477). There also was not a significant difference between Phase 2 and Phase 3 (p = .167). There was a statistical difference between Phase 1 and Phase 3 (p = .003). See Tables 6 and 7 for data and analysis results related to descriptive statistics and results of the post-hoc Bonferroni Correction, which showed a decrease in students identified with SLDs from Phase 1 to Phase 3 and an increase in students identified with other disabilities from Phase 1 to Phase 3. Significant effects were noted in the proportion of students identified with other disabilities, whereas the changes in SLD proportions did not denote significant changes.

Table 6

Descriptive Statistics of Rural Sample by Disability by Implementation Phase

Disability Area	Phase	*M*	*SD*	*CI* (95%)
SLD	Phase 1	.956	.454	.854; .962
	Phase 2	.897	.433	.748; .859
	Phase 3	.818	.480	.751; .885
Other Disabilities	Phase 1	1.669	.624	.892; 1.019
	Phase 2	1.760	.679	1.665; 1.854
	Phase 3	1.884	.631	1.797; 1.972

Table 7

Post hoc ANOVA Pairwise Comparisons (Bonferroni Correction)

Disability Area	Phase	Comparison Phase	Mean Difference	SE	*p*	*CI (95%)*
SLD	Phase 1	Phase 2	.058	.045	.605	-.051; .167
		Phase 3	.137	.045	.008	-.028; .247
	Phase 2	Phase 1	-.058	.045	.605	-.167; .051
		Phase 3	.079	.046	.245	-.030; .189
Other Disabilities	Phase 1	Phase 2	-.091	.064	.477	-.245; -.064
		Phase 3	-.215	.065	.003	-.370; -.059
	Phase 2	Phase 1	.091	.064	.477	-.064; .245
		Phase 3	-.124	.065	.167	-.279; .031

Based upon overall results, the null hypotheses for research question 1 was rejected. Mean plots for percentage of students identified with SLDs and other disabilities across the three phases of the insufficient progress criterion rollout are presented in figures 1 and 2.

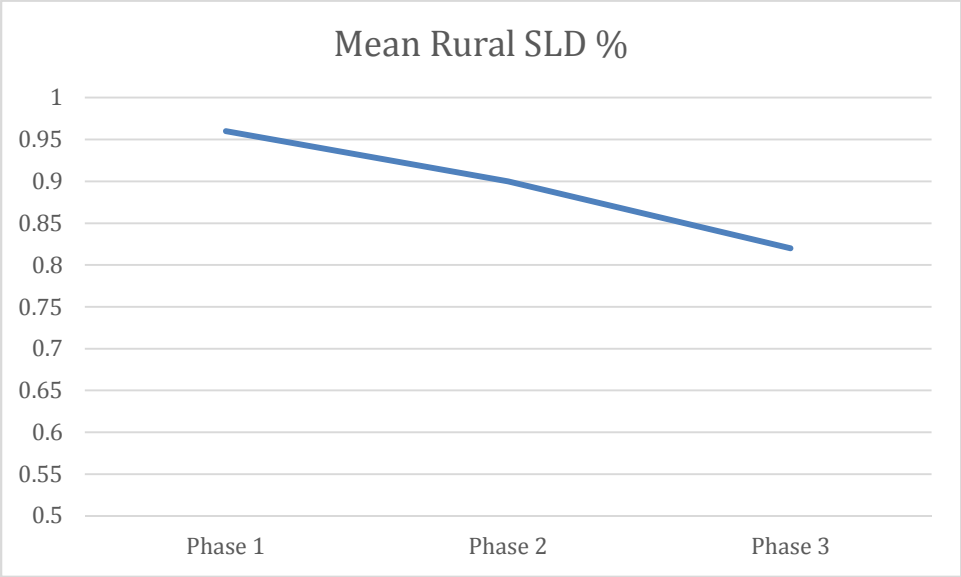


Figure 1. Mean plot percentage of students identified with SLD during each phase of implementation.

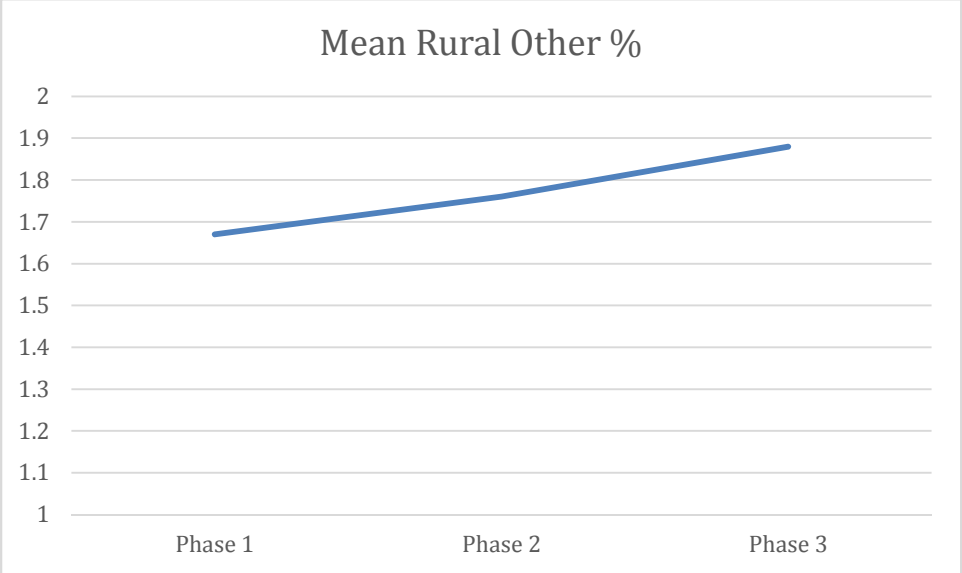


Figure 2. Mean plot percentage of students identified with Other Disabilities during each phase of implementation.

Research Question 2: Special Education Enrollment Differences between Rural and Suburban Schools

Does the prevalence or proportion of special education enrollments (number of cases divided by the total district enrollment) for SLD and Other disabilities, as measured by child count data, significantly differ between rural and suburban Wisconsin school districts during the three phases of the insufficient progress criterion?

To address Research Question 2 a Type of Community (2) by Disability (2) by Phases of Implementation (3) ANOVA, assessed the relationship between the independent variables of type of community (rural or suburban), disability grouping (SLD, Other Disabilities) and the three phases of the insufficient progress criterion rollout, and the impact to the dependent variable of proportion of special education enrollments in the areas of SLD and Other Disabilities.

Again, before conducting the ANOVA, the assumptions of normality and homogeneity of variance were assessed, as described below. A review of histogram graphs was completed to determine normal distributions of all the variables across the three phases of insufficient progress criterion rollout. Based upon visual inspection of these graphs, it was determined the assumption of normality was met. All the variables appeared to have normal distributions across the three phases of insufficient progress criterion rollout, despite there being a statistical significance for skewness as measured by the Shapiro-Wilk test (Cramer & Howitt, 2004). See tables 5 and 8 for overall normality test results for the rural and suburban districts, respectively. Instead, floor and ceiling effects were noted in the data which would have contributed to the significant

skewness results. Few outliers were noted via SPSS boxplot outputs for this data, however, with a large sample size it was determined these data points did not need to be removed for the purpose of this analysis. Therefore, all data were kept intact for analysis. The assumption of homogeneity of variances, however, was violated for the following: other disabilities in phase 1, $F(1, 272) = 7.40$, $p = .007$; other disabilities in Phase 2 $F(1, 272) = 9.78$, $p = .002$; and SLD in Phase 3 $F(1, 272) = 17.10$,$p < .001$, as assessed by Levene's test for equal variance; therefore, Welch's F analysis was used in place of classic ANOVA, as the assumption of equal variances is not required for this analysis (Field, 2013). See Tables 9-11 for descriptive statistics for each phase of rollout for rural and suburban school districts.

Table 8

Shapiro-Wilks Test of Normality: Suburban School Districts

Disability Type	Phase	Kurtosis	Shapiro-Wilks	*p*
SLD	Phase 1	1.09	.92	<.001
	Phase 2	3.17	.90	<.001
	Phase 3	10.71	.82	<.001
Other Disabilities	Phase 1	.67	.98	.30
	Phase 2	-.01	.98	.45
	Phase 3	.19	.99	.98

Table 9

Proportion of Disabilities by Locale during Phase 1

					95% Confidence Interval	
Locale	Disability	N	Mean	SD	Lower Bound	Upper Bound
Rural	SLD	201	.956	.454	.892	1.019
	Other Disabilities	201	1.669	.624	1.582	1.756
Suburban	SLD	73	.838	.391	.746	.929
	Other Disabilities	73	1.805	.392	1.713	1.897

Table 10

Proportion of Disabilities by Locale During Phase 2

				95% Confidence Interval	
Locale	Disability	Mean	SD	Lower Bound	Upper Bound
Rural	SLD	.897	.433	.837	.958
	Other Disabilities	1.760	.679	1.665	1.854
Suburban	SLD	.738	.408	.643	.833
	Other Disabilities	1.837	.432	1.736	1.938

Table 11

Proportion of Disabilities by Locale during Phase 3

Locale	Disability	Mean	SD	95% Confidence Interval	
				Lower Bound	Upper Bound
Rural	SLD	.818	.480	.751	.885
	Other Disabilities	1.884	.631	1.797	1.972
Suburban	SLD	.558	.306	.487	.630
	Other Disabilities	1.859	.568	1.727	1.990

Results from Welch's *F* indicated the following results for students identified with SLDs when comparing rural and suburban school districts: results indicated a statistical significance between the proportion of students identified SLD during Phase 1 of the insufficient criterion rollout between rural and suburban school districts, $F(1, 147.05) = 4.47$, $p = .036$, during Phase 2, $F(1, 134.87) = 7.885$, $p = .006$, during Phase 3, $F(1, 200.74) = 27.80$, $p < .001$. Results for students identified with other disabilities when comparing rural and suburban school districts indicated there was a significant difference in students identified with other disabilities during Phase 1, $F(1, 203.21) = 4.59$, $p = .033$. There were no statistically significant results for the proportion of student identified with other disabilities during Phase 2 of the insufficient criterion rollout between rural and suburban school districts, $F(1, 200.84) = 1.22$, $p = .270$, or during phase 3, $F(1, 141.62) = .11$, $p = .747$. See Table 12 for analysis results.

Table 12

Welch's F Results Between Rural and Suburban Districts for Disabilities across Rollout Phases

Disability	Phase	*df1*	*df2*	*F*	*p*
SLD	Phase 1	1	147.05	4.47	.036
	Phase 2	1	134.87	7.89	.006
	Phase 3	1	200.74	27.80	< .001
Other Disabilities	Phase 1	1	203.21	4.47	.033
	Phase 2	1	200.84	1.22	.270
	Phase 3	1	141.62	.11	.747

Because there were only two comparison groups (rural and suburban school districts), the Bonferroni Correction was not needed to further analyze this research question as originally planned. However, because multiple statistical analyses were performed on a single data set, three independent *t*-tests were also performed with an adjusted alpha level of .0083 (six *t*-tests, Phases (3) x Disability area (2), times .05) to determine statistical significance amongst disability type between rural and suburban school districts during each of the three phases. This yielded similar results as would have been obtained through the use of Bonferroni Correction. These results are reported in Table 13. It is important to note that despite running a different analysis, the *t*-test *p*-values are similar to those yielded from the Welch's *F* analysis reported above. However, the adjusted alpha level utilized for these *t*-tests provides useful data and analysis as it helps protect against potential Type I error with the shared data sets between the phases of the insufficient criterion rollout. The *t*-test results indicate rural districts are identifying a significantly higher number of students in the area of SLD

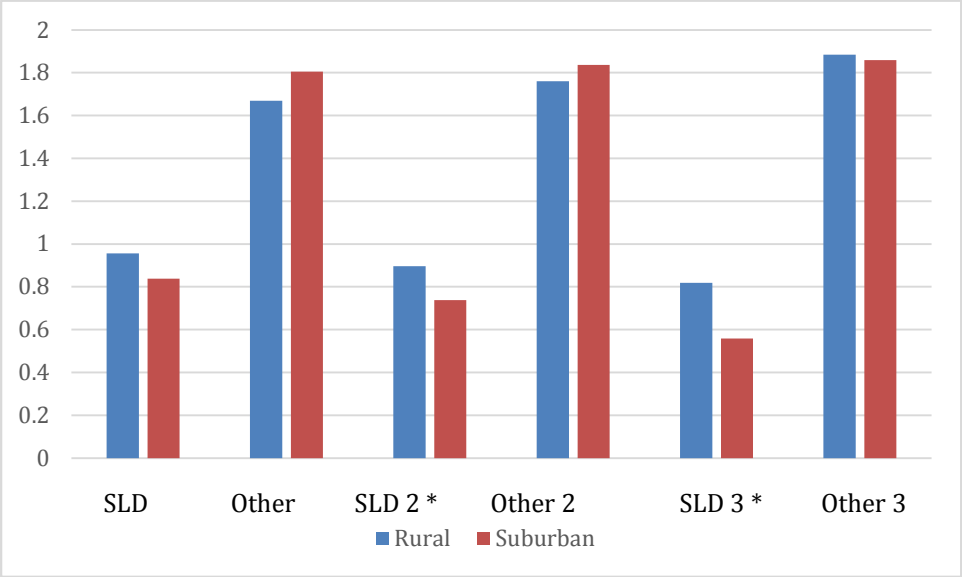
during Phase 2, $t(272) = -2.73$, $p = .007$, and Phase 3, $t(200.74) = -5.27$, $p < .001$, of the insufficient progress criterion rollout, as compared to suburban school districts. Results for other disabilities at all phases of rollout were not found to be significant.

Table 13

T-test Results for Disabilities Across Rollout Phases

Disability	Phase	*t*	*df*	*p*
SLD	Phase 1	-1.97	272	.050
	Phase 2	-2.73	272	.007
	Phase 3	-5.27	200.74	< .001
Other Disabilities	Phase 1	2.14	203.21	.033
	Phase 2	1.11	200.84	.270
	Phase 3	-.31	272	.759

Based upon these results, the null hypotheses for research question 2 was rejected. See Figure 3 for a graph of mean proportions of students identified with SLDs and other disabilities across the three phases of implementation by district type.



* $p \leq .0083$

Figure 3. Proportions of SLD and Other Disabilities across phases by district type

Research Question 3: RTI Implementation between Rural and Suburban Schools

During each of the three phases of the insufficient progress criterion implementation, did the level of school-wide RTI implementation fidelity, as measured by the school-wide implementation tool (SIR), significantly differ between rural and suburban school districts?

To address Research Question 3, a Phases (3) by School Districts (2) repeated measures ANOVA was conducted to assess the relationship between the independent variable of type of community (rural vs. suburban), and the dependent variable of overall level of RTI implementation fidelity during the three phases of the insufficient progress criterion rollout. Before conducting the repeated measures ANOVA, tests for normality was completed, the assumption of normal distribution was upheld. A review of histogram graphs was completed to determine normal distributions of all the variables

across the three phases of insufficient progress criterion rollout. Based upon visual inspection of these graphs, it was determined the assumption of normality was met. Both rural and suburban school districts appeared to have normal distributions across the three phases of insufficient progress criterion rollout. Additionally, skewness statistics were all above the .225 level, indicating data is normally distributed. The assumptions of independent observations were also upheld, as each group (suburban and rural districts) was composed of different school districts. Few outliers were noted via SPSS boxplot outputs for this data, however, with a large sample size it was determined these data points did not need to be removed for the purpose of this analysis (Field, 2013). Mauchly's test indicated that the assumption of sphericity had been violated, $\mathcal{X}^2(2) = 101.150$, $p < .001$; therefore, Greenhouse-Geisser corrected tests are reported instead of completing a repeated measures ANOVA (Field, 2013).

Results of the Greenhouse-Geisser analysis ($\varepsilon = .698$) indicated the interaction between community type and repeated measures RTI implementation fidelity does not significantly differ between rural and suburban school districts during each of the three phase of the insufficient progress criterion rollout, $F(1.395, 249.740) = 2.330$, $p = .117$. Results also indicated that RTI implementation fidelity had a statistically significantly change related to phase of the insufficient criterion rollout (i.e., repeated measure of RTI fidelity), $F(1.395, 249.740) = 168.378$, $p < .001$. Further results from the repeated measures Greenhouse-Geisser analysis showed that there was not a significant within-subjects effect between Phase 1 and Phase 2 of RTI implementation fidelity as measured by the SIR ($p = .66$), but there was a significant effect between Phases 2 and 3 ($p < .001$).

The between subject contrast indicated a significant difference between rural and suburban community's overall RTI implementation fidelity ($p = .03$). Post-hoc tests, including pairwise comparisons revealed there was not a significant difference in SIR scores between phases 1 and 2 of implementation ($p = 1.00$), but there was a significant difference in SIR scores between Phases 1 and 3 ($p < .001$) and Phases 2 and 3 ($p < .001$). Overall, these results indicated rural and suburban districts both significantly increased their implementation of RTI from the first to third phases of the criterion rollout, as would be expected. The null hypothesis for research question 3 is not rejected, indicating rural school districts are capable of RTI implementation fidelity similar to their suburban counterparts. The implications of this finding are discussed in more detail in chapter 5. See Table 14 for overall SIR scores (RTI fidelity) for each of the three phases of the insufficient progress criterion rollout by district type.

Table 14

RTI Implementation Fidelity between Rural and Suburban Districts

District Type	Phase	Mean	*SD*
Suburban	Phase 1	44.120	16.121
	Phase 2	46.202	16.993
	Phase 3	73.437	12.488
Rural	Phase 1	42.581	22.833
	Phase 2	41.448	23.904
	Phase 3	65.009	20.753

Research Question 4: Environmental Factors' Impact to RTI Fidelity

Do environmental factors; including certified staff salary, geographical isolation, retention of highly qualified instructors, and federal funding as measured by demographic

data collected and reported as part of public record by Wisconsin DPI, impact a school's ability to implement school-wide RTI with fidelity?

To address Research Question 4 a multiple regression analysis was conducted to assess the relationship between the five identified environmental factors (district locale, staff salary, total years staff experience, total years of staff experience in the current school district, and federal funding), as the predictor variables, and overall RTI implementation fidelity, as the outcome variable.

First, the assumptions of normality, homoscedasticity, and the absence or multicollinearity were assessed. Upon initial analysis of normality, one variable (Federal Funding) appeared to be significantly skewed (skewness = 5.636; SE = .180), while the remainder of the variables had a skewness of less than .800. Therefore, a log transformation was applied to this variable, which resulted in a normalized distribution. Field (2013) indicated that this is an appropriate way to adjust a single variable when running regression analyses. Once this transformation was completed, assumptions were tested again. To assess the assumption of normality of residuals among the predictor variables and the dependent variable a normal P-P plot was analyzed. Visual analyses of the P-P plot and skewness statistics were found to be within acceptable limits. Homoscedasticity, which assumes scores are nearly equally distributed about a regression line, was interpreted through a standardized prediction versus standardized residual regression scatterplot. Therefore, it was determined the assumptions of normality and homoscedasticity were upheld. Few outliers were noted via SPSS boxplot outputs for

this data, however, with a large sample size it was determined these data points did not need to be removed for the purpose of this analysis (Field, 2013).

Lastly, the assumption of absence of multicollinearity was assessed to ensure the predictor variables were not too closely related. Two predictor variables indicated a significant correlation. However, upon further examination of the variance inflation factors (VIFs) from the regression model, none of the VIFs exceeded 3.530. Field (2013) indicated that VIF values below 10 suggest an absence of multicollinearity. Likewise, tolerance statistics were all above 0.2, further indicating absence of multicollinearity between the predictor variables.

Table 15

Results of Multiple Regression Analysis

Source	*B*	*SE*	B	R^2	*t*	*p*	VIF	Tolerance
Local Experience	.134	1.522	1.500	.001	.985	.326	3.530	.283
Total Experience	-.062	1.321	-.628	.002	-.476	.635	3.267	.306
Staff Salary	-.305	.000	-.001	.001	-2.908	.004	2.106	.475
Federal Funding	.073	3.895	3.563	.019	.915	.362	1.234	.810
District Locale	-.354	.231	-.768	.033	-3.324	.001	2.175	.460

Results of the multiple regression analysis, reported in Table 15, indicated that the environmental variables as a group significantly predicted SIR scores (i.e., overall RTI implementation fidelity), $F(5, 176) = 3.183$, $p = .009$, $R^2 = .083$. These results indicated that 8.3% of RTI implementation variability can be attributed to the predictor variables. Further, the results of the multiple regression analysis indicated that local staff

experience, B = 1.500, p = .326, total staff experience B = -.628, p = .635, and federal funding B = 3.563, p = .362 did not significantly predict SIR scores. However, staff salary B = -.001, p = .004, R^2 = .001 and district location B = -.768, p = .001, R^2 = .033 significantly predicted RTI implementation fidelity. These results indicated that as implementation fidelity increases, overall staff salary decreased, and rural districts are demonstrating lower levels of implementation fidelity than suburban districts (as rural districts were coded with a higher number than suburban districts). To determine to what extent staff salary impacted RTI implementation between the two types of school districts, an additional analysis, using only staff salary as a predictor for SIR scores was completed using first rural school districts, then suburban districts. These results indicated that staff salary significantly predicted RTI implementation in rural schools, B = -.001, p = .039, but not in suburban school districts, B = -.001, p = .090. Furthermore, R^2 values indicate 3.2% of RTI implementation variation amongst rural school districts can be attributed to staff salaries. The salaries for teachers in the rural districts was lower, with a mean of $49,024 and standard deviation of $4,682, than the salaries for staff in the suburban districts, with a mean of $57,165 and a standard deviation of $6,773. Based upon the regression results, the null hypothesis for research question 4 is rejected.

Summary

Chapter 4 discussed the results of the data analyzed as they relate to the research questions and the hypotheses that were being reviewed. The results of this study indicated there was a statistically significant increase between Phases 1 and 3 of the insufficient criterion rollout for the proportion of students identified with other

disabilities, and there was significant decrease in the proportion of students identified with SLDs within rural school districts in Wisconsin between Phases 1 and 3. Thus, the null hypothesis for RQ1was rejected based on these findings. Further analysis indicated there was a statistically significant difference between rural and suburban school districts in the proportion of students identified with SLDs, with rural districts showing higher proportions, during phases two and three of the insufficient criterion rollout. Additionally, both types of communities experienced decreases in SLD proportion. There was also a statistically significant difference in the proportion of students identified with other disabilities between rural and suburban school districts during Phase 1, with rural districts having a lower proportion of students enrolled in special education than suburban school districts. As a result, the null hypotheses for research question 2 was rejected, as differences were noted between disability prevalence rates between rural and suburban districts at various phases of the insufficient progress criterion rollout. Results of this study also showed that RTI implementation fidelity was similar in rural and suburban school districts across all three phases of the insufficient criterion rollout. There were no significant differences between rural districts' ability to implement RTI with fidelity as compared to suburban school districts in Wisconsin. Therefore, the null hypothesis for research question 3 could not be rejected. Lastly, there was an overall significant relationship between the environmental factors (staff total experience, staff local experience, staff salary, federal funding, and district locale) on RTI implementation fidelity. Specifically, the individual factors of staff salary and district locale had the greatest impact on predicting RTI implementation fidelity. Results indicated that as

salary increased, RTI implementation fidelity decreased. Further analysis indicated this was true only for rural school districts, and that 3.2% of overall implementation fidelity can be attributed to staff salary. Additionally, suburban school districts showed higher levels of fidelity than rural school districts. The null hypothesis for research question 4 was rejected.

Overall, the results of this study indicate that while rural and suburban school districts in Wisconsin are capable of implementing RTI with similar levels of fidelity, the implementation of this technique may have had an impact on special education enrollment practices in rural school districts. This is evidenced by the increase in proportions of students identified with other disabilities in rural districts, and by the significant decrease in proportion of students identified with SLDs in rural districts from Phase 1 to Phase 3 of the insufficient progress criterion rollout. Additionally, it was noted that while suburban school districts did not show a significant decrease in the proportion of students identified with SLDs, the proportion of students identified with this disability remained lower than rates reported for rural districts. These results indicated that rural districts are demonstrating an increase in overall disability identification, while suburban districts continue to display a decline in special education identification rates during the three phases of the insufficient criterion rollout. Furthermore, results of this study suggest environmental factors may contribute to RTI implementation fidelity and special education enrollment practices, as differences were noted between rural and suburban districts. Specifically, as staff salary increases, RTI implementation fidelity decreases. Further analysis indicated this effect was significant

in only rural school districts, as staff salary did not impact implementation fidelity in suburban school districts. Additionally, being a suburban district predicted higher levels of fidelity over being a rural school district. In Chapter 5, the results will be further discussed. Additionally, implications of this study and recommendations for future research will also be made.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study was to examine whether the prevalence of special education enrollments for suspected SLD and other disabilities within the state of Wisconsin (including those with speech or language impairment, emotional or behavioral disability; other health impairment; or autism), differed between suburban and rural school districts. This study explored whether school-wide RTI implementation levels (as measured by the WI School-Wide Implementation Tool) differed between rural and suburban school districts, and whether this impacted special education enrollments. Furthermore, this study investigated how special education prevalence rates differed between rural and suburban school districts during the three phases of the insufficient criterion rollout for SLD identification within Wisconsin (i.e. before the criterion rollout, 2007-2010; during criterion rollout, 2010-2013; and after criterion full implementation, 2013-2016). Lastly, this study examined if environmental factors unique to rural school districts impacted the proper implementation of RTI and thus impacts overall special education enrollment patterns.

There were four research questions that were addressed in this study. Results of the analyses for the first research question showed there were significant changes in the proportion of students identified with SLDs and other disabilities between the first and third phases of the insufficient progress criterion rollout in rural school districts, indicating there was a decrease in students identified with SLD and an increase in students identified with other disabilities. The results for the second research question

indicated there was a significant difference between rural and suburban school districts in the proportion of students identified with SLDs during all three phases of the insufficient criterion rollout. There was also a difference in the proportion of students identified with other disabilities between rural and suburban school districts during Phase 1. The results indicated that rural school districts, overall, are identifying higher rates of students in the area of SLD than their suburban counterparts. The overall proportion of students identified with other disabilities in rural school districts increased significantly from Phase 1 to Phase 3 of the insufficient progress criterion rollout, as a result, by Phase 3, the proportion of students identified with other disabilities in rural school districts had risen and was similar to the proportion of students identified with other disabilities in suburban districts. Over time, rural school districts appear to have begun to identify more students in other disabilities, raising their rates to similar levels compared to suburban school districts. Results from the third research question indicated no significant findings. RTI implementation fidelity was similar in rural and suburban school districts across all three phases of the insufficient criterion rollout. Lastly, the results from the fourth research question indicated there was an overall significant relationship between the environmental factors of staff salary and district locale on RTI implementation fidelity. The factors of staff salary and district locale appeared to predict RTI implementation fidelity, with lower staff salary (for rural districts only) and suburban districts predicting higher fidelity than higher staff salary and rural districts.

Interpretation of the Findings

Prevalence of SLD and Other Disabilities During Phases of RTI Implementation in Rural School Districts

The first research question asked whether proportions of students identified with SLDs and Other Disabilities, as measured by the WI DPI annual child count data, changed between the three phases of the insufficient progress criterion rollout in rural school districts. The results of this analysis found there was a significant decrease in proportion of students identified with SLD between Phase 1 and 3 of the insufficient progress criterion rollout. Additionally, a significant increase was found in the proportion of students identified with other disabilities between Phases 1 and 3. The null hypothesis was rejected for this research question.

These results of this analysis indicated that for rural districts, overall SLD prevalence decreased before and after the implementation of the insufficient progress criterion rollout, and there was a significant increase in the prevalence of students with other disabilities between the first and third phase. The increase in the other disabilities prevalence rate did not change significantly between the second and third phases. The results of this research question indicated that in rural Wisconsin schools, the prevalence rates of other disabilities are on the rise while SLD prevalence rates are declining, which is similar to past research findings of RTI implementation leading to decreased SLD identification rates (Scull & Winkler, 2011; and Zirkel, 2013). National trends indicating decreased SLD identification rates in association with RTI implementation appear to hold true in WI rural school districts, as these results indicated a statistically significant

decline in SLD rates (Marston, Muysken, Lau, & Canter, 2003; Torgesen, 2009; VanDerHeyden, Witt, & Gilbertson, 2007). However, the findings of this study also indicated a significant increase in other disabilities in WI rural school districts in conjunction with RTI implementation. The findings of this study may indicate, as past researchers have noted, that rural school districts are struggling to utilize a new system, reliant on RTI-type data, to effectively make decisions regarding special education identification and enrollment. While the overall SLD proportions in rural districts are significantly declining since the enactment of the insufficient progress criterion law in 2010, the proportion of students identified with other disabilities is increasing significantly. The results of this study supported the hypotheses that disability identification practices may shift away from SLD identification towards other disability areas that may have more lenient, or less strict, eligibility criteria in the face of meeting RTI implementation standards (Zirkel, 2013).

Differences in Special Education Prevalence Rates between Rural and Suburban Districts During Phases of RTI Implementation

The second research question asked whether proportions of students identified with SLDs and other disabilities differed between rural and suburban school districts during the three phases of the insufficient progress criterion rollout. The results from this research question indicated that rural school districts have a higher prevalence of students identified with SLDs than their suburban counterparts in Wisconsin. While there is a decline in SLD prevalence across the state, rural school district rates are not declining as quickly as those in suburban school districts, as evidence by rural school districts having

higher prevalence rates than suburban districts during Phases 2 and 3. These results also indicated that prior to the insufficient progress criterion implementation there was a lower rate of children identified with other disabilities in Wisconsin rural school districts compared to suburban school districts. With increased RTI implementation and changes in the SLD criterion, this prevalence rate is on the rise in rural school districts, making rates in rural school districts similar to suburban school districts. The findings related to changes in SLD prevalence rates with rural school districts for research question 1, and the increasing statistical significance of SLD prevalence rates between rural and suburban school districts during Phases 2 and 3 of the insufficient progress criterion may suggest that RTI implementation is working to decrease SLD referral and identification rates in Wisconsin suburban school districts more effectively than in Wisconsin rural schools as hypothesized in previous studies (Marston, Muysken, Lau, & Canter, 2003; Torgesen, 2009; VanDerHeyden, Witt, & Gilbertson, 2007; Zirkel, 2013; Johnson & Howley, 2015). Assuming all other factors are equal, there should not have been a difference between rural and suburban districts in the proportions of students identified with SLDs or other disabilities. Instead the findings of this research question further supported the ascertain that rural districts may be struggling to effectively utilize RTI-type data for special education decision making, as noted in the interpretation for research question 1. The sharper decline in SLD identification noted in suburban school districts, as well as the significant increase in the identification of other disabilities in rural districts, could be attributed to better RTI facilitation than what is currently occurring in rural school districts (Zirkel, 2013). The differences in RTI implementation fidelity between rural and

suburban school districts will be discussed further in the interpretation of the findings that address research questions three.

Differences RTI Implementation Fidelity Rates Between Rural and Suburban School Districts

The third research question asked whether there was a significant difference in overall RTI implementation fidelity between Wisconsin rural and suburban school districts, as measured be the Wisconsin RTI Center's School-wide Implementation Review Tool (SIR). The results of this research question indicated that, overall, school districts in Wisconsin, are implementing RTI at a significantly higher level of fidelity during Phase 3 of the insufficient progress criterion rollout than during Phase 1. However, there was no indication of a significant difference between rural and suburban school district for implementation fidelity. According to Brendle (2015) and Berry et al. (2011), staffing constraints and limited resources in rural school districts may make it more difficult for them to implement RTI than suburban school districts. However, the findings of this research question negate these suggestions, as Wisconsin is not currently showing differences between rural and suburban districts ability to properly implement RTI procedures. While it is encouraging to see that both rural and suburban school districts are reporting similar implementation fidelity for RTI program implementation; it is concerning that there were significant differences in disability proportions as noted in the results of research question 2. The results of these two research questions call into question the possibility of additional factors playing a role in the special education

decision making process, which will be discussed further in the interpretation of analyses addressing research question four.

Impact of Environmental Factors on RTI Implementation Fidelity in Rural and Suburban School Districts

Research question four asked to what extent environmental factors (total staff experience, local staff experience, staff salary, federal funding, and district locale) impact the ability to implement school-wide RTI with fidelity, as measured by the SIR. Results of the multiple regression analysis indicated significant findings, specifically indicating that environmental factors do impact a district's ability to implement RTI with fidelity. However, the R^2 value indicated only 8.3% of RTI implementation variability can be attributed to the predictor variables. Upon further analysis, two specific variables contributed significantly to predicting RTI implementation fidelity: staff salary (B = -.001) and district locale (B = -.768). These results of this analysis indicated that staff salaries and district location (i.e. rural or suburban) may impact a district's overall ability to implement RTI with higher levels of fidelity. School districts with higher staff salaries and those located in a rural community, overall, are showing lower levels of RTI fidelity than districts with higher staff salaries or from suburban communities. Upon further analysis, it was noted that staff salary was only a significant predictor of RTI fidelity in rural school districts. Again, the results indicated higher salaries lead to lower levels of overall RTI implementation fidelity. These results could be an indication that rural districts are attracting young or recently graduated candidates that have better education surrounding implementing new program initiatives, such as RTI, and therefore are better

equipped to utilize this type of programming and have a firmer understanding of the SLD identification process (Prasse, Breunlin, Giroux, Hunt, Morrison, & Their, 2012). Researchers note that teachers with recent professional development or specific education in RTI are able to implement RTI programming and interventions better than those without specialized training in these areas, as would be noted in teachers with recently completed teacher preparation programs (Spear-Swerling & Cheeseman, 2012 & Hoppey, 2013). However, preliminary studies in this area indicate that staff experience does not predict teacher belief in school reform and implementing new program initiatives, such as RTI (Donnell & Gettinger, 2015). These conflicting findings denote the need for further research in this area. The extent to which the identified environmental variables applied only to rural school districts was also investigated. Calculated R^2 values indicate that 3.2% of RTI implementation variation amongst rural school districts could be attributed to staff salaries. The remaining predictor variables did not have a significant impact on RTI implementation fidelity for rural school districts. Graham and Provost (2012) argued that environmental factors, such as lower budgetary allocations through federal funding, staff salaries, geographical isolation, and difficulty attracting and retaining highly-qualified teachers may impact program (RTI) implementation. Based upon the results of this study some of these predictive factors are present within the Wisconsin school systems. Based upon my findings, some environmental factors play a role in proper program implementation, specifically in the area of staff salary and district locale. However, the data analysis shows that lower salaries lead to higher levels of RTI implementation fidelity in rural districts, which

contradicts Graham and Provost's (2012) findings. Further research should be completed to determine other potential causes or factors to explain difference between rural and suburban district, staff salary, and RTI fidelity. Von Bertalanffy's (1950) general systems theory specifies social systems, such as school districts, are impacted by their environments. This theory appears to hold true when comparing rural and suburban school districts' ability to implement new educational initiatives, such as RTI, based on the findings of this study.

The overall results of this study indicate that both rural and suburban school districts are able to implement RTI with fidelity. However, despite the ability to meet similar levels of fidelity as suburban school districts, rural school districts are exhibiting changes in special education prevalence rates not noted in suburban school districts over the course of the three phases of the insufficient progress criterion rollout. The reason for these changes are not explicitly clear from the results of this study, as the ability of both types of school districts to implement RTI with fidelity was not found to be significantly different. Rural districts have shown a more significant shift in the ways students are being identified for special education services over the past nine years. Rural districts are not decreasing in SLD identification as quickly as their suburban counterparts. Additionally, rural school districts show a significant rate of increase in the proportion of students identified with other disabilities from Phase 1 to Phase 3. While there was not a significant difference in other disabilities between rural and suburban districts at Phase 3, the increased rate noted in rural districts indicates an overall increase in students identified for special education services in rural districts compared to suburban districts.

One major contributing factor to this difference appears to be staff salary. Rural districts with higher average staff salary are seeing lower levels of RTI implementation fidelity, which, in turn, impacts student outcomes and changes in the special education identification and enrollment process. Whether these differences noted in salary impact RTI implementation fidelity due to increased staff motivation to implement new initiatives or the district's ability to recruit younger staff with more experience, education, and flexibility in trying to implement specific initiatives, such as RTI, remains unclear from the results of this study. However, it is important to note the results are a potential indicator for school districts that staff salaries impact RTI program implementation. A post hoc analysis was completed to determine to what extent environmental factors impacted rural and suburban districts separately. Based upon the findings of this study, rural districts exhibited differences in RTI implementation dependent upon staff salary, while suburban school districts did not. It is unclear from this study why staff salary impacts RTI implementation in rural districts, while suburban districts are not display differences in RTI implementation predicted by salary. Gaining further understanding into the impact of this factor could better inform schools districts and potentially lead to decreased special education rates. During phase three of the insufficient progress criterion rollout, rural school district had 1,563 students (.82% of the student population) identified with SLDs compared to 1,915 students (.56% of the student population) identified in suburban school districts. Additionally, rural school districts had identified 3,787 students (1.88% of the student population) with other disabilities, while suburban districts identified 6,292 students (1.86% if the student population) during

Phase 3. While rural school districts did show as significant a decrease of students identified with SLDs, as compared to suburban school districts, with additional supports and training surrounding RTI implementation and data-based decision making, there is positive potential for them to see similar shifts in special education enrollment rates as noted in suburban school districts.

Limitations of the Study

There were limitations that could have potentially impacted the results of this study. One such limitation of this study was that data was collected through archival databases through the Wisconsin DPI and RTI Center. While districts are required to report specific special education data to DPI, at this time there is no requirement for districts to participate in data collection through the RTI Center. This includes data surrounding RTI implementation and fidelity checks, including participation in the SIR questionnaires. Data were only available from districts that choose to utilize RTI techniques and reported their progress through the RTI Center. Therefore, this data might be biased towards districts that were more committed to having successful RTI frameworks. This bias may have resulted in limited accuracy and validity of the data collected and may not truly represent rural and suburban school district's overall RTI implementation fidelity over time. Another limitation of utilizing SIR data to identify level of RTI implementation and RTI fidelity is that the SIR is a questionnaire including a Likert-type scale. This characteristic may limit the scope of participant's answers and the conclusions drawn from these responses. Additionally, districts are not required to submit SIR ratings in specified intervals; this resulted in a number of schools being

excluded from the sample, because they had not provided ratings during each of the three phases of this study. The recency of reported ratings may also limit the conclusions and generalizability of the study. To address these concerns, data sources were aligned by year and with annual DPI reporting dates to ensure all data are collected within the same school year. School districts with no SIR data were excluded from the study for research questions 3 and 4.

The archival data utilized for this study were provided by both the WI DPI and the WI RTI Center; however, the databases available were not easily transferrable to create data sets within the SPSS software. Data were required to be keyed by hand and were not easily copied. While data checks were performed to ensure accuracy, it is possible some data were entered incorrectly, thus potentially impacting the overall results of the study.

The database (WISEdash) that was utilized for this study to collect information regarding special education disability classification for school districts only reports prevalence data for each school year. This was an additional limitation to the study. These data were reported twice a year, allowing such information to be utilized for the purpose of this study; however, the rate of disability incidence (or newly identified cases of disability) would have been ideal for the study. Incidence ratings would have provided more precision in understanding changes in special education identification practices aligned with the insufficient progress criterion. At this time, however, such specific data was neither collected nor reported on an on-going basis by the Wisconsin Department of Instruction.

A convenience sampling strategy was used in this study, which may limit the ability to determine a potential causal relationship. Additionally, this sampling strategy may have led to bias results, as districts not actively engaged in the RTI process through the RTI center were excluded from the study. The last limitation of this study was the lack of reported validity and reliability of the SIR in measuring RTI implementation fidelity. Despite these limitations, the finding of the study contributes to the professional knowledge base for determining the impact of school community and RTI implementation on special education eligibility.

Recommendations

The results of this study demonstrated that further research is needed surrounding special education disability identification processes, RTI implementation, and how environmental factors impact these practices in rural and suburban school districts. As noted earlier, it would have been ideal to investigate incidence of disabilities as opposed to prevalence of disabilities within the education system, however, at the time of this study incidence data was not readily available. As such, further examination of disability incidence could provide greater information regarding research questions proposed in this study. Additionally, data collected directly from school districts, in defined intervals, regarding RTI implementation fidelity may yield more reliable and valid data to determine differences in RTI implementation fidelity between school districts, and the extent to which environmental factors interfere with overall program implementation. Current results indicated that staff salary and district locale impact overall RTI implementation fidelity, additional research may be necessary to determine what other

environmental factors are impacting overall program implementation and disability identification.

Further investigation could also be completed to help determine the root cause of changes in disability identification practices in rural school districts. While SLD rates are declining in both rural and suburban school districts, rates of other disabilities are significantly increasing in rural school districts, while rates in suburban school districts are not displaying significant changes. Further research might provide additional insights into the differences identification practices between rural and suburban school districts.

Implications

The implications for positive social change include the addition of this study to the growing literature base regarding special education eligibility and RTI practices in terms of the unique needs and concerns of rural school districts compared to their suburban counterparts. National trends indicated that while SLD rates are declining, rates of other disabilities are on the rise (Zirkel, 2013). The results of this study indicated these trends are also occurring in the state of Wisconsin, and at a more rapid pace in the 44% of Wisconsin school that are located within rural settings, as compared to suburban school districts. Likewise, environmental factors unique to rural school districts have been linked to a number of issues that impact ability to implement new educational initiatives and maintain overall academic achievement rates compared to suburban school districts (Barrett, Cowen, Toma, & Troskey, 2015; Brownell, Bishop, & Sindelar, 2005; Dexter, Hughes, & Farmer, 2008; Graham and Provost, 2012; Shepherd, Salembier, 2011; Williams, 2003). The results of this study identified the specific factors of district

locale and staff salary impact a districts ability to implement RTI with fidelity. These results may inform district stakeholders that environmental factors have a significant impact on program implementation. Furthermore, these factors could have an impact on special education decision-makers' ability to effectively and accurately identify students for special education, as noted by the changes in special education identification patterns through the insufficient progress criterion rollout in both rural and suburban school districts. If all school districts are able to make informed decisions based upon environmental factors, within their control, new program implementation may work more effectively and efficiently, and thereby, special education enrollment will be less likely to be significantly impacted, as suggested by the general systems theory (von Bertalanffy, 1950).

Conclusion

While this study did not show statistical significance between overall RTI implementation fidelity and type of school district, and significant results were not aligned with anticipated results, there were a number of interesting statistically significant findings surrounding special education disability identification and the role of environmental factors on school districts that are impactful for special education decision makers, school administrators, and future education practices, including new program/initiative implementation. The insufficient progress criterion for SLD identification, which contains criteria similar to RTI programming and implementation, appears to impact the ways in which rural school districts in Wisconsin identify students for special education. While RTI implementation fidelity is consistent between rural and

suburban school districts, utilizing such techniques for special education identification and enrollment impacts each type of district differently. While suburban school districts exhibit a sharp decline in SLD prevalence rates after the SLD criterion change went into place, the decline in SLD prevalence in rural school districts appears to be less significant and more aligned with the already noted secular trend of decreased SLD enrollments within the state of Wisconsin. Additionally, suburban school districts exhibited a slight increase in the prevalence rates of other disabilities aligned with the SLD criterion change, while rural school district exhibited a significant increase in prevalence rates. Lastly, results indicate that despite similar ability to implement RTI programs with fidelity between rural and suburban school districts, the multiple regression analysis yielded significant results indicating type of school district is a predictor variable in determining overall RTI implementation fidelity. Staff salary was also a significant predictor variable in determining RTI implementation fidelity across school districts. These results overall indicate rural school districts may struggle to implement RTI with fidelity, which also shifts overall special education enrollment practices, compared to suburban school districts and that these difficulties may be related to specific environmental factors unique to rural school districts. However, further research is needed in this area to determine what, if any, additional factors lead to changes and difference in special education enrollments between rural and suburban school districts. Specifically, research investigating disability incidence rates overtime would beneficial in identifying school district needs and narrowing down where and how enrollment trends are shifting.

While the exact cause of differences in the shifts of special education prevalence rates was not explicitly discovered as a result of this study, the results do indicate potential difficulties in properly identifying students for special education services within rural school districts. Staff in rural school districts likely continue to need higher levels of support, and professional development, to help mediate significant changes in special education practices and to ensure equal participation in new programming initiatives to better service at-risk and high needs students. Policy makers should also consider potential ramifications to rural student outcomes when proposing new initiatives, guidelines, or laws related new initiatives or programming changes at a statewide level.

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Appendix A: Data Use Agreement with Wisconsin RTI Center

DATA USE AGREEMENT

This Data Use Agreement ("Agreement"), effective as of August 18, 2017, is entered into by and between **Jessica Golburg** and **Wisconsin RTI Center**. The purpose of this Agreement is to provide Recipient with access to a Limited Data Set ("LDS") for use in the following titled research project: RTI Implementation and Special Education Eligibility in Rural Wisconsin Schools under the direct supervision of Dr. Mary Pinon at Walden University in accord with the HIPPA and FERPA regulations.

1. Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the "HIPAA Regulations" codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

2. Preparation of the LDS. Covered Entity shall prepare and furnish to Recipient a LDS in accord with the HIPAA Regulations. **NOTICE: This agreement is valid only if the Data do not include any of the following "Prohibited Identifiers": Names; postal address information other than town, cities, states and zip codes; telephone and fax numbers; email addresses, URLs and IP addresses; social security numbers; certificate and license numbers; vehicle identification numbers; device identifiers and serial numbers; biometric identifiers (such as voice and fingerprints); and full face photographs or comparable images.**

3. Minimum Necessary Data Fields in the LDS. In preparing the LDS, Covered Entity or its Business Associate shall include the data fields specified by the parties from time to time, which are the minimum necessary to accomplish the purposes set forth in Section 5 of this Agreement.

4. Responsibilities of Recipient.

   Recipient agrees to:

   a. Use or disclose the LDS only as permitted by this Agreement or as required by law;

   b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

   c. Report to Covered Entity any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law, including the presence of prohibited identifiers in the LDS;

a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA and FERPA Regulations.

c. No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER	**DATA RECIPIENT**
Signed: Kim Gulbrandson	Signed: Jessica Golburg
Print Name: Kim Gulbrandson	Print Name: Jessica Golburg
Print Title: Research and Evaluation Coordinator 9/18/17	Print Title: Doctoral Candidate, Walden University 9.18.2017

Appendix B: Wisconsin RTI Center School-Wide Implementation Review

PART ONE: HIGH QUALITY INSTRUCTION

High quality instruction (curriculum, instruction, and assessment) is engaging, standards-based, data-driven, and research-based and is grounded in culturally responsive practices.

Do we have **HIGH QUALITY INSTRUCTION** on multiple levels?		Not in Place	Purpose-Building	Infrastructure	Initial Implementation	Full Implementation
For instruction at the UNIVERSAL level, we…						
1	Use universal curriculum and instruction based on the **Wisconsin State standards** or **local standards**	NIP	PB	IS	II	FI
2	Deliver universal curriculum and instruction based on **grade-level/course benchmarks**	NIP	PB	IS	II	FI
3	Use **research-based** practices and/or programs within our universal curriculum and instruction	NIP	PB	IS	II	FI
4	**Differentiate** universal curriculum and instruction based on student needs	NIP	PB	IS	II	FI
5	Provide universal curriculum and instruction that **engages students**	NIP	PB	IS	II	FI
6	Provide universal curriculum and instruction that **uses the cultural beliefs, practices, and experiences** of our students	NIP	PB	IS	II	FI
7	Use **formal strategies** to share our grade-level/course benchmarks with all **parents/guardians**	NIP	PB	IS	II	FI
8	Use a process to ensure that our universal curriculum and instruction are **delivered with fidelity** (i.e. as intended)	NIP	PB	IS	II	FI
9	Use multiple measures to **review the overall effectiveness** of our universal curriculum and instruction **for all students** and **adjust accordingly**	NIP	PB	IS	II	FI
10	Use multiple measures to **review the effectiveness** of our universal curriculum and instruction **for demographic groups of students** and **adjust accordingly**	NIP	PB	IS	II	FI
For instruction at the SELECTED and INTENSIVE level, we…						
11	Provide **interventions in addition to the universal curriculum** for students not meeting benchmarks	NIP	PB	IS	II	FI
12	Use **evidence-based interventions** for students not meeting benchmarks	NIP	PB	IS	II	FI
13	Provide interventions **relevant to the cultural beliefs, practices, and experiences** of our students not meeting benchmarks	NIP	PB	IS	II	FI
14	Provide **evidence-based additional challenges** for students exceeding benchmarks	NIP	PB	IS	II	FI
15	Provide additional challenges **relevant to the cultural beliefs, practices, and experiences** of our students exceeding benchmarks	NIP	PB	IS	II	FI
16	Use a process to ensure that our interventions/challenges are **delivered with fidelity** (i.e. as intended)	NIP	PB	IS	II	FI
17	Regularly **review the overall effectiveness of our interventions/challenges** for students receiving selected and intensive support	NIP	PB	IS	II	FI
18	Regularly **review the effectiveness of our interventions/challenges for demographic groups of students** receiving selected and intensive support	NIP	PB	IS	II	FI

The Wisconsin RtI Center/Wisconsin PBIS Network (CFDA #84.027) acknowledges the support of the Wisconsin Department of Public Instruction in the development of this document and for the continued support of this federally-funded grant program.

PART TWO: BALANCED ASSESSMENT

Continuous review of student progress involves a balanced, systematic process of constant inquiry that uses multiple measures to determine the current skill level of students, how students are responding to core curriculum and instruction, and how students are responding to interventions or additional challenges.

Do we use **BALANCED ASSESSMENTS** to continuously review student progress?		Not in Place	Purpose-Building	Infrastructure	Initial Implementation	Full Implementation
For assessment of learning at the UNIVERSAL level, we…						
19	Use a **process to screen** all students on grade-level/course benchmarks multiple times each year	NIP	PB	IS	II	FI
20	Use **valid and reliable** universal screening tools/processes	NIP	PB	IS	II	FI
21	**Use** a screening process that is **relevant to our students' cultural beliefs, practices, and experiences**	NIP	PB	IS	II	FI
22	Use **multiple measures** in our universal screening process	NIP	PB	IS	II	FI
23	Use **decision rules to determine levels of support** for students based on universal screening results	NIP	PB	IS	II	FI
24	Use a **system to document** universal screening results and instructional decisions	NIP	PB	IS	II	FI
25	Use **formal strategies** that ensure **parents/guardians** know and understand **universal screening results**	NIP	PB	IS	II	FI
26	Use a process to **analyze aggregated universal screening results**	NIP	PB	IS	II	FI
27	Use a process to **analyze disaggregated universal screening results** (i.e. by student demographic groups)	NIP	PB	IS	II	FI
28	Regularly **review the effectiveness and efficiency** of our universal screening processes	NIP	PB	IS	II	FI
For assessment of learning at the SELECTED AND INTENSIVE levels, we…						
29	Use **valid and reliable diagnostic data** to provide in-depth information about students in need of support at the selected and intensive levels	NIP	PB	IS	II	FI
30	Use **valid and reliable tools to monitor the progress** of students receiving interventions/additional challenges	NIP	PB	IS	II	FI
31	**Use a process** based on the intensity of the intervention/challenge **to determine the frequency of progress-monitoring** for students receiving support at selected and intensive levels	NIP	PB	IS	II	FI
32	**Frequently review progress-monitoring data to gauge** whether students are making **adequate progress** in response to the interventions/challenges and **adjust accordingly**	NIP	PB	IS	II	FI
33	Use a system to **document student-level progress-monitoring data and instructional decisions** for students at the selected and intensive levels of support	NIP	PB	IS	II	FI
34	Use a process to regularly **inform parents/guardians** of ongoing student progress in response to interventions/challenges	NIP	PB	IS	II	FI

PART THREE: COLLABORATION

Collaboration is a process where people work together to identify and provide supports to students to increase their academic and behavioral success through data-based decision making.

Do we **COLLABORATE** within our multi-level system of support?		Not in Place	Purpose-Building	Infrastructure	Initial Implementation	Full Implementation
To strengthen the effect of our UNIVERSAL curriculum/instruction, we…						
35	**Collaborate frequently in grade level/content area teams** about universal student data and instructional practices	NIP	PB	IS	II	FI
36	**Involve multiple staff roles** in grade level/content area team discussions about universal student data and instructional practices	NIP	PB	IS	II	FI
37	**Demonstrate cultural competence when collaborating** in grade level/content area teams about universal student data and instructional practices	NIP	PB	IS	II	FI
38	Follow a **consistent process to guide** grade level/content area **team discussions and decisions** at the universal level	NIP	PB	IS	II	FI
39	**Collaborate** periodically ***across*** grade levels/content areas about universal student data and instructional practices	NIP	PB	IS	II	FI
To strengthen the effect of our SELECTED AND INTENSIVE interventions/challenges, we…						
40	**Involve multiple staff roles** in grade level/content area teams when **determining the appropriate type and level of intensity of interventions/challenges** for students in need of support at the **selected level**	NIP	PB	IS	II	FI
41	**Demonstrate cultural competence** when collaborating in grade level/content area teams about the appropriate nature of support at the **selected level**	NIP	PB	IS	II	FI
42	Follow a **consistent process to guide** grade level/content area **team discussions and decisions** about support at the **selected level**	NIP	PB	IS	II	FI
43	Use a process to **collaborate with and engage parents/guardians** of students receiving support at the selected level	NIP	PB	IS	II	FI
44	**Work collectively to provide interventions/challenges** for students receiving support at the selected level	NIP	PB	IS	II	FI
45	Use a process to **access timely building-level problem-solving team support** for students in need of support at the intensive level	NIP	PB	IS	II	FI
46	**Involve multiple staff roles** in our **building-level problem-solving team** for students in need of support at the intensive level	NIP	PB	IS	II	FI
47	Follow a **data-based process to guide building-level problem-solving team decisions** about the nature and level of intensity of interventions/challenges for students in need of support at the intensive level	NIP	PB	IS	II	FI
48	**Use a culturally competent process** when collaborating in our **building-level problem-solving team**	NIP	PB	IS	II	FI

PART THREE: COLLABORATION

Collaboration is a process where people work together to identify and provide supports to students to increase their academic and behavioral success through data-based decision making.

Do we **COLLABORATE** within our multi-level system of support?		Not in Place	Purpose-Building	Infrastructure	Initial Implementation	Full Implementation
49	**Engage parents/guardians** as active team participants at **each step of the problem-solving process** for students receiving support at the intensive level	NIP	PB	IS	II	FI
50	Use a process to **measure the effectiveness** and **efficiency** of our **building-level problem-solving team** for students receiving support at the intensive level	NIP	PB	IS	II	FI

PART FOUR: LEADERSHIP AND ORGANIZATIONAL STRUCTURES

Effective leadership is essential to the development and continuing improvement of any organization. Leaders are needed to focus efforts on excellence and equity in education. School leaders expect and hold staff accountable for challenging all students with a rigorous, culturally relevant curriculum and for demonstrating high expectations for each student. School leaders ensure that each school has financial, material, and programmatic resources adequate to provide each student an equitable opportunity to learn and achieve success. [Source: WI DPI Characteristics of Successful Schools]

Do we have school-wide **LEADERSHIP AND ORGANIZATIONAL STRUCTURES** to support full RtI implementation?		Not in Place	Purpose-Building	Infrastructure	Initial Implementation	Full Implementation
51	Our school embraces an **RtI vision** centered on **achieving high levels of academic and behavioral success for all students**	NIP	PB	IS	II	FI
52	Our **principal** is **actively committed** to a multi-year RtI implementation	NIP	PB	IS	II	FI
53	Our **school-wide schedules** are **aligned to support** delivery of **multiple levels** of high quality instruction based on the needs of our students	NIP	PB	IS	II	FI
54	School **personnel and roles** are **aligned to support** delivery of **multiple levels** of high quality instruction based on the needs of our students	NIP	PB	IS	II	FI
55	The school **budget** is **aligned to** implement our **RtI goals**	NIP	PB	IS	II	FI
56	**Collaboration** around student data and instruction is **built into staff expectations, schedules, and the school calendar**	NIP	PB	IS	II	FI
57	We commit **adequate time and resources to support professional learning** for all staff needed for full RtI implementation	NIP	PB	IS	II	FI
58	We use a **system to easily document and access individual student-level data** for all of the years each student has been in our school	NIP	PB	IS	II	FI
59	Our **school-level leadership team meets regularly** to **oversee implementation of** our school-wide RtI action plan	NIP	PB	IS	II	FI
60	We use a **process to evaluate our short-term progress and long-term goals** toward full RtI implementation	NIP	PB	IS	II	FI
61	We use a **process to regularly communicate** our **school-wide RtI actions and results** to multiple stakeholder audiences, including all staff, families, school board members, and the community	NIP	PB	IS	II	FI