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Educational Leaders' Perspectives on Their Preparation, Practice, and Professional
Development in MTSS

A Dissertation Presented

by

JODI DRURY

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

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College of Education

Educational Leaders' Perspectives on Their Preparation, Practice, and Professional
Development in MTSS

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DEDICATION

To my patient and loving husband and children.

ACKNOWLEDGMENTS

ABSTRACT

EDUCATIONAL LEADERS' PERSPECTIVES ON THEIR PREPARATION,

PRACTICE, AND PROFESSIONAL DEVELOPMENT IN MTSS

MAY 2018

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The role of school leaders today directly impacts students and staff. Research into educational leaders' perspectives and experiences with Multi-Tiered Systems of Support (MTSS) provides a lens to help examine the culture of training and constructs of knowledge, of school leaders. The five research questions that drove this research study were: (1) What are school leaders in rural counties in Western Massachusetts current knowledge of MTSS implementation? (2) What experience do these school leaders have with implementing MTSS? (3) What training on MTSS did these school leaders receive? (4) Do these school leaders feel prepared to implement MTSS? (5) What additional knowledge, training and supports do these school leaders believe they would need to

effectively implement MTSS? To answer the research questions, the study employed a mixed-methods sequential explanatory (MMSE) research design.

Findings show that leaders have heard of MTSS and have a general understanding of what MTSS is. Leaders want to be trained in MTSS implementation. Since, the state offers no formal training in MTSS for leaders, leaders' knowledge of MTSS implementation is limited at this time. However, despite lack of training, leaders feel prepared to implement MTSS. Leaders are educating themselves about MTSS and using parts of it in their schools. Ultimately, most leaders can implement parts of MTSS but not the system of MTSS, which creates confusion about what MTSS really is.

Leaders knowledge and experience with MTSS expands the research on educational leaders' knowledge and training as a whole. It is important that school leaders receive high quality education and training that helps them stay current in the field. Leaders should have a voice in the training they need. Districts and states need more sustainable training systems for leaders in MTSS, and some means of measuring leaders' knowledge, so leaders are given the supports and training they need. It is imperative that leaders receive high quality education and training to improve the outcomes of all staff and students.

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CHAPTER I

INTRODUCTION

The field of educational leadership is rapidly evolving to meet the diverse academic and behavioral needs of all students. In a time of increased concern about preparing all students for success in their adult lives and careers, school leaders hold a position of great importance in our society (Leithwood, 2008). School leaders today are responsible for improving the outcomes of all students in their schools. Hence, the knowledge and skill set of school leaders has more importance today than ever before. Unfortunately, a significant gap exists between the knowledge and skills school leaders receive from their preparation programs and professional development, and current educational initiatives, policies, and the actual demands they face each day (Vogel & Weiler, 2014; Darling-Hammond et. al., 2007; Braun et. al., 2011; Edmonds et. al., 2007; Fields & Egley, 2005; Eddy & Rao 2009; Bustamonte & Combs 2011; Gumus 2012; McHatton et. al., 2010; Spanneut et. al., 2012). The result is that many school leaders do not possess the knowledge and understanding of important initiatives in the field that can improve the outcomes of their students (Levine, 2005). The purpose of the proposed study is to understand school leaders' perceptions of their knowledge, training, experience, and ability to implement Multi-Tiered Systems of Support (MTSS) in public schools.

Multi-Tiered Systems of Support (MTSS)

In an era in which data on students must be systematically collected and readily available for analysis, school leaders are increasingly accountable for leading public schools in a way that directly improves educational outcomes for students, and

particularly for students who are struggling to learn. One approach that school leaders need to employ for identifying and systematically intervening to support struggling learners is known as Multi-Tiered Systems of Support (MTSS). MTSS is the combination of Response to Intervention (RTI) and Positive Behavior Supports (PBIS) also known as School Wide Positive Behavior Supports (SWPBS). RTI targets students' academic progress and is made up of three tiers: (1) high quality instruction for all students in the general education classroom, (2) small group interventions for students that are making slower progress, and (3) intensive individualized interventions to initiate the special education eligibility process. Most models of RTI also include universal screening, a problem-solving method and integrated assessment and data collection at each tier (Batsche, 2005). SWPBS is a parallel system to RTI but its focus is on behavior, not academics. The purpose of SWPBS is to teach positive student behavior in schools to create a positive school culture for learning (Sugai et. al., 2010). SWPBS is data driven and multi-tiered. It also integrates assessment and data collection at each tier.

MTSS is created when RTI and SWPBS are woven together. It combines RTI, SWPBS, and a system of supports to provide a responsive and comprehensive model to address barriers to student learning (Averill & Rinaldi, 2011). MTSS targets specific areas in which students are struggling and applies increasingly intensive research-based interventions until the barriers to learning are addressed. MTSS systematically focuses on leadership, professional development (PD), and empowering school cultures to assess curriculum and instruction (Dulaney et. al., 2013).

MTSS in its simplest form is comprised of universal screening, effective instruction, problem solving, progress monitoring, and understanding student data. The main components of implementing MTSS are establishing a long-term and short-term implementation plan. The stages of MTSS implementation are exploration, adoption, and installation (Fixsen, 2005). Leaders of MTSS must be prepared for the barriers and facilitators of change. Leaders of MTSS must choose staff carefully, design appropriate training, provide on-going consultation and coaching, evaluate progress, provide support to staff, and provide appropriate systematic interventions (district level resources and supports). Leaders must understand MTSS thoroughly, and they must be able to establish relationships with staff that will create a community of professionals (Brown-Chidsey & Bickford, 2016). "When school leaders truly get to know, appreciate, and cultivate the interests, needs, and diversity of their staff, a true learning community is formed" (Brown-Chidsey & Bickford, p.98).

Supports must be created and communicated regarding schedules, specific grades and subjects that will be tiered first, check-in meetings, and acknowledgement of successes and failures. Attention must also be given to long-term implementation. A detailed feedback loop, about classroom practices, helps guide long-term efforts. Collaboration, coaching, teams, and staff evaluations support staff in the implementation process.

MTSS was embraced by researchers and school reformers, over the past 20 years. It is integrated into current reforms like Race to the Top, by providing data systems for monitoring student progress, planning high quality instruction for all students, and personalizing instruction. MTSS is aligned with teacher evaluation

systems because it uses progress-monitoring tools to develop student learning objectives, and MTSS documents fidelity of high-quality instructional practices across levels in the system. MTSS supports common core standards by using screening to identify students that need extra help, using data to determine if core instruction meets students' needs, and designing standard-related instruction to meet the needs of students requiring intensive supports (rti4success.org/related-rti-topics/school-reform, 2016).

The Origins of MTSS. MTSS was first introduced in 1997, as part of the reauthorization of IDEA, and was referred to as Positive Behavior Supports (PBS). PBS was the result of work done in education in the 1980s that saw the need for prevention, research-based practices, data - based decision-making, school-wide systems, explicit social skills instruction, team - based implementation, and professional development, to improve student outcomes (Sugai & Simonsen, 2012). The next reauthorization of IDEA in 2004, included Response to Intervention (RTI). RTI was created from the idea that students would make better progress academically and behaviorally if their individual learning needs were met. The field of education started to move away from reactionary approaches or wait-to-fail approaches in education, to prevention approaches (Brown-Chidsey & Bickford, 2016). Struggling learners could be identified and supported before they failed.

MTSS comes from the science of prevention, which came from the field of public health. In 1964, Gerald Caplan defined the concept of prevention (Brown-Chidsey & Bickford, 2016). He suggested there were three levels of prevention primary, secondary, and tertiary. The principle of prevention science is that people do not have to wait for a problem to be severe before acting. Caplan's prevention model has become

known as MTSS in the field of education, or the three-tiered model of support for all students.

      Legislation. The 2004 reauthorization of IDEA encouraged the use of RTI and prohibited states from requiring school districts to use IQ-achievement discrepancy criteria in the identification of students with specific learning disabilities. Discrepancy indicates that a student's academic performance is lower than anticipated. The IQ-achievement discrepancy model means a student's score on their IQ test is at least two standard deviations (30 points) higher than his or her scores on an achievement test, and the student is described as having a significant discrepancy between IQ and achievement and, therefore, as having a learning disability (IDEA, 2004). IDEA encouraged the use of RTI, a scientific, research-based approach to determine if students were learning disabled. RTI was created to improve the process of identifying students with an SLD. The reauthorizations of IDEA (1997, 2004) increased attention to the use of scientifically based behavior interventions and supports, to prevent problem behaviors and to address the educational needs of students with serious behavior challenges (Sugai et. al., 2010).

      The No Child Left Behind (NCLB) Act was enacted in 2002. It provided significant progress for our nation's children. Specifically, it focused on students' progress, regardless of race, income, zip code, disability, home language, or background. NCLB focused on student and teacher performance and accountability. NCLB and IDEA both focused on achievement but at very different levels. NCLB is large scale-that all children will succeed. IDEA requires individualized education

programs for students with disabilities. The alignment focused on the need for educated and highly qualified teachers.

Over time, NCLB's requirements became increasingly unreachable for schools and educators (Sunderman et. al., 2008). An important oversight of NCLB, was that it did not include principals' roles in improving schools (Sunderman et. al., 2008). The reauthorization of the NCLB was approved in December of 2015. It is now called Every Student Succeeds Act (ESSA). ESSA clearly defines the principal as the leader of the school. ESSA focuses on developing effective principals to improve the outcomes of all students. Under the law, principals must collaborate on state and district implementation plans, in a bottom-up, not a one-size-fits-all approach. ESSA differentiates professional learning for principals from professional learning for teachers (ESSA, 2015). Monies will be dedicated to developing better support systems for principals, in hopes of improving the overall quality of principals in the field (ESSA, 2015). States can prioritize their funding to create mentoring programs, induction programs, and performance measures to attract and retain effective principals (Pollitt, 2016).

The Massachusetts Blueprint for MTSS. The Massachusetts' Blueprint for MTSS was created to support schools and districts to align with the District Standards and Indicators, and provide the structure to develop policies, practices, and procedures to successfully implement MTSS. The District Standards and Indicators are (1) Leadership and Governance, (2) Student Support (School Culture, Family, and Community Engagement), (3) Financial and Asset Management, (4) Human Resources and Professional Development, and (5) Curriculum, Instruction, and Assessment (See Table 1.1).

Leadership and governance. The Leadership and Governance Standard states that district and school leaders will create, implement, and evaluate the policies and procedures that are standards-based, driven by student achievement data, and designed to improve instruction and student outcomes for all students. The conditions for School Effectiveness are the district will provide effective systems for school support and intervention, the school will provide effective school leadership, the principal will make staffing decisions based on the school improvement plan and student needs, and the principal will make effective use of strategic resources and will have adequate budget authority. The standard briefly mentions the importance of effective school leadership and includes data-based decision making and systems for support and intervention, which are key components of MTSS.

Student support. This standard states that all students will get the academic and behavior supports they need, to be successful. Conditions for School Effectiveness include tiered instruction, positive behavior supports, and outreach to families and community organizations.

Financial and asset management. This standard states that the district will use student achievement data as a factor in the overall budget process. The district will acquire resources to provide for and sustain the advancement and achievement for all students enrolled in the district. The district will regularly assess the effectiveness and efficiency of its budget to meet changes and unanticipated events.

Human resources and professional development. The Human Resources and Professional Development (PD) standard states that the district will create a culture conducive to adult learning through effective communication, on-going professional

improvement, and joint responsibility for student learning. PD is based on district priorities, staff needs, student achievement data, and assessment of instructional practices. The PD calendar will provide enough time and flexibility for MTSS.

On-going PD will be job embedded, planned, and focused on MTSS topics and skills. New role and growth opportunities will exist for professionals identified for advanced training that are committed and effective. Administrators will create PD from their assessment of staff's strengths and needs. Staff will be assessed on their application of new skills and practices. Administrators will provide additional PD for staff, and high-quality feedback.

The Conditions for School Effectiveness are professional development and structures for collaboration which will include individual PD, district PD, job embedded PD, instructional coaching, content-oriented learning, frequent collaboration, and evaluation of PD and collaboration. Principals can make staffing decisions based on school improvement plans and student needs, per district personnel policies, budget restrictions, and approval of the superintendent. This standard clearly states that PD in MTSS is important and will happen. It does not include any mention of PD for school leaders.

Curriculum and instruction. This standard states that the district will develop curriculum and instruction practices that are aligned to state frameworks and produce positive outcomes for all students. Conditions for School effectiveness are curriculum will be aligned with the state curriculum, MCAS, and the grades and classes of the school. All staff will know how to use high quality, research-based instructional practices and programs, and a system for monitoring their instruction.

Student assessment. This standard states that district and school leaders will use student assessment results and other data to improve student achievement and inform all aspects of its decision-making (policies, instruction, assessment, and supervision). Conditions for School Effectiveness is that the school will use a balanced system of formative and benchmark assessments.

Summary of the Massachusetts Blueprint for MTSS. The Massachusetts Blueprint for MTSS is a helpful guide for schools and leaders to use when they implement MTSS. The most significant oversight in the standards is the absence of explicit language regarding the leadership training and PD in MTSS, for school leaders. The standards assume that school leaders know how to implement MTSS, which is a real concern.

Research on School Leadership and Training

There is limited research that connects leadership training and education with improved outcomes for all students (Boscardin, 2005). Historically, educational reforms have not been explicit about the relationship between leadership and student success. IDEA and NCLB gave principals more responsibility to improve the quality of instruction for all students, and ESSA transfers authority for accountability and school improvement from the federal government to the states and local districts. ESSA places significant emphasis on the role of the principal as the leader of the school and provides supports to principals to help them develop their leadership skills (ESSA, 2015). New reforms have included supports to improve the alignment of the skills and knowledge leaders need to impact the outcomes of their students directly and positively.

Current Leadership Practices

School leaders today must meet the increasing demands of accountability that are placed on them to improve the outcomes of all their students. School leaders are responsible for meeting the needs of all students, using assessment data to make responsive decisions, applying scientific based interventions appropriately, monitoring students' progress regularly, and leading teams of teachers to assist in carrying out these tasks each day with fidelity. In one recent study on school leadership, an important factor in schools that outperform others with similar students, researchers found that achievement levels were higher in schools where principals (1) undertake and lead a school reform process, (2) act as managers of school improvement, (3) cultivate the school's vision, and (4) make use of student data to support instructional practices and aid struggling students (Kirst et. al., 2005). However, these skills and qualities are rare. For school leaders to be effective, school leaders must understand monitoring systems, data collection, special education procedures and services, and the overall academic performance of all students (Pazey & Cole, 2013; Lashley, 2007). The school leader also must know special education timelines and legal procedures to make sure the school follows IDEA.

In an extensive review of the empirical studies on school leadership, Leithwood (2008) stated that school leadership is second only to classroom teaching as an influence on student learning. Effective teaching is the product of excellent leadership (Wallace Foundation, 2006). Effective leaders focus on student learning and professional development for teachers (DiPaola & Walther-Thomas, 2003). School leaders cannot permit the daily demands of their jobs to interfere with their role as the

leader of instruction and curriculum (Berlin et. al., 1988 cited in VanRoekel, 2008). However, school leaders struggle to be instructional leaders because of the overwhelming managerial demands of their jobs (VanRoekel, 2008).

School leaders need to be learning leaders, system players, and agents of change (Fullan, 2010). School leaders must get into classes to keep learning and stay connected to the instruction happening in their schools. School leaders must be system players. They must network with other leaders to access new ideas and improve their school. School leaders also need to be change agents. They must work through resistance and make changes despite ambiguities and remaining capable to hear feedback (Fullan, 2010).

2015 Professional Standards for Educational Leaders

The 2015 Standards for Educational Leaders emphasize the relationship between educational leadership and student learning. The standards were created from an extensive process that looked at the current role of education leaders in empirical research, input from researchers, surveys from leaders, and focus groups.

The components and design of leadership preparation programs and licensure programs are key to understanding what principals should know prior to taking a leadership position. The 2015 Inter-State Professional Standards for Educational Leaders were created to guide principals in their (1) professional practice, (2) preparation and licensure, (3) hiring, (4) development, and (5) their supervision and evaluation. The standards inform policies and regulations that oversee the profession.

1) Effective educational leaders develop, advocate, and enact a shared mission, vision, and core values of high-quality education and academic success and

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well-being of *each* student.

2) Effective educational leaders act ethically and according to professional norms to promote *each* student's academic success and well-being.

3) Effective educational leaders strive for equity of educational opportunity and culturally responsive practices to promote *each* student's academic success and well-being.

4) Effective educational leaders develop and support intellectually rigorous and coherent systems of curriculum, instruction, and assessment to promote *each* student's academic success and well-being.

5) Effective educational leaders cultivate an inclusive, caring, and supportive school community that promotes the academic success and well-being of *each* student.

6) Effective educational leaders develop the professional capacity and practice of school personnel to promote *each* student's academic success and well-being.

7) Effective educational leaders foster a professional community of teachers and other professional staff to promote *each* student's academic success and well-being.

8) Effective educational leaders engage families and the community in meaningful, reciprocal, and mutually beneficial ways to promote *each* student's academic success and well-being.

9) Effective educational leaders manage school operations and resources to promote *each* student's academic success and well-being.

10) Effective educational leaders act as agents of continuous improvement to promote *each* student's academic success and well-being.

The 2015 Leadership Standards emphasize student learning and wellbeing. The 2015 Standards provide a research and practice-based understanding of the impact leadership has on student learning. The standards do not prescribe specific actions so leaders can adapt the standards to meet their school's needs. The different standards function interdependently but can be understood in three related clusters (1) Curriculum, Instruction & Assessment, and Community of Care and Support for Students, (2) Professional Capacity of School Personnel, Professional Community for Teachers and Staff, Meaningful Engagement of Families and Community, and Operations and Management, and (3) Mission, Vision and Core Values, Ethics and Professional Norms, and Equity and Cultural Responsiveness. The standards allude to "coherent systems" and "research-anchored systems" to improve the progress of all staff and students. However, there is no mention of RTI or MTSS in any of the standards. The absence of RTI and MTSS in the standards is a limitation that highlights the continued gap between policy and research. The absence of RTI and MTSS in the standards creates confusion for school leaders and for leadership training programs with respect to RTI and MTSS.

Gaps in School Leadership Preparation & Licensure

Many leadership training programs have not revised their programs to prepare school leaders to be instructional leaders (Briggs et. al., 2013). There is a lack of knowledge and systems for leaders to routinely examine and use outcome data. The ability to model and instruct staff on how to use data is a requirement of effective

principals, but the training programs are not adequately training principals with these skills.

Leadership preparation programs should redefine the role of school leaders, shifting the emphasis from theory to practice and developing leadership skills to empower them as the leader of the school. Although many in the field of education feel strongly that leadership preparatory programs and courses must be more related to the daily demands current leaders face, little has been done to change the way our nation prepares leaders to lead (Briggs et. al., 2013). Many programs have added more contemporary focuses to their leadership programs. However, most programs have not revised their programs so current graduates of preparation programs are ill-equipped to meet the challenges of this era of accountability (Briggs et. al., 2013).

Purpose of Study

The Massachusetts Blueprint for MTSS standards are laudable but we do not know if school leaders have the training and education to meet the standards, and ultimately implement MTSS successfully. Clearly, the field of educational leadership has embraced MTSS as an evidence-based approach to improving outcomes for students, however it is essential that all school leaders are prepared and capable to implement MTSS in the schools. The purpose of this study is to understand Massachusetts' school leaders' knowledge, experience, and readiness to implement MTSS in public schools. While researchers and school reformers have embraced MTSS as a key strategy for supporting improved outcomes for students, it is less clear that school leaders are being adequately trained and supported to create and sustain MTSS as part of their own professional development. Research on MTSS holds significant

promise for improving educational policies, leadership training, and budgetary implications. This study will explore the intersection of school leaders' understandings of MTSS and their perspectives on their training and preparation to implement MTSS in schools.

Research Questions

The purpose of this study was to understand the perspectives of Massachusetts' school leaders regarding their knowledge of MTSS, which provide school leaders with the most current skills they need to lead their schools today. Specifically, this study looks at whether school leaders perceive themselves as knowledgeable and prepared to implement MTSS in their schools. The five research questions that drive this research study are:

(1) What are school leaders' (specifically Principals, Vice/Assistant Principals, Deans of Students, Community Coordinators, Special Education Directors, and Head Teachers) in rural counties in Western Massachusetts current knowledge of MTSS implementation?

(2) What experience do these school leaders have with implementing MTSS?

(3) What training on MTSS did these school leaders receive?

(4) Do these school leaders feel prepared to implement MTSS?

(5) What additional knowledge, training and supports do these school leaders believe they would need to effectively implement MTSS?

Definition of Terms

A. *Administrative MTSS* - The organization of administrators and administrative practices, that addresses the professional development of staff in a system of supports to provide a responsive and comprehensive model to address barriers to staff's learning and improve the learning outcomes of students.

B. *Data-Based Decision Making* - Teams use screening and progress monitoring data to make decisions about instruction, movement within the multi-level prevention system, and disability identification.

C. *Discrepancy Model* - Discrepancy indicates that a student's academic performance is lower than anticipated. The IQ - achievement discrepancy model means a student's score on their IQ test is at least two standard deviations (30 points) higher than his or her scores on an achievement test, and the student is described as having a significant discrepancy between IQ and achievement and, therefore, as having a learning disability.

D. *Educational Initiatives* - New models in education to improve instruction and student learning outcomes.

E. *Educational Policy* - The principles and government policy in educational, as well as the collection of laws and rules that govern the operation of education systems.

F. *Every Student Succeeds Act (ESSA)* - The reauthorization of NCLB was approved in 2015 and was re-named Every Student Succeeds Act (ESSA). ESSA clearly defines the principal as the leader of the school. ESSA focuses on developing effective principals to improve the outcomes of all students.

G. *Free and Appropriate Public Education (FAPE)* - The provision of regular or special education and related aids and services that are designed to meet individual needs of persons with disabilities, as well as the needs of non-disabled persons, are met and based on adherence to procedural safeguards outlined in the law.

H. *Focus Group* - Focus groups are a method of data collection that brings respondents together to discuss data and provide more information on issues.

I. *Individuals with Disabilities Education Act* (*IDEA/IDEIA*) - A federal law enacted in 1990 and reauthorized in 1997 and 2004. It is designed to protect the rights of students with *disabilities* by ensuring that everyone receives a free appropriate public *education* (FAPE), regardless of ability.

J. *Leadership Preparation Programs* - Programs that Universities, Colleges, or Districts run to educate, train, and prepare current and aspiring leaders for leadership positions in schools and districts. Programs offer courses and credits on topics that are related to administrative standards and licensure requirements.

K. *Least restrictive environment (LRE)* – In the Individuals with Disabilities Education Act (IDEA), least restrictive environment (LRE) means that a student who has a disability should have the opportunity to be educated with non-disabled peers, to the greatest extent appropriate.

L. *Mixed-Methods Sequential Explanatory Research* - Research that involves collecting and analyzing quantitative data, then collecting and analyzing qualitative data in two consecutive phases within one study

M. *Multi-Tiered Systems of Support (MTSS)* - MTSS is the combination of Response to Intervention (RTI) and Positive Behavior Supports (PBIS) also known as School Wide Positive Behavior Supports(SWPBS). MTSS addresses the social, emotional, academic, and behavioral development of students in a system of supports to provide a responsive and comprehensive model to address barriers to student learning.

N. *No Child Left Behind (NCLB)* – An Act that requires all public schools receiving federal funding to administer a state-wide standardized test annually to all students. This means that all students take the same test under the same conditions and are held to the same standards of achievement. NCLB was enacted in 2002. It focused on students' progress, regardless of race, income, zip code, disability, home language, or background. NCLB focused on student and teacher performance and accountability. Recently, NCLB's requirements became increasingly unreachable for schools, and it did not include principals' roles in improving schools.

O. *Positive Behavior Instruction Supports/School Wide Positive Behavior Supports (PBIS/SWPBS)* - PBIS/SWPBS is a parallel system to RTI but its focus is on behavior, not academics. The purpose of PBIS/SWPBS is to teach positive student behavior in schools to create a positive school culture for learning. PBIS/SWPBS is data driven and multi-tiered. It also integrates assessment and data collection at each tier.

P. *Professional Development* - Workshops and/or courses in topics related to current practices in education.

Q. *Qualitative Research* - Qualitative research is a systematic approach to understanding the qualities of a phenomenon in a particular context. Qualitative research does produce science-based evidence that informs policy and practice in education. Qualitative research uses empiricism, which is knowledge from sense experience and observation. Knowledge production is about perspectives, settings, and techniques. The particular research skills and tools include a systematic use of certain qualitative methods. Qualitative research explores the attitudes, opinions, and beliefs of those impacted or involved in education.

R. *Quantitative Research* - A logical and data-led approach which provides a measure of what people think from a statistical and numerical point of view.

S. *Research-Based Interventions* - Interventions that are based in research that use rigorous, systematic, and objective procedures to evaluate whether a student is making progress or not.

T. *Response to Intervention (RTI)* - RTI is a process that determines if a child responds to scientific, research-based intervention as part of their determination that a student has a Specific Learning Disability. RTI is data driven and multi-tiered. It also integrates assessment and data collection at each tier.

U. *Response Rate* - The number of individuals who completed interviews divided by the number individuals who were originally asked or selected to be interviewed.

V. *Sample* - A group that is selected from a larger group (the population). By studying the sample the researcher tries to draw valid conclusions about the population.

W. *Sampling* - The process of selecting a subgroup of a population that will be used to represent the entire population.

X. *Sampling Error* - Fluctuation in the value of a statistic that is calculated from different samples that are drawn from the same population.

Y. *Specific Learning Disability (SLD)* - The term means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

Z. *Survey Research* - Survey research is when the researcher selects a sample of respondents from a population and administers a standardized questionnaire to them. The questionnaire, or survey, can be a written document that is completed by the person being surveyed, an online questionnaire, a face-to-face interview, or a telephone interview.

CHAPTER II

LITERATURE REVIEW

I conducted a review of the literature on school leaders' knowledge of Response to Intervention (RTI) & Multi-Tiered Systems of Support (MTSS). My review of the uliterature included leaders' (1) perceptions of their knowledge and skills regarding MTSS, (2) leadership standards, and (3) training and licensing of school leaders. MTSS is not broadly included in the school leadership research. Consequently, I used a broad number of search terms to capture the relevant related research.

Search Procedures

First, a search of key terms was done using the Educational Resources Information Center (ERIC). Databases were searched for articles from 1997 to March of 2015 because tiered interventions were first included in IDEA in 1997. To understand the current literature on school leaders' education and professional development needed to lead MTSS, it is important to understand the literature on school leaders' education and training in general. More specifically, the research on the education and training educational leaders receive & need, professional development for leaders, implementation of MTSS/RTI, and the leadership education and training needed to lead MTSS/RTI. Terms selected for this search included the following (1) principals, training, and education, (2) principals and degree programs, (3) administrators, training, and education, (4) administrators and degree programs, (5) principals and professional development, (6) administrators and professional development, (7) principals and MTSS and training, (8) principals and RTI and training, and (9) principals and PBIS and training. Four limitations were placed on these searches using options available in

the search engine (1) Publication years specified 1997-present, (2) peer-reviewed studies, (3) leadership training studies, and (4) academic journals.

I found a total of 309 articles. Out of the 309 articles 162 included principals, education, and requirements, 61 included administrators and RTI, 27 included PBIS and administrators, 13 included administrators, RTI, and training, 6 included administrators, PBIS, and training, 0 included administrators, MTSS, and training, 1 included MTSS and training, 10 included administrators and preparatory programs, and 2 included MTSS in general.

Criteria for Inclusion

I reviewed the title and abstract of each article to determine if the topic of the article was relevant to my review. Articles were included if they (1) reported descriptive or quantitative data, (2) examined school leader's education and professional development preparatory programs/courses, and (3) included MTSS/RTI leadership knowledge and training. I eliminated 218 articles that did not meet the criteria. Then I reviewed the remaining 91 studies to determine if the authors described a study about leaders' education and training programs in any of these three areas. A review using these criteria identified 14 articles. Ten of the studies were qualitative. Four of the studies utilized survey designs.

Content Review

To understand the research and ensure the rigor of my literature review, I reviewed the findings of each of the fourteen studies. I focused on (a) the alignment of state principal standards, licensure requirements, principal development programs, and the day-to-day responsibilities of principals; (b) principal training courses in theory

versus the actual role of a principal; (c) principal training courses that support

developing effective principals; (d) special education knowledge principals need; (e)

professional development for principals; (f) leaders' knowledge and experience with

RTI and MTSS implementation, (g) leadership of MTSS, and the findings of the

studies (see Table 2.1).

The Importance of Alignment for Leadership and Training

Authors of two of the articles (Vogel & Weiler, 2014; Darling-Hammond et. al.,

2007) addressed the alignment of state principal standards and licensure requirements,

and pre- and in-service principal development programs. The two studies used

qualitative research designs. Vogel and Weiler (2014) utilized document analysis.

Darling-Hammond and colleagues (2007) utilized case studies to understand leadership

preparation programs. The participants in the studies included 849 principals, 79 of

which had received pre-service and in-service training (Darling-Hammond et. al.,

2007).

The authors of both articles highlighted the importance of the issue of alignment

in leadership preparation programs (Vogel &Weiler, 2014; Darling-Hammond et. al.,

2007). Authors of both studies found that that implementation of high quality

preparation and professional development for school principals is a complex and costly

undertaking. It is important to understand that most leadership training institutions and

school districts do not have the human resources or funding to invest in high quality

training for their leaders, so it does not happen. This is not to excuse the importance of

continuous efforts to create and establish quality leadership training programs.

The authors found that states, districts, universities, and foundation people need to be able to work together to coordinate and align their institutions' policies and practices. Schools and districts can act as silos, disconnected from their state's and local training institutions' policies and practices (Vogel & Weiler, 2014). The resources needed to create an aligned and sustainable network are hard to find, because so many of the actors (states, districts, universities) can choose to train leaders at their own discretion (Vogel & Weiler, 2014). One way to help secure alignment is if novice principals that complete their mentoring and induction programs were mandated to receive satisfactory evaluations (Vogel & Weiler, 2014). The evaluations would have to be well constructed and linked to state principal standards required for licensure (Vogel & Weiler, 2014).

Neither of the articles (Vogel & Weiler, 2014; Darling-Hammond et. al., 2007) addressed MTSS, RTI, or PBIS, the most widely implemented school wide practices in public education. This oversight is an example of the alignment gaps that truly exist in leadership training. MTSS is one of the most important and current topics that leadership programs need to be covering. It is also a great example of an initiative that involves states, districts, and universities to implement and sustain it.

Critical features of preparation programs alignment. Authors of the two studies (Vogel & Weiler, 2014; Darling-Hammond et. al., 2007) examined the critical features of preparation programs' alignment of policies, practices, and standards for school leaders. The authors reported that to produce effective school leaders, an integration of policies that ensure preparation programs, license requirements, and district professional development and evaluation systems that are aligned with state

principal standards is needed. According to Darling-Hammond and colleagues (2007) the alignment of preparation programs to standards is not sufficient to cultivate and sustain effective leadership:

> "Robust implementation of the standards through strong, tightly related coursework and clinical experiences, reinforced by a continuum of supports upon entry into the career, appears to be necessary to secure transformed practices. Candidates who did not receive strong internships wrapped around their coursework, or who did not receive ongoing professional development once in the field, were less likely to report high levels of effective practices" (p. 149).

MTSS is an example of an initiative that will only survive if alignment and robust implementation of it happens. Leaders need to be trained in what MTSS is, how to implement it, and they need experience in implementing it. Sustainable training systems need to be established at the state level, university level, and district level that are integrated and streamlined (Darling-Hammond et. al., 2007). MTSS is a complex and system-wide approach to improving schools. MTSS must be built on an administrative foundation in which all levels and actors are active participants of an MTSS administrative team. MTSS requires the commitment of administrators to build the capacity to implement it (Dulaney et. al., 2013).

Preparation programs for administrators with respect to alignment of policies, standards, and practices. Authors of the two studies (Vogel & Weiler, 2014; Darling-Hammond et. al., 2007) also examined the alignment of standards, policies, and practices with respect to current preparation programs. Darling-Hammond and

colleagues (2007) reported that the best preparation programs provide a highly aligned and coherent system of school leadership development for university preparation programs, state departments of education, and school districts. Exemplary programs can produce leaders who engage in effective practices, exemplary pre-and in-service development programs share common features, program success is influenced by leadership, partnerships, and financial supports, and state and district policies influence program designs and outcomes (Darling-Hammond et. al., 2007). Additionally, exemplary programs have recruitment and selection of high quality candidates which is essential to program design, the programs are aligned with state and professional standards with a standards based approach focused on instructional leadership and school improvement, programs provide durable partnerships between districts and universities, states and districts, which produces consistent and coherent PD, programs integrate features and provide a robust model of leadership, they have significant resources, especially human resources to support learning embedded in practice (Darling-Hammond et. al., 2007).

However, nationally "fewer than 20 states rely on induction programs, mentoring, professional development, or other on-the-job training as a means of knowledge and skill development (Adams & Copland, 2005 cited by Vogel & Weiler, 2014). Quality preparation programs also require that all participants are committed (Darling-Hammond et. al., 2007). Participants need to establish sustainable relationships and funding. Policy and financial infrastructure can produce comprehensive programs that produce high quality leaders. Unfortunately, the funding structure needed for leadership preparation programs is very unclear (Darling-

Hammond et. al., 2007). It is not enough for a district, a state, or a university to individually align their policies and programs (Darling-Hammond et. al., 2007). The alignment must be integrated into each sector to be effective, connecting districts to their state and university models through sustainable relationships and funding (Darling-Hammond et. al., 2007).

Summary of alignment of preparation programs with respect to MTSS. The findings related to the alignment of leadership preparation programs demonstrate the resource challenges of producing high quality preparation programs. Considering these findings, it is difficult to find ways for preparation programs to provide quality training and education to prepare leaders in complex systems like MTSS. Despite the importance that the authors placed on the alignment of preparation programs, neither discussed alignment to MTSS or any other related school wide interventions in their investigations of preparation programs for school leaders. Neither study discussed the ways that current and future administrators of leadership programs failed to explicitly identify or comment upon the alignment of policies, practices, and standards of preparation programs that include MTSS, a current and ongoing initiative in nearly all public schools.

This oversight of the research is important because it highlights the lack of consideration given to MTSS by school leadership researchers. While MTSS is still in the initial phase of adoption across districts, universities, and states, PBIS and RTI have been implemented in school districts for nearly twenty years. MTSS is simply a new acronym for previous school improvement initiatives. Most leadership training programs are not providing specific courses in MTSS yet. States and districts do not

uniformly implement MTSS. Therefore, a major shortcoming in the various training programs examined, is revealed. A real strength of the studies would have been to provide a clear example like MTSS, so readers and professionals in the field would understand why it was not taken into consideration, or specific barriers that limit alignment to specific initiatives.

Theory and Practice

Authors of three of the articles (Braun et. al., 2011; Edmonds et. al., 2007; Fields & Egley, 2005) addressed the relationship between school leadership theory and school leadership practice. Fields and Egley (2005) utilized a case study design. The authors of the other two studies used surveys (Braun et. al., 2011) and focus group interviews (Braun et. al., 2011; Edmonds et. al., 2007) to understand how school leaders translate theory into practice. The participants in the studies included 300 practicing and aspiring principals (Braun et. al., 2011; Fields & Egley, 2005; Edmonds et. al., 2007).

The authors of all three articles (Braun et. al., 2011; Fields & Egley, 2005; Edmonds et. al., 2007) highlighted the importance of preparing school leaders who could translate theory into practice and who could implement current best practices in school settings. The authors emphasized the importance of practical knowledge of current effective practices (Braun et. al., 2011; Fields & Egley, 2005; Edmonds et. al., 2007), but none of them addressed MTSS, RTI, or PBIS, which are the most recent initiatives in public education.

Critical features of preparation programs. Authors of the three studies (Braun et. al., 2011; Edmonds et. al., 2007; Fields & Egley, 2005) examined the critical features of the preparation programs needed for school leaders. Two studies reported

that it was important that programs include knowledgeable professors and training in current knowledge that includes a balance of theory and practice (Braun et. al., 2011; Edmonds et. al., 2007). The same two articles also stressed the importance of programs having more rigorous admission standards to strengthen the candidate pool of future leaders (Braun et. al., 2011; Edmonds et. al., 2007). The participants in one study reported relatively high rates of dissatisfaction with their training programs (Edmonds et. al., 2007). Participants said courses focused too much on theory and not enough on group activities and interaction with other leaders. Half of the principals in the focus groups reported that their training programs were inadequate (Edmonds et. al., 2007). Many future leaders reported that their preparation programs could be improved through more hands-on internships, more relevant curriculum, and a balance between theory and practice (Braun et. al., 2011).

Preparation programs do not integrate theory into practice (Braun et. al., 2011). Many programs offer courses in leadership theory but many times those courses are not connected to leaders' actual job responsibilities (Braun et. al., 2011). Leadership training must be current and connected to the work leaders are expected to do in schools. Leaders in the studies voiced their need for on-going professional development imbedded into their district's system of support for their development (Braun et. al., 2011). Courses and internships that discuss MTSS are needed so aspiring principals know what it is and how to implement it.

Roles of administrators with respect to theory and practice. Authors of the two studies (Braun et. al., 2011; Fields & Egley, 2005) examined the administrators' perceptions of their roles and responsibilities with respect to theory and practice.

Authors reported that administrator's thought that the practical role of an administrator often limited or impeded the ability of an administrator to apply current knowledge or theory. For instance, new assistant principals were most challenged by their job responsibilities like organizing their work, completing their paperwork, dealing with interruptions, and feeling they had limited authoritative power (Fields & Egley, 2005). These findings demonstrate the relative burden that bureaucratic administrative duties place on principals and other school leaders. Considering these findings, it is difficult to find ways that school leaders can effectively implement, support, and evaluate complex systems like MTSS.

Summary of theory and practice with respect to MTSS. Despite the importance that the authors placed on current and theoretically supported practices, none examined MTSS or related school wide interventions in their investigations of school leaders (Braun et. al., 2011; Fields & Egley, 2005; Edmonds et. al., 2007). These studies were important because they showed that current and future school leaders failed to explicitly identify or comment upon any school wide systems of support. Ironically, the studies showed that preparation programs coursework and instruction would benefit from monitoring of the courses they offer, or administrative MTSS, to improve leadership programs. Practicing principals are overwhelmed with their managerial duties and they struggle to lead staff in learning and implementing current best practices. The studies shed light on a real issue in leadership preparation. If professors in preparation programs are not working in the field, then they do not know about current initiatives like MTSS. Therefore, training programs are not providing

courses in MTSS, instruction that meets principals' needs, and the on-going PD needed for MTSS is also overlooked.

Courses and Practice

Authors of three of the articles (Eddy & Rao 2009; Bustamonte & Combs 2011; Gumus, 2012) addressed the relationship between school leadership and the courses they take in their preparation programs. Authors of two of the studies (Bustamonte & Combs, 2011; Gumus, 2012) employed qualitative research designs, and one did a quantitative study (Eddy & Rao, 2009). They used exploratory content analysis (Bustamonte & Combs, 2011) and interviews (Gumus, 2012) to understand leadership preparation courses and how programs develop leaders. The authors of one study (Eddy & Rao, 2009) utilized a survey design. The participants in the studies included 16 principals, 72 educational institutions, and 65 directors of education training programs (Eddy & Rao, 2009; Bustamonte & Combs, 2011; Gumus, 2012).

The authors of all three articles highlighted the importance of the need for leadership preparatory programs to provide the skills and training needed to lead schools today. The authors emphasized the importance of courses in leadership, data analysis, evaluation, the collection of data, program alignment with current policies and practices and monitoring of programs and practices, but none of them addressed MTSS, RTI, or PBIS; the most current school wide initiatives and practice in public education.

Critical features of preparation programs. Authors of two of the studies (Eddy & Rao, 2009; Bustamonte & Combs, 2011) examined the critical features of preparation programs' courses for school leaders. The authors reported that it was important that programs include a review of program and student learning outcomes to

inform and align the new curriculum. Secondly, the gap between faculty members' perceptions of what is important, and the research skills school leaders' use each day must be examined. The voices and experiences of professionals in leadership training programs is essential to improving and aligning programs to meet future leaders' needs. The top four practices viewed as important to include in course offerings were (1) leadership and organizational theory, (2) leadership and decision-making, (3) the role of budget and finance, and (4) joint research between faculty members and students (Eddy & Rao, 2009). Leaders need preparation programs that offer courses that cover the actual demands of their jobs.

One study (Bustamonte and Combs, 2011) examined the course offerings and degree plans from programs' websites. Out of the 74 research methods course descriptions, 19 mentioned data analysis, 12 mentioned evaluation, 12 mentioned the collection of data, and 3 referenced monitoring of programs and practices. Only 16 of the 74 programs used the term "school leadership" in their course descriptions. (Bustamonte & Combs, 2011). Thus, only 22% of the programs included leadership offerings. Specific courses in leadership are not a priority of most leadership programs, which is concerning because MTSS cannot be implemented without leaders trained in MTSS. Essentially, all initiatives and practices schools need, cannot take root unless there is the appropriate leadership in place to lead those initiatives.

Experiences of administrators with respect to preparation courses and practice. Authors of two of the studies (Eddy & Rao, 2009; Gumus, 2011) examined the administrators' experiences in their preparation programs with respect to the courses they took and the actual role of principals. Authors of one of the studies reported that

there were inconsistencies between what program directors' think is important and offerings of the programs they participated in (Eddy & Rao, 2009). These findings demonstrate the disconnect that exists between the preparation course offerings and the knowledge and skills aspiring principals need to be leaders. Considering these findings, it is difficult to understand how school leaders are adequately prepared with the knowledge they need to effectively implement MTSS.

Summary of principal preparation courses and practice with respect to MTSS. Despite the importance that the authors placed on current courses preparation programs offer, none of the programs or courses evaluated included MTSS or related school wide interventions. None of the studies included information from current and future school leaders that explicitly identified or commented upon any courses related to MTSS or any other school wide systems of support. It is apparent that there are no courses currently being taught in MTSS, or at least they are not titled MTSS. Courses in data analysis and evaluation are important to the work leaders do. However, the lack of consideration or commentary about MTSS in the studies, also points out that courses exist in specific skills but are not viewed to exist within a larger system or frame, like MTSS. Leaders' skills sets do not exist in isolation, but rather as integrated into their overall leadership role. Leadership training programs need an integrated curriculum that ties together theory, and current practices across levels (state, university, district), to meet the real demands leaders encounter on the job.

Special Education Knowledge and Training

Only one study (McHatton et. al., 2010) examined principals' perceptions of their preparation, practice, and professional development to respond to the needs of

students in special education and gifted education. They employed quantitative research design. The authors utilized a survey design to understand principals' perceptions of their preparation, practice, and professional development to respond to the needs of students in special education and gifted education.

The participants in the study included 64 principals. The district is one of the 10 largest districts in the nation and serves approximately 200,000 students, 58% of whom are ethnically or racially diverse. A survey was sent to all 169 principals in the district. Sixty-one of the surveys were deemed completed and included in the study. Over three-quarters of the participants were female, White, and between 45 and 64 years old. Seventy-five percent of the participants held master's degrees, and 88.4% had ten or fewer years of experience as an administrator. Most participants worked in elementary school settings in either urban or suburban areas with student populations ranging from 250 to 1000.

McHatton and colleagues (2010) found that many preparation programs do not offer courses in special education. They emphasized that most participants reported that professional development provided by the district focused on modifications, legal issues, and accommodations. Additionally, participants reported that they felt most prepared in doing teacher observations and least prepared in initial placement meetings and the development of annual IEPs. The majority of respondents felt prepared to deal with the legal issues, discipline, characteristics, modifications, accommodations and funding in regard to exceptional education, but none of them addressed MTSS, RTI, or PBIS, the most current school wide initiatives and practice in public education.

Critical features of special education knowledge in preparation programs.
McHatton (2010) examined the difference in emphasis between preparation programs and district provided professional development for school leaders. Many participants felt that their district's PD was more meaningful than the courses they took in their preparatory programs. The study also shows the disconnect between administrators' actual daily work activities and the activities that preparation programs and professional development prepare them for. Many preparation courses did not include special education knowledge or an understanding of student behavior problems. This is an important oversight because most students with special needs are being educated in the general education classrooms.

Summary of principal perceptions of their preparation courses in special education with respect to MTSS. Despite the importance that McHatton (2010) placed on the differences that exist between preparation programs and district professional development, they did not include MTSS or related school wide interventions in their investigations of leaders' perceptions of preparation programs. This study was important because it showed that current and future school leaders failed to explicitly identify or comment upon any courses or PD related to school wide systems of support, revealing a major shortcoming in the various training opportunities leaders have access to. Participants discussed the lack of special education training but did not mention MTSS. The study discussed that many preparatory programs update their courses but have not reformed their programs overall. RTI, or MTSS, is part of the special education identification process. This disconnect reveals that some professionals do not know what MTSS is, and/or do not see MTSS as part of special education.

Professional Development (PD)

Only one study (Spanneut et. al., 2012) examined the self-identified professional development needs of a population of public school district building-level principals in New York State. They utilized a survey. The principals in the study were asked to complete an anonymous needs assessment to identify their levels of professional development needs for each of the 31 functions contained in the ISLLC (2008) standards. The needs assessment also included questions about the eight different professional development delivery methods, and requested participants to identify their preference and use for each, as a way to meet their professional development needs. The participants in the study included 129 principals. The authors emphasized the importance of practical knowledge of current effective practices.

Critical features of preparation programs and professional development. Spanneut and colleagues (2012) examined the critical features of professional development for school leaders. They reported that initial professional development efforts should be focused on providing principals with best practice strategies and methods to assist them in achieving quality instruction and developing assessments that monitor student progress. Additionally, professional development should be aligned with the specific needs of continuous improvement, evaluating progress, and organizational effectiveness. Efforts should be made to develop specific skill training in systems of accountability, analyzing data, and then applying data to make informed decisions (Spanneut et. al., 2012). These findings are particularly important within the context of MTSS because students flow through the different tiers based on the data

teachers collect to show they are making progress or not. However, MTSS, RTI, and PBIS were not addressed. This is problematic especially because the focus of data collection and using data to make decisions was a result of the initial RTI policies put in place for schools to use.

Roles of administrators with respect to professional development. Spanneut and colleagues (2012) examined the administrators' perceptions of their professional development needs. The authors reported that principals want continuous professional development opportunities to improve their knowledge and skills. Principals want professional development that meets their needs and is connected to their actual leadership responsibilities. These findings demonstrate the importance of professional development for school leaders. Considering these findings, it is imperative to find ways that school leaders can be provided with professional development to effectively implement, support, and evaluate complex systems including MTSS.

Summary of professional development with respect to MTSS. Despite the importance that Spanneut and colleagues (2012) placed on professional development for principals, they did not include MTSS or related school wide interventions in their investigations of leaders' perceptions of professional development. This study was important because it showed that current and future school leaders failed to explicitly identify or comment upon any professional development courses specifically related to school wide systems of support, revealing a major shortcoming in the professional development leaders have received. It appears that school leaders desire specific skills like data collection and analyzing data to inform their decisions, but they do not see these skills as a part of MTSS. The leaders are not referencing school reform initiatives

like MTSS, but rather specific skills. This could be the result of how leaders are receiving professional development and training, in pieces, rather than as parts of a larger system, like MTSS. This perspective is concerning because although specific skills like data collection are important, MTSS needs a system with clear leadership to sustain it over time.

RTI and MTSS Implementation

Four articles directly addressed RTI and MTSS. Two articles (Mellard et. al., 2012; Bineham et. al., 2014) looked at staff's perceptions of RTI implementation. One article (Mohammed et. al., 2009) addressed eight states' experiences with a specific model of implementing RTI. One article (Dulaney et.al., 2013) explored leaders' experiences with MTSS. Authors of two of the articles (Mellard et. al., 2012; Bineham et. al., 2014) examined principals, general and special education professionals' perceptions of the implementation practices of RTI. The authors of the two articles highlighted the importance of principal leadership in implementing RTI. The authors utilized qualitative and quantitative research designs. The authors of one study utilized a survey design (Bineham et. al., 2014). The authors of the other study utilized interviews, data collection, school site visits and observations, and discussion groups (Mellard et. al., 2012) to understand principals', special education teachers', and general education teachers' perceptions of RTI implementation. The participants in the studies included more than 627 staff.

   Critical features of RTI implementation. Mellard and colleagues (2012) examined the critical features of RTI implementation by leaders. The authors reported that principals in the study that were effectively implementing RTI were strong

instructional leaders. Principals communicated with their staff and supported their staff

to understand it and implement it. Principals provided their teachers with the necessary

time needed to understand more fully RTI and its implementation (Mellard et. al.,

2012). Many participants in the other study were concerned about the lack of training

principals had in RTI, and how they were getting trained in RTI. The study shows that

RTI has not yet moved through its stages of adoption (Bineham et. al., 2014).

Experiences of administrators with respect to RTI. Mellard and colleagues

(2012) found principals that demonstrated the highest levels of RTI implementation also

demonstrated the highest levels of district and principal leadership. Four common

themes emerged from the interviews with the strong leaders, principals protected their

master schedules and ensured that staff had time to incorporate RTI into daily routines,

principals promoted buy in from staff by being personally involved in RTI planning and

implementation, principals directed the agenda by establishing RTI as an expectation of

the school's culture, and principals altered the priorities for protecting the time and

resources needed for implementation and sustainability (Mellard et. al., 2012).

Bineham and colleagues (2014) showed participants were confused about what

RTI is, how to implement it, and its usage. One in three respondents stated they did not

receive professional development training in RTI. One third of the respondents were

confused about who is responsible for RTI (Bineham et. al., 2014). Weak leadership of

RTI creates confusion, which results in staff that do not understand the purpose of RTI,

and therefore staff will not have the supports they need to implement it effectively.

Summary of principals' knowledge with respect to RTI. Mellard and

colleagues (2012) demonstrated the importance of principal leadership and principals as

the leaders of change. Mellard and colleagues' (2012) findings were relevant to the current study because effective principals are necessary to implement MTSS, and principals need appropriate training in MTSS so that they can be the leaders of MTSS in their schools. Bineham's (2014) study points out that leaders need training in RTI. Bineham's (2014) study showed that leaders need training in RTI and MTSS, so they can instruct and lead curriculum-based interventions, changing the roles of staff, curriculum-based assessment training, and systematic assessments, which are all crucial elements of MTSS.

Leaders Experiences with RTI

Only one study (Mohammed et.al., 2009) conducted research to provide states with the knowledge they need to implement RTI. The project included observations and documentation of the relationships and processes states and Regional Comprehensive Centers (RCC) negotiate during RTI implementation. The study was a participatory evaluation model. Sixteen RCCs were asked to participate and nominate a state it was working with on statewide implementation of RTI. Each RCC was also asked to provide RTI implementation questions most frequently asked by the state it serves. Phone calls were done with each nominated state and it's RCC to explain the purpose of the project and whether they would be willing to allow a team to observe how their RCC and state worked with each other. Eights states agreed to participate in the study: Alaska, California, Idaho, Mississippi, Pennsylvania, Texas, Vermont, and Wyoming.

Critical features of RTI implementation. Mohammed and colleagues (2009) had the representatives of each of the seven states and their seven RCCs meet to discuss what they felt was most important to RTI implementation process. Participants

identified four categories to consider in statewide RTI implementation, definition, and alignment of RTI, leadership, capacity for implementation, and instructional aspects of RTI implementation. Each category provided issues, challenges, and successes that participants faced in the implementation process.

Leadership of RTI. The participants in Mohammed's (2009) study identified the following leadership considerations: 1) define the roles of general education, special education, and the state department, 2) identify applicable policy at the federal, state, local, and school levels, 3) identify and build the required expertise-knowledge, skills, and abilities for implementation, and 4) construct leadership teams at different levels of administration-state, local, and school (Mohammed et. al., 2009). Local agencies need leadership assistance. A significant challenge was that groups outside the state department of education created their own RTI materials, without state guidance (Mohammed et.al., 2009). A gap exists between RTI materials being provided and its alignment with the state's definition and vision of RTI implementation.

Summary of RTI leadership. Mohammed and colleagues (2009) proposed that RCCs could help with statewide implementation of RTI, because of their unaffiliated relationships with state departments, and their access to national experts and resources. RCCs are able to help states effectively implement RTI and disseminate state-specific information to ensure consistency, alignment, and fidelity. This study is relevant to the current study because it provides one model to possibly implement statewide MTSS.

Leaders Experiences with MTSS

Only one study (Dulaney et. al., 2013) interviewed superintendents in one southwest state in the United States that were using tiered interventions. The researchers

examined one state's superintendents' perceptions regarding opportunities and obstacles of MTSS implementation to inform other states and leaders considering MTSS. The study used three research questions (1) How do superintendents perceive their districts' readiness to fully implement MTSS in an era of increased accountability, (2) What are the districts' opportunities and obstacles to MTSS implementation, and (3) What are districts doing to support and sustain MTSS? They had many suggestions for improving the tiered model. The study explored systems' improvement efforts via MTSS to help inform practice for other state and local school leaders. Forty-one districts were included in the study, 562 elementary schools and 306 secondary schools. District student enrollments ranged from 168 to 68,392. Reported demographics showed that 78.1% were Caucasians, 21.9% were minorities, with 15% Hispanic. The schools included approximately 26,000 licensed classroom teachers, 4,000 educator specialists, and 1,600 district and school administrators.

In the Spring of 2011, sixty-six percent, or 41 of the state's superintendents responded to a survey requesting feedback on the presence and quality of MTSS implementation. Interview questions were categorized into the following: 1) MTSS knowledge, culture, and implementation readiness, 2) MTSS capacity building, 3) MTSS implementation opportunities, and 4) MTSS implementation obstacles. Basic descriptive statistics were used to analyze the data from the survey and qualitative analysis was used for the textual data from the nine interviews, using a grounded theory method with emic and etic coding strategies (Dulaney et. al., 2013).

Critical features of MTSS implementation. The authors (Dulaney et. al., 2013) analysis of the qualitative data produced three major findings (1) Districts must

develop an MTSS framework and promote a common language based on that framework, (2) a district-wide culture of collaboration must exist, (3) capacity of staff and learning communities must be built at every level of the system so improvement is sustainable (Dulaney et.al., 2013). Collaborative teams across levels are needed to implement MTSS. Teams need to do collective inquiry, make data driven decisions, and participate in on-going PD.

Summary of leaders' experiences with MTSS. Dulaney's (2013) study showed that most of the superintendents did not understand the MTSS language, since they did not have a state-wide focus on MTSS. Only one of the leaders knew what MTSS stood for. A formal plan for MTSS was only found in two districts. Superintendents in the study would like a statewide plan with resources to support it. They would like the barriers of collaboration, costs, and teacher resistance addressed. Their principals that were strong instructional leaders produced strong tiered-systems. The superintendents want clear guidelines and training for leaders, in addition to leadership teams for capacity building. Superintendents stated that PD is needed that focuses on data based decision-making and problem solving. All the superintendents believed that capacity building is crucial to MTSS. Superintendents felt strongly that principals must be trained in using data (Dulaney et. al., 2013).

Overall, Dulaney and colleagues (2013) demonstrated the need for clear state and district guidelines and training for leaders in MTSS. Most states are moving towards strengthening their improvement efforts and increasing student achievement. However, most states still do not have a clear, statewide plan to ensure this improvement. Additionally, states struggle to find the resources to implement MTSS.

An evaluation of district leaders' knowledge and perceptions of MTSS will inform

current practice and help create capacity building opportunities to improve schools.

MTSS provides a framework to help districts create their plans.

Dulaney's (2013) study was limited to one state, therefore it cannot be

generalized to all states. Currently, empirical evidence on MTSS is very limited. States

and districts are still evaluating existing programs, and implementing MTSS because it

is understood to be critical to systems change. The findings were relevant and important

to the current study because leaders' education and training in MTSS is essential to the

capacity building needed to implement MTSS effectively, which was a main outcome

of the study.

Summary of Content Review of Research

Ten of the articles examined different aspects of leadership training but did not

include or discuss MTSS (Gumus, 2015; Bustamonte & Combs, 2011; Fields & Egley,

2005; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Braun et. al., 2011;

Edmonds et. al., 2005; McHatton et. al., 2010; Eddy & Rao, 2009; Spanneut et. al.,

2012). The authors showed that collaboration and commitment of educational leaders

and staff is needed across states, universities, and districts to align policies, licensure

requirements, PD, and evaluation systems to build quality sustainable preparation

programs, and attract high quality candidates. Leaders need professors to be current in

the field who can provide courses in which theory is integrated into practical skills,

training is connected to the actual current demands of the job, so they can balance their

managerial duties and their leadership of initiatives. Leaders need courses and on-going

PD in current initiatives like MTSS and special education, and the specific skills

required to lead these initiatives in their schools. Leaders need career-staged training in specific skills that are explicitly imbedded into the larger systems like MTSS and special education, so they understand the bigger picture.

Four of the articles discussed RTI and MTSS (Mellard, Prewett, & Deshler, 2012; Bineham, Shelby, Pazey, & Yates, 2014; Mohammed, Roberts, Murray, & Vaughn, 2009; Dulaney et. al., 2013). The authors showed that effective leaders can lead MTSS. Leaders that receive appropriate training in MTSS can lead it. Participants in one study (Mohammed et. al, 2009) identified the following leadership considerations (1) define the roles of general education, special education, and the state department, (2) identify applicable policy at the federal, state, local, and school levels, (3) identify and build the required expertise-knowledge, skills, and abilities for implementation, and (4) construct leadership teams at different levels of administration-state, local, and school. Analysis of the qualitative data in another study (Dulaney et. al., 2013) produced three major findings (1) Districts must develop an MTSS framework and promote a common language based on that framework, (2) a district-wide culture of collaboration must exist, (3) capacity of staff and learning communities must be built at every level of the system so improvement is sustainable. In summary, for MTSS to be sustainable, all levels of the system, state, district, and university training programs need a formal and sustainable framework to collaborate, define roles, build teams, build skill capacity, create PD, share a common language, and connect their MTSS practices and programs to existing policies as part of each levels' (state, district, university) accountability and evaluation systems.

Review of the Methodological Rigor of the Research

The second phase of my review was to examine the quality of the research designs of the fourteen articles. I describe the articles in two parts. First, I discuss the qualitative research studies, then I discuss the quantitative research studies.

Review of Qualitative Research Studies

Interviews. I reviewed the ten qualitative studies using the quality indicators of Brantlinger and her colleagues (2005). Studies that used interviews were rated according to the five criteria for interviews. Studies that used observations were rated according to the six criteria for observations. Studies that conducted document analysis were rated according to the four criteria for document analysis. Finally, all the data analyses of each study were rated according to the six criteria for data analysis (see Table 2.3).

Interview indicator. The first indicator is related to interviews (see Table 2.4). Brantlinger and colleagues (2005) provided five components for the interview indicators (1) appropriate participants, (2) reasonable interview questions, (3) adequate recording mechanism(s), (4) sensitivity and fairness given to participants, and (5) confidentiality measures ensured.

Eight studies used interviews (Gumus, 2015; Edmonds et. al., 2005; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Mellard et. al., 2012; Dulaney et. al., 2013; Mohammed et. al., 2009; Braun et. al., 2011). In all the studies, 1150 of the participants were principals, 9 were superintendents, and 16 were state educational representatives.

Table 2.4 displays the five criteria of interviews. The eight studies that used interviews are rated according to whether or not the study described each of the five criteria that make up the quality indicator for interviews. A one means the study included the criteria in the article, and a zero means the study did not include the criteria in the article.

Appropriate participants. Criteria one of interviews is that appropriate participants were selected (see Table 2.4). When conducting interviews, researchers must include appropriate participants, so readers understand the results and whether the participants represented the population of interest within the study. Participants must be purposefully identified for the interviews. Participant descriptions should include demographic data, and they must be effectively recruited to participate. Researchers also need to have an adequate number of participants to interview (Brantlinger et. al., 2005).

Eight out of the ten qualitative studies conducted interviews (Gumus, 2015; Edmonds et. al., 2005; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Mellard et. al., 2012; Dulaney et. al., 2013; Mohammed et. al., 2009; Braun et. al., 2011). The table shows that two of the studies did not provide detailed information on the participants they interviewed (Dulaney et. al., 2013; Braun et. al., 2011). For example, Braun and colleagues (2011) did a two-part study and since the qualitative phase was secondary, they neglected to re-state the specific demographics of their participants again or provide a chart of participant characteristics. The authors generally stated that participants were mainly elementary school principals, mainly women, and only half of

the participants reported they had excellent preparation experiences (Braun et. al., 2011).

The authors of the other six studies selected appropriate participants. For example, Gumus' (2015) study consisted of primary and middle school principals in the state of Michigan. Gumus selected principals that were (1) were currently a principal in a public primary or middles school, and (2) they had at least three years of principal experience. Gumus provided the gender, age, highest educational degree, and professional experience in the demographic data he collected.

Reasonable interview questions. Criteria two of interviews, is reasonable interview questions (see Table 2.4). Interview questions must be meaningful and reasonable for the specific study (Brantlinger et. al., 2005). Questions must be worded clearly so participants understand them and must be appropriate for the topic of the study. Finally, the interview questions must be appropriate and sufficient for exploring the research topic (Brantlinger et. al., 2005).

Seven studies used reasonable interview questions. For example, Edmonds and colleagues (2007) included three clearly written interview questions and broke down the responses in a grid according to likes and dislikes from aspiring principals and practicing principals. The three questions were (1) What are some of the things you liked about the classes you have taken in your principal preparation program, (2) What are some of the things you disliked about the classes you have taken in your principal preparation program, (3) If you could change one thing about your principal preparation program, what would it be? Then Edmonds and colleagues (2007) described each of the responses. Mellard and colleagues (2012) provided participants' responses but failed

to clearly describe their interview questions. Mellard and colleagues (2012) generally stated that they interviewed principals about their RTI practices, but it was not clear if reasonable questions were asked.

Adequate recording mechanism(s). Criteria three of interviews is adequate recording mechanisms (see Table 2.4). The recording and transcription of the interviews should be clearly explained in the report (Brantlinger et. al., 2005). Researchers must have mechanisms to record and transcribe the interview. Devices used in the study must be mentioned and clearly described.

Five of the studies did not describe appropriate recording mechanisms (Edmonds, et.al., 2005; Fields & Egley, 2005; Mellard, et. al., 2012; Dulaney et. al., 2013; Mohammed et. al., 2009). For example, Dulaney and colleagues (2013) provided their interview questions and data analysis but never mentioned how they recorded the interviews. Three of the studies (see Table 2.4) provided explanations of the recording devices they used (Gumus, 2015; Darling-Hammond et. al., 2007; Braun, et. al., 2011). For example, Braun and colleagues (2011) stated that they recorded conversations with an Olympus DS-330 digital recorder and transcribed through a process of reading and re-reading the transcripts.

Sensitivity and fairness given to participants. Criteria four of interviews is that participants are treated with sensitivity and fairness (see Table 2.4). The description of the participants in the report must be respectful and appropriate (Brantlinger et. et. al., 2005). Researchers must be sensitive and fair to their participants.

Authors of seven of the studies were sensitive and fair to their participants in their report (Braun et. al., 2011; Darling-Hammond et. al., 2007; Dulaney et. al., 2013;

Edmonds et. al., 2005; Fields & Egley, 2005; Gumus, 2015; Mohammed et. al., 2009). For example, Edmonds and colleagues (2007) simply stated that the participants were from Missouri's Academy training program in which there were 200 principals participating. The identity and description of the participants was generally stated, appropriate, and respectfully described. Mellard and colleagues (2012) were very vague throughout their article, thus it was unclear if they were sensitive and fair to their participants.

Confidentiality measures ensured. The fifth interview criteria is confidentiality (see Table 2.4). Participants' interview responses must be kept confidential throughout the study (Brantlinger et. al., 2005). Researchers must take appropriate measures to ensure confidentiality of their participants. Participants that were interviewed cannot be named or revealed.

All the authors of the eight studies that used interviews ensured confidentiality of their participants (see Table 2.4). For example, Gumus (2015) gave each participant a number to protect their identity in the study.

Summary of interview research. The strength of all the interviews was the questions that were asked and the confidentiality of the participants in the interviews. Two studies (Gumus, 2015; Darling-Hammond et. al, 2007) met all the criteria for interviews. An important weakness in five of the studies was that they did not report on the recording mechanisms used for the interviews. It is important for professionals in the field to know how researchers are recording their interviews to fully understand how the data was collected for replication and quality purposes. The studies would have been

improved if they were more transparent and explicit about including each indicator in their articles. Overall, the eight studies met 78% of the quality indicators for interviews.

Observations. The second category of qualitative research I examined was observation studies. Observation studies involve systematically observing a setting or participant to understand the qualities of a phenomenon in a particular context. Brantlinger and colleagues (2005) recommended six criteria for the observation quality indicator. They include (1) appropriate setting and/or participants for observation, (2) sufficient time spent in the field including number and duration of observations or study span time, (3) the researcher's ability to fit into the site and be accepted, respected, and unobtrusive, (4) the researcher should have minimal impact on the setting, (5) field notes must be systematically collected, video-taped, audio-taped, or written after observations, and (6) sound measures are taken to ensure confidentiality of the participants and the setting. In Table 2.5 the six criteria that make up the essential quality indicator for observations are listed with the two studies that used observations (Darling-Hammond et. al.,2007; Mellard et. al., 2012). One means the indicator was included within the article and zero means the indicator was not included within the article.

Appropriate setting and/or participants for observation. The first criteria of observations is appropriate setting and participant (see Table 2.5). In observation studies, researchers must have an appropriate setting and/or participant to observe (Brantlinger et. al., 2005). The setting and participants must be relevant to the study (Brantlinger et. al., 2005). Observations are done to produce evidence based on the exploration of specific contexts and specific individuals (Brantlinger et. al., 2005). For

example, a study looking at an ethnically diverse family with a child with a disability, observed the child and his brothers in school and in the community.

Darling-Hammond and colleagues (2007) observed post-secondary, pre-, and in-service leadership preparatory programs with several cohorts of graduates. The reputable programs that were chosen were embedded in districts and tied to training programs that were examined in the study. Darling-Hammond and colleagues (2007) used two separate observation protocols to guide their observations of program activities and visits to the schools. The protocols prompted researchers to provide details of the school settings, student and staff demographics, features of the learning environments, instructional practices, and content of the instruction.

Mellard and colleagues (2012) observed administrators that were implementing RTI in their schools. However, this study did not specify why administrators and settings were observed. Mellard and colleagues (2012) made general statements about their participants and settings, which made it difficult to clearly understand how the study was done and if the participants and settings observed were appropriate.

Sufficient time spent in the field including number and duration of observations or study span time. The second criteria of observations is sufficient time in the field (see Table 2.5). Researchers must be in the setting long enough to do enough observations (Brantlinger et. al., 2005). The number and duration of the observations, along with the study time span must be sufficient to document quality observations (Brantlinger et. al., 2005). Researchers need time to think deeply and critically to make sense of what they observe over an appropriate period of time (Brantlinger et. al., 2005).

Darling-Hammond and colleagues (2007) visited each program twice and spent around 100 hours with participants. Darling-Hammond and colleagues began the research in November of 2004 and finished the study in the Fall of 2005. In contrast, Mellard and colleagues (2012) neglected to mention how long they were in the field doing their observations.

The researcher's ability to fit into the site and be accepted, respected, and unobtrusive. The third criteria of observations are whether or not the researcher fit into the site (see Table 2.5). Researchers need to fit into the setting they are observing in (Brantlinger et. al., 2005). Researchers must be respectful of the space. They must be accepted into the space. Researchers must be unobtrusive in the space they observe (Brantlinger et. al., 2005).

Neither of the two studies (Darling-Hammond et. al, 2007; Mellard et. al., 2012) provided information about how the researcher fit into the site. It is imperative to know how the researchers worked with their settings and participants, to fit into the site. Additionally, it is important to the field if there were any problems with researchers fitting into the sites and conducting their research.

The researcher should have minimal impact on the setting. The fourth criteria of observations are the researcher's impact on the setting (see Table 2.5). Researchers must have minimal impact on the setting they are observing (Brantlinger et. al., 2005). The exception to this is action research, in which case the researcher is supposed to impact the setting. Otherwise, researchers are just observers and not participants of the setting (Brantlinger et. al., 2005).

Neither of the two studies (Darling-Hammond et. al., 2007; Mellard et. al., 2012) provided information about how the researcher impacted the site or not. Neither study explained if the researchers were solely observers and not participants. Again, researchers need to be explicitly clear about their impact to improve the credibility of their work, and to provide professionals in the field with important information that promotes future quality studies.

Field notes must be systematically collected, video-taped, audio-taped, or written after observations. The fifth criteria regard the collection of field notes during observations (see Table 2.5). Researchers must take systematic field notes during their observations (Brantlinger et. al., 2005). A detailed description of how notes were taken must be provided in their report. For example, how interviews were videotaped, audiotaped, or written, along with specifics on when (before, during, or after the observation) it was done and how it was done (Brantlinger et. al., 2005).

The two studies that did observations did not provide quality information about how field notes of observations were recorded. Darling-Hammond and colleagues (2007) briefly mentioned the observation protocols and they included them in their appendix but did not go into deeper explanation of how researchers were trained in filling out the protocol or the actual process of them writing their notes. Mellard and colleagues (2012) did not mention how field notes were taken in his study.

Sound measures are taken to ensure confidentiality of the participants and the setting. The final criterion of observations is confidentiality (see Table 2.5). Researchers must take appropriate measures to ensure confidentiality of the participants and the setting (Brantlinger et. al., 2005). The names of the individual participants and

the specific observations of the setting are not revealed in the study or report, to protect and respect the participants and the setting (Brantlinger et. al., 2005).

Darling-Hammond and colleagues (2007) included the specific schools and programs but did not directly name specific participants when she included quotes. Quotes were included but the names of the people who made the comments were not provided. Mellard and colleagues (2012) did not reveal the names of their participants. The study overall, was too vague to replicate or truly understand what was done.

Summary of observation quality indicators. The two observation studies (Darling-Hammond et. al., 2007; Mellard et. al., 2012), met 33% of the criteria for observations. Darling-Hammond and colleagues (2007) met half of the criteria essential for observations. Mellard and colleagues (2012) described the setting and the participants but did not explicitly state how the observations were done, the length of time of the observations, the researcher's fit and impact on the site(s), how field notes were collected, and how measures were taken to ensure confidentiality.

Researchers need to share and publicize how they took field notes so that other educational researchers can learn and evaluate what was done. Researchers' fit and impact on their settings also need to be taken into consideration to more deeply understand how settings and participants responded to them, and how the researcher's presence affected the overall outcomes and findings. Researchers conducting observations need more training in the essential quality indicators that produce high quality research and articles.

Document analysis. The third category of qualitative research is document analysis. Document analysis means that researchers systematically analyze documents

that relate to their study (Brantlinger et. al., 2005). Three of the studies (Bustamonte & Combs, 2011; Fields & Egley, 2005; Vogel & Weiler, 2014) conducted document analysis. Brantlinger and colleagues (2005) recommended four criteria for the document analysis indicator. They include (1) meaningful documents are found and their relevance is established, (2) documents are obtained and stored in a careful manner, (3) documents are sufficiently described and cited, and (4) sound measures are used to ensure confidentiality of private documents.

Table 2.6 lists the four criteria that make up the quality indicator for document analysis, along with the four articles that used document analysis. A one means the indicator was included within the article, and a zero means the indicator was not included within the article.

Meaningful documents are used. The first criterion of document analysis is that researchers need to use appropriate documents that are meaningful and relevant to the study (Brantlinger et. al., 2005). Documents can include texts, artifacts, objects, and pictures. Internet information and websites are also used today (Brantlinger et. al., 2005).

Two articles used meaningful documents and described the relevancy of the documents (Bustamonte & Combs, 2011; Vogel & Weiler,2014). For example, Bustamonte & Combs (2011) used the research course offerings, titles, and descriptions from university programs websites. Degree plans and requirements were also researched on the schools' websites.

Fields and Egley (2005) analyzed their twenty participants' journal responses to researchers' topic questions. Their research could have been strengthened if they used

additional documents to bolster their study. Self-reports are not the most reliable

sources to use. Participants' understandings of the journals they wrote, that were

analyzed and made public, is also concerning.

Documents are obtained and stored in a careful manner. The second criterion of

document analysis is that documents are stored carefully (see Table 2.6). Researchers

need to obtain and store the documents in a careful manner, so they do not get damaged

or lost (Brantlinger et. al., 2005). Documents must be handled with respect. Private

documents also need to be kept safe so that they are not stolen or available for others to

see that do not have permission to see them (Brantlinger et. al., 2005).

All three of the studies (Bustamonte & Combs, 2011; Fields & Egley, 2005; Vogel

& Weiler, 2014) did not explain how documents were stored securely. This may be

because some of the studies used information off the internet which is not private. For

example, Bustamonte and Combs (2011) used the course offerings and degree plans

from universities' websites. Fields and Egley (2005) used administrators' journal entries

but did not include how they stored the journals in a safe place to protect participants'

entries.

Documents are sufficiently described and cited. The third criterion of document

analysis is that documents are sufficiently described and cited (see Table 2.6).

Researchers need to sufficiently describe and cite the documents appropriately

(Brantlinger et. al., 2005). The documents that are analyzed must be clearly described

and cited in the report (Brantlinger et. al., 2005).

An overall strength of the three studies is that they each described and cited the

documents they used (Bustamonte & Combs, 2011; Fields & Egley, 2005; Vogel &

Weiler, 2014). For example, Vogel and Weiler (2014) used the Educational Leadership

Constituent Council (ELCC) standards. The standards origin and purpose are provided.

The standards are included in a table in the article, and then thoroughly described and

cited.

Sound measures are used to ensure confidentiality of private documents.

Criterion four of document analysis is that documents are confidential (see Table 2.6).

Researchers must take measures to ensure confidentiality of private documents

(Brantlinger et. al., 2005). Some documents contain confidential information that must

be protected (Brantlinger et. al., 2005).

Two of the studies did not explain how sound measures were taken to ensure

confidentiality of the documents (Fields & Egley, 2005; Vogel & Weiler, 2014). Again,

this was possibly since they were using information, or documents, posted on

institutions' websites, which are not private. For example, Bustamonte and Combs

(2011) used institutions' websites, which are public, but when they analyzed the

courses, they did not mention the specific schools that offered the course. The

confidentiality of the schools was respected. However, Fields and Egley (2005) failed to

include how they kept administrators' personal journals secure and confidential.

Summary of document analysis research. The articles that did document

analysis, met 50% of the criteria that comprise the quality indicator for document

analysis. Two of the studies (Bustamonte & Combs, 2011; Vogel & Weiler, 2014)

would have been stronger if they explained how information off the internet is public

and does not need to be stored securely. However, the identities of particular schools

and programs were respected and treated as confidentially as possible. Fields and Egley

(2005) should have explained how administrators' journals were stored safely to ensure

confidentiality. Researchers that use document analysis need to emphasize and discuss

the storage of their documents and the confidentiality of their documents. Other

researchers in the field need to know and understand the responsibility they must

protect the documents they could use for their study.

   Data analysis. The final category of qualitative research is data analysis. Data

analysis is when the researcher analyzes the data of their study, to make sense of their

findings. All of the studies provided information on how they analyzed their data. When

reviewing data analysis research, Brantlinger and colleagues (2005) has suggested six

criteria that indicate the quality of the data analysis. They include (1) results are sorted

and coded in a systematic way, (2) sufficient rationale was provided for what was, or

was not, included in the report, (3) documentation of methods used to establish

trustworthiness and credibility are clear, (4) reflection about the researcher's personal

perspectives are provided, (5) conclusions are substantiated by sufficient quotations

from participants, field notes, and evidence of document inspection, and (6) connections

are made with related research.

   Table 2.7 lists the six criteria that make up the quality indicator of data analysis,

along with the ten qualitative studies. *A* one means the indicator was included within the

article, and a zero means the indicator was not included within the article.

   Results are sorted and coded in a systematic way. Criterion one of data analysis is

that results are sorted and coded in a systematic way (see Table 2. 6). Researchers must

appropriately sort and code their findings in a systematic and meaningful way to ensure

the quality and validity of their research (Brantlinger et. al., 2005). This process must be described in the report (Brantlinger et. al., 2005).

Eight of the ten studies sorted and coded their results in a systematic way (Gumus, 2015; Bustamonte & Combs, 2011; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Dulaney et. al., 2013; Mohammed et. al., 2009; Braun et. al., 2011). For example, Dulaney and colleagues (2013) stated that they used basic descriptive statistics when they analyzed data from the nine interviews, using grounded theory with emic and etic coding strategies. However, Fields and Egley (2005) separated their results but never explained how they sorted them and the rationale used for sorting. Mellard and colleagues (2012) neglected to explain how they sorted and coded his results

Sufficient rationale was provided for what was, or was not, included in the report. Criterion two of data analysis is that sufficient rationale was provided for including or excluding information in the study (see Table 2.7). The inclusion or exclusion of information in a study must be clearly stated in the report (Brantlinger et. al., 2005). Researchers must have sufficient rational for why they included or excluded information in their study for professionals in the field to make sense of the actual research that was done so they can use it and evaluate it.

Nine articles included a rationale for including or excluding information (Gumus, 2015; Edmonds, et. al., 2005; Bustamonte & Combs, 2011; Mellard et. al., 2012; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Dulaney et. al., 2013; Mohammed et. al., 2009; Braun et. al., 2011). For example, Vogel & Weiler (2014) and Bustamonte & Combs (2011) both stated that the schools' websites and state

department of education websites were missing information on courses, licensure requirements, and principal standards. In some cases, schools were eliminated from the study (Bustamonte & Combs, 2011), or phone calls were made to education departments to obtain information (Vogel & Weiler, 2014). Fields & Egley (2005) failed to mention if anything was or was not included in their report, from their twenty administrators' journals and small group discussions.

Documentation of methods used to establish trustworthiness and credibility are clear. Criterion three of data analysis is that the researchers clearly document the methods they used to establish trustworthiness and credibility (see Table 2.7). Researchers must clearly describe and document their methods used to establish trustworthiness and credibility (Brantlinger et. al., 2005). Discussions of validity and reliability of results are important to include in the report for assessing the overall credibility of the research (Brantlinger et. al., 2005).

Six articles documented methods used to establish trustworthiness and credibility (Gumus, 2015; Bustamonte & Combs, 2011; Mellard et. al., 2012; Darling-Hammond et. al., 2007; Fields & Egley, 2005; Vogel & Weiler, 2014; Braun et. al., 2011). For example, Gumus (2015) provided a detailed explanation on the internal and external validity and reliability of his study. Edmonds and colleagues (2005) did not mention how he established credibility and simply stated that participant's responses were analyzed but did not state how.

Reflection about researcher's personal perspectives is provided. Criterion four of data analysis is that researchers reflect on their biases (see Table 2.7). Researchers must state their biases and/or personal positions. It is important for researchers to include

their personal positions and/or biases and how it may have impacted the overall study or not (Brantlinger et. al., 2005). Since researchers in qualitative studies tell the stories of people and places, they need to openly share how their perceptions impact how they understand and see certain people and settings.

All the studies (Gumus, 2015; Bustamonte & Combs, 2011; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Dulaney et. al., 2013; Mohammed et. al., 2009; Braun et. al., 2011; Edmonds et. al., 2005; Mellard et. al., 2012) fell short on this indicator and did not provide a reflection on the researcher's personal position and/or biases as part of their data analysis. For example, Bustamonte and Combs (2011) and Vogel and Weiler (2014) provided nicely written and thoughtful conclusions and recommendations from their findings but they did not provide reflections from the actual researchers in their studies.

Brantlinger and colleagues (2005) describes qualitative researchers as "the instrument". Qualitative researchers are "evolving instruments" working with diverse participants and settings where they collect their data (Brantlinger et. al., 2005). One of the most controversial topics in qualitative research involves researchers' objectivity and subjectivity. Therefore, it is a significant weakness that the researchers in all of my qualitative studies did not explicit share their personal positions and therefore could not discuss or explain how their biases may or may not have impacted the data they collected and the findings they reported.

Care made with related research. Criterion five of data analysis is that the researcher makes connections to prior related research that was done (see Table 2.7). Researchers must connect their study to prior related studies to strengthen their work

(Brantlinger et. al., 2005). It is important that researchers state how their research is connected to other research that has been done, and any significant differences or similarities that exist that were taken into consideration (Brantlinger et. al., 2005).

All the studies made connections to prior related studies (Gumus, 2015; Bustamonte & Combs, 2011; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Dulaney et. al., 2013; Braun et. al., 2011; Mohammed et. al., 2009; Edmonds et. al., 2005; Mellard et. al., 2012). For example, and colleagues (2011) made several connections to Darling-Hammond and colleagues' research (2005; 2007; 2010) to emphasize the importance of doing research on principal preparation programs and whether the programs include high degrees of quality essential preparation practices or not.

Conclusions are substantiated by sufficient quotations from participants, field notes, and evidence of document inspection. Criterion six of data analysis is that researchers substantiate their findings with sufficient quotes from participants, field notes, and evidence of document inspection to strengthen the quality of their research and findings (see Table 2.7). Researchers must substantiate their conclusions with quotes from participants, field notes from observations, and evidence of documentation inspection to strengthen their findings and quality of their research (Brantlinger et. al.,2005). Evidence from the study substantiates the conclusions and findings (Brantlinger et. al., 2005).

Nine of the articles (Gumus, 2015; Bustamonte & Combs, 2011; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Dulaney et. al., 2013; Braun et. al., 2011; Mohammed et. al., 2009; Edmonds et. al., 2005) substantiated their

conclusions. For example, Edmonds and colleagues (2007) provided six quotes at the end of the article to substantiate their conclusions. According to one participant in Edmonds and colleagues (2007) study "Real administrators currently in the job were excellent professors" (p. 18). Mellard and colleagues (2012) neglected to substantiate his conclusions with quotes or field notes. Mellard and colleagues (2012) provided quotes in his study but did not strengthen his conclusions with them. Overall, the study (Mellard and colleagues et. al., 2012) significantly lacked the rigor of high quality qualitative research and did not meet the essential components of Brantlinger and colleagues' (2005) quality indicators.

Summary of data analysis research. Overall, the data analysis done by the ten studies met only 68% of the criteria for the data analysis quality indicator. Four studies did not include methods used to establish credibility (Dulaney et. al., 2013; Edmonds et. al., 2005; Mellard et. al., 2012; Mohammed et. al., 2009). A significant weakness was that none of the studies included the researcher's personal biases. In qualitative research, researchers are to be acutely aware of their personal biases. Qualitative researchers are to accept the notion that bias cannot be eliminated in their study and therefore, they must be explicit about their purpose and personal perspective to produce systematic and rigorous inquiries (Rossman & Rallis; 2012). Therefore, the findings and interpretations of the ten qualitative articles must be approached carefully.

Summary of the Quality Indicators for Qualitative Research

Five of the ten qualitative studies met 70% or more of the criteria for quality indicators across the four types of qualitative research (Gumus, 2015; Bustamonte & Combs, 2011; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Braun et. al.,

2011). Notable strengths in interviews included questions that were reasonable, participants who were treated fairly, and ensured confidentiality. A notable strength in observations was that appropriate settings and participants were observed. Notable strengths in document analysis were the use of meaningful documents, and documents were sufficiently described and cited. Finally, notable strengths in data analysis were results sorted and coded in a systematic way, rationale was provided for including or omitting information, conclusions were substantiated, and connections were made to prior research.

Five of the ten studies met from 29% to 64% of the components for the respective quality indicators (Fields & Egley, 2005; Dulaney et. al., 2013; Mohammed et. al., 2009; Edmonds et. al., 2005; Mellard et. al., 2012). The lowest percentiles were in (1) the lack of reporting on recording mechanisms in interviews, (2) the failure to include how researchers fit into their settings, impacted the settings, and how field notes were recorded and transcribed for observations, (3) the absence of discussion on ensuring that documents were stored carefully and kept confidential, and (4) the failure to include researchers' personal biases in the studies. It is important for readers to know how researchers recorded their interviews for replication purposes and the overall validity of the study. Researchers' presence in a setting must be considered and discussed. The process researchers use to document field notes and transcribe them must be shared for others to understand and evaluate. Document security is also important for researchers to include, even if they are using websites and internet information. Researchers must still state that they considered storing documents securely instead of ignoring it totally.

Finally, the most significant indicator for high quality qualitative research that none of the articles included was the researchers' personal perspectives and biases. Qualitative researchers tell the stories of the people, settings, and documents they examine. Brantlinger and colleagues (2005) stressed that to do high quality qualitative research, "researchers must have experience related to their topic, be well read, knowledgeable, analytical, reflective, and introspective" (p. 197). The fact that each qualitative research study omitted researchers' biases is a serious weakness across all of the studies. Leadership training and education, along with leaders' knowledge of MTSS, was studied and interpreted through researchers' perspectives and biases that were not clearly provided to readers and professionals in the field. Therefore, results must be interpreted with caution

Quality of Survey Research

Surveys are questionnaires that are designed to produce statistics about a target population (Fowler, 2014). Effective surveys are composed of three potential properties (1) Probability sampling that provides an un-biased sample to estimate how precise the data will be, (2) Standardized measurement that is consistent across all respondents to ensure that comparable information is obtained about everyone that is described, (3) A special purpose survey to meet analysis needs to ensure that all data needed for a given analysis are available and can be related (Fowler, 2014). Information about some set of events may not be paired with other characteristics needed to carry out a desired analysis (Fowler, 2014).

Surveys bring together three different methodologies (1) sampling, (2) designing questions, and (3) data collection. Quality sampling is done when the researcher can

find a way to give all or nearly all population members the same chance of being selected and using probability methods for choosing the sample (Fowler, 2014). Therefore, it is important that researchers include descriptions of their population and sampling procedures. Question design must include an evaluation of the questions to determine if they are clearly understood and if the answers are meaningful (Fowler, 2014). The mode of data collection (in-person, telephone, internet, and mail surveys), the length of time the data collection takes, and how data and results are analyzed, must be clearly stated in studies. The combination of these components, are essential to quality survey design (Fowler, 2014).

An acceptable survey must achieve total survey design, which means that each component is evaluated carefully to make sure it met the specific criteria, to ensure credibility of the data (Fowler, 2014). For example, researchers must consider the following about sampling: the choice of using a probability sample or not, the people that actually have a chance to be sampled, the size of the sample, the strategy that will be used to sample, and the rate of response (Fowler, 2014). Question design must consider the following: the degree to which previous literature regarding the reliability and validity of questions will be used, the use of consultants that are experts in question design, and the investment in pretesting and question evaluation (Fowler, 2014).

I looked at the properties of quality surveys from Fowler (2014) since quality indicators for surveys were not available. The properties of quality surveys supported by Fowler were (a) a population description, (b) specific sampling used, (c) a description of questions, (d) the mode of data collection used included length of time,

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(e) a description of data including time involved, and (f) clearly presented results including response rate.

Each study included in this review was analyzed using the six properties of survey research. A one means the author met the criteria, and a zero means the author did not meet the criteria (see Table 2.8). The results of the current findings are described relative to each quality component (see Table 2.8). When applicable, samples of individual studies are examples and non-examples of studies that met a particular characteristic. For the literature within this review, 4 of the 10 articles (McHatton et. al., 2010; Spanneut et. al., 2012; Bineham et. al., 2014; Eddy & Rao, 2009) qualified as survey research (see Table 2.8).

Population. The type of population must be taken into consideration when choosing a mode of data collection. Specifically, the computer skills, reading skills, writing skills of the population, along with their motivation to cooperate to complete the survey are important considerations. A population that is highly literate and interested in the research is more likely to complete a self-administered mail or internet survey. Mail and internet self-administered surveys are easier for busy people to respond to, since they can respond when it is most convenient for them.

All four of the articles described the populations of their studies (McHatton et. al., 2010; Spanneut et. al., 2012; Bineham et. al., 2014; Eddy & Rao, 2009). One author (Eddy & Rao, 2009) did not specify the demographics of their population but stated that 149 coordinators of higher education administration participated in the survey. Spanneut and colleagues (2012) surveyed 273 building level principals across four districts in New York. McHatton and colleagues (2010) surveyed 64 principals in one

district and they were mainly female, white, aged 45-64, held master's degrees, and worked in elementary schools. Bineham and colleagues (2014) randomly surveyed 627 educators, administrators, and support staff nationally and in the District of Colombia. None of the authors specifically described their participants' motivation level, and none mentioned any issues with participants' interest levels in the survey topic, which could have impacted the studies.

Sampling. According to Fowler (2014) quality sampling gives "all (or almost all) population members the same chance of being selected and using probability methods for choosing the sample" (p.4). The critical issues of sampling are whether or not to use a probability sample, people who have a chance to be sampled, the size of the sample, the specific strategy used for sampling people, and the rate of response (Fowler, 2014).

Each of the authors described how the sampling was done (McHatton et. al., 2010; Spanneut et. al., 2012; Bineham et. al., 2014; Eddy & Rao, 2009). One author did random sampling across districts in the United States (Bineham et. al., 2014). Another author focused on a large metropolitan district in a southeastern state of the United States (McHatton et. al., 2010). The third author sampled principals from sixty-six different school systems in New York (Spanneut et. al., 2012). The fourth author used a sample from the mailing list of the Association for the Study of Higher Education directory of Higher Education programs (Eddy & Rao, 2009).

Questions. Questions are another essential part of the survey process. In the last twenty years, question design has advanced. Now researchers evaluate questions to see if they make sense, and if the answers are meaningful (Fowler, 2014). Question wording

has become more objective. Researchers must consider previous literature regarding the reliability and validity of their questions. Consultants that are experts in question design, along with pretesting and question evaluation are important to the survey questions. Self-administered surveys are most effective when they are comprised of closed questions, that can be answered by a simple click or checking a box, so respondents can more easily answer the questions. Finally, researchers must pay attention to the way question content might interact with mode of data collection which impacts overall results, as part of their survey design (Fowler, 2014).

Three of the authors partially described their survey questions (McHatton et. al., 2010; Spanneut et. al., 2012; Bineham et. al., 2014) and one author (Eddy & Rao, 2009) more fully described their survey questions. Eddy and Rao (2009) specifically mentioned each question in their survey in detail. The other authors briefly and generally mentioned the format and type of their questions (McHatton et. al., 2010; Spanneut et. al., 2012; Bineham et. al., 2014). The authors fell short on reporting if their questions were open-ended, the reason the questions were chosen, and why short response questions were used. Two of the authors specifically stated that professionals in the field developed the survey and that it was reviewed for validity (Bineham et. al., 2014; McHatton, et. al., 2010).

Mode of data collection and length of time. The mode of data collection is another important component in evaluating and understanding the quality of surveys (Fowler, 2014). Currently, many surveys are done via the internet. Internet access is still not universal, and the strategies for sampling email addresses are limited (Fowler, 2014). Mail surveys are still very common and are effective when there are good

address lists (Fowler, 2014). Researchers must make decisions about data collection that is cost-effective and provides quality data (Fowler, 2014).

Two of the authors clearly stated their mode of data collection (Bineham et. al, 2014; Eddy & Rao, 2009). One survey was sent via the internet (Bineham et. al., 2014). Two authors mailed their surveys (Eddy & Rao, 2009; Spanneut et. al., 2012). One of the authors briefly mentioned a paper and pencil survey but it was not clear how it was actually carried out (McHatton et. al., 2010).

The length of time for data collection must also be considered to fully understand the span of time over which data was collected, and how time can impact findings and results. Mail surveys usually take two months to complete, including mailing surveys, re-mailing them, and telephone or in-person follow-up. The internet is faster but still requires reminders and follow-up. Telephone surveys can be completed in a few days. In-person interviews are time consuming especially if the sample is big (Fowler, 2014).

One article (Spanneut et. al., 2012) mentioned the length of time it took to distribute the survey and receive it from participants. Two authors described the number of follow-up emails they sent to their participants to remind them to complete the survey (Bineham et. al., 2014; Spanneut et. al., 2012). It is important to include the length of time it took to collect data so professionals in the field understand this process and what can be done to improve it for future studies.

Data analysis & results. Results of surveys are produced from filed data that has been coded (Fowler, 2014). Then data is analyzed according to sample nonresponse and sample frame deficiencies, item nonresponse; different probabilities of selection,

and calculating sample errors. Sample nonresponse and sample frame deficiencies means the extent to which those not responding are different from those who respond with respect to variables the survey attempts to estimate (Fowler, 2014). Item nonresponse means responses to a survey do not provide code-able answers to every question (Fowler, 2014). The researcher can either leave those respondents who did not provide information out of an analysis, or they can try to estimate the answers they would have given if they provided answers (Fowler, 2014).

Different probabilities of selection mean that when a sample design calls for selecting certain individuals at higher rates than others then responses must be weighted so that the probability of selection is the same for all respondents (Fowler, 2014). Calculating sample error means calculating other statistics about the likely relationship between sample estimates and the characteristics of the population (Fowler, 2014). Luckily, today there are several statistical packages that have the capacity to adjust reflect the realities of the sample design (Fowler, 2014).

Two of the authors partially described their data analysis of their surveys (Bineham et. al., 2014; Spanneut et. al., 2012), and the other two (McHatton et. al., 2010; Eddy & Rao, 2009) went into more depth on the data analysis that was done in their study. Two studies were difficult to understand since the data was comprised of too many quotes and the data was not clearly presented in graphs or written text (Bineham et. al., 2014; Spanneut et. al., 2012). The other two studies included the reliability of their data and how data was coded into SPSS (McHatton et. al., 2010; Eddy & Rao, 2009).

Three studies described the results of their research (Bineham et. al., 2014; Spanneut et. al., 2012; Eddy & Rao, 2009). For example, Bineham and colleagues (2014) provided the participants' responses and then sorted them into common categories with percentages and clear explanations. However, Bineham (2014) did not report on the length of time it took them to get surveys out and returned, the wording of their questions, previous literature in regard to the reliability and validity of their questions, if consultants and experts were used in question design, pretesting, and question evaluation. The previous omissions by Bineham (2014), call the results of the study into question, based on Fowler's (2014) criteria of a quality survey.

McHatton and colleagues (2010) did not present their results in a clear and organized way. Results were provided but they were hard to make sense of. McHatton and colleagues (2010) also did not report on how they distributed their surveys, the type of survey (paper or internet), and the length of time it took to distribute and collect completed surveys. McHatton and colleagues' (2010) results also must be interpreted with caution, since they did not meet two of Fowler's (2014) criteria of a quality survey.

Rate of response. The rate of response is another important consideration in deciding upon a data collection procedure (Fowler, 2014). Fowler (2014) defines response rate as the "number of people who complete the survey divided by the number of eligible people sampled…and the denominator incudes all people in the study population who were selected but did not respond for whatever reason" (p. 43). Fowler (2014) states "there is no agreed-on standard for a minimum acceptable response rate" (p.44). The two most important factors that must be considered to increase the response

rate of any survey are having access to the selected individuals and getting their cooperation to complete the survey (Fowler, 2014).

Acceptable response rates differ from one mode (mail, internet, telephone, etc.) to another. Additionally, response rates are taken into consideration when a study's purpose is to measure the effects or generalize about a larger population. Response rates are less important if the purpose of a study is to gain insights (Groves, 1990; Hamilton, 2003; Punch, 2003; Sheehan, 2001; Shaughnessy, 1990; Survey Monkey, 2009). Acceptable response rates from researchers in the field are mail, 50% is adequate, 60% is good, and 70% is very good; phone, 80% is good; email, 40% is average, 50% is good, 60% is very good; online, 30% is average; paper, 50% is good; face-to-face, 80-85% is good (Groves, 1990; Hamilton, 2003; Punch, 2003; Sheehan, 2001; Shaughnessy, 1990; Survey Monkey, 2009).

The bias with nonresponse is different among mail, telephone, and personal interview procedures (Fowler, 2014). Well-designed surveys have low rates of item nonresponse, less than 5% (Fowler, 2014). Group-administered surveys have one of the highest response rates. In-person interviews continue to be one of the best ways to collect high quality data, depending upon the topic, the quality of the interviewer, and the location of the population. However, one of the best ways to decrease survey nonresponse is using multiple modes of data collection, if the data is comparable across modes (Fowler, 2014).

Three studies reported their response rates (McHatton et. al., 2010; Eddy & Rao, 2009; Bineham et. al., 2014). Eddy and Rao's (2009) "return" rate for a mail survey was 44%. According to the acceptable response rates for mail surveys, 44% is not adequate.

The term "return" rate is also confusing, since the authors should have used the appropriate terminology for surveys which is response rate. It would have been helpful if the authors stated how many participants responded out of the 149 surveys that were sent. Additionally, Eddy & Rao (2009) did not report on whether they re-sent the survey, how they made attempts to get access to their participants, and how they tried to get participants to cooperate to complete the survey.

McHatton and colleagues' (2010) response rate for their mailed survey was 39% or 64 principals responded out of 169 that were sent the survey. However, 64 divided by 169 is 37% not 39%. Regardless, 39% is not an acceptable response rate for a mailed survey. The numbers are not correct which is concerning. McHatton and colleagues (2010) also did not report on whether they re-sent the survey, how they made attempts to get access to their participants, and how they tried to get participants to cooperate to complete the survey.

Bineham's (2014) response rate for their emailed survey was 22% or 627 responses. According to the literature, 22% is below average. Bineham (2014) states that their response rate is "similar to a national meta-analysis that reported 26% median response rate to internet surveys…and their strict random-sampling process, using random.org and the National Center for Education Statistics' state education agency websites, provides additional confidence to their response rate" (p. 6). Perhaps the response rate for Bineham's (2014) study is less important because the purpose of the study was to gain insights into professional's perceptions and implementation practices of RTI. Emails that were undeliverable received one email follow-up to comply with districts' email security policies.

Summary of Survey Research

Overall, the four surveys met 83% or 20 of the 24 characteristics of quality surveys (see Table 2.8). Eddy and Rao (2009) met all the quality indicators of survey research. However, it would have been helpful if they specified the demographics and response rate more clearly. Bineham and colleagues (2014) met four out of six of the indicators. Spanneut and colleagues (2012) and McHatton and colleagues (2010) met five of the quality indicators for surveys. Spanneut and colleagues (2012) described their population, specified their sampling procedures, described their questions, mode, and results but neglected to provide a clear analysis of their data.

The studies did not adequately describe their survey questions' form and content. Question design is one of the most important parts of survey research because questions can be biased and can produce estimates full of error. According to Fowler (2014) quality surveys must "attend to careful question design, pretesting, and use of existing literature on how to measure what is to be measured" (p. 98). Finally, the studies data analysis and description of their response rates were also weak. Ultimately, researchers that use surveys should be held accountable to following quality indicators of survey research and thoroughly describing if their research met each indicator or not and why, to improve researchers' use of surveys.

Gaps in the Research That Support the Proposed Study

The Content Review of my research shows that there are gaps between leaders' training and education, application of skills, and leadership of new initiatives that must be explored in the proposed study. All the authors make strong arguments that investment in leadership training is imperative to improving schools. Only four of the

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ten qualitative research articles mentioned RTI or MTSS, the most notable school wide

support systems, despite the fact that the majority of leaders in the studies reported that

their training programs and PD did not provide them with the practical skills or school

wide supports they need in special education, data analysis, monitoring and evaluating

programs, and aligning policies and practices. Furthermore, leaders in the studies stated

that they received little training in special education and RTI.

The four studies that included RTI or MTSS emphasized that to implement and

sustain these initiatives, stakeholders at all levels (state, district, university) must share

an investment and responsibility in creating a comprehensive framework for MTSS.

The authors of the four studies on RTI and MTSS were clear that these initiatives

require leaders trained in RTI/MTSS that can organize staff PD, create leadership

teams, and align policies to practice. More research must be done to understand leaders'

knowledge of MTSS. Are leaders not getting trained in MTSS as a result of not getting

trained in special education and not receiving regular, up-to-date professional

development? Therefore, it is essential that the proposed study examines leaders'

experiences with PD, training programs, specific courses they completed, their

understanding of special education, their understanding of MTSS, their ability to lead

initiatives like MTSS and manage their schools, to understand the specific barriers to

their leadership development in MTSS.

The Methodological Review of the research showed that the qualitative studies

were weak in describing interview questions, recording mechanisms, how researchers fit

into the site and impacted the site, how field notes were recorded, how documents were

stored and protected, and how researchers' personal biases impacted their findings and

results. The proposed study will not omit those characteristics that make high quality qualitative research, according to Brantlinger and colleagues (2005). Although the surveys met most of Fowler's (2014) indicators of high quality surveys, they were weak in describing the design of their questions, the time it took to collect their surveys, their data analysis procedures, and their rate of response. The proposed study will be sure to describe each of Fowler's (2014) characteristics of a quality survey.

CHAPTER III

METHOD

The purpose of the proposed study was to understand western Massachusetts' school leaders' knowledge, experience, and ability to implement Multi-Tiered Systems of Support (MTSS) in public schools. While researchers and school reformers have embraced MTSS as an important initiative for supporting improved outcomes for students (mass.gov, 2016), it is less clear that school leaders are implementing MTSS or are adequately trained to implement MTSS in their schools. Research on MTSS holds significant promise for improving educational policies, leadership training, and budgetary implications. This study explored the extent that school leaders understood MTSS and their own beliefs about the quality of the training and preparation they received to implement MTSS in schools.

Research Questions

There were five research questions that drove this study.

1. What are school leaders' (specifically Principals, Vice/Assistant Principals, Deans of Students, Community Coordinators, Special Education Directors, and Head Teachers) in rural counties in Western Massachusetts, current knowledge of MTSS implementation?

2. What experience do these school leaders have with implementing MTSS?

3. What training on MTSS did these school leaders receive?

4. Do these school leaders feel prepared to implement MTSS?

5. What additional knowledge, training and supports do these school leaders believe they would need to effectively implement MTSS.

Research Design

To answer the research questions, I employed a mixed-methods sequential explanatory (MMSE) research design. The research involved collecting and analyzing quantitative data, then collecting and analyzing qualitative data in two consecutive phases within the one study. For this study, the initial quantitative data was collected through a closed-ended survey. Phase Two collected qualitative data through an open-ended survey, and Phase Three collected more qualitative data through two recorded focus groups.

Mixed-Methods Sequential Explanatory research is popular and straightforward; however, it is not easy to implement. Therefore, consideration was given to prioritize the quantitative and qualitative data collection and analysis, the stages in the research process at which the quantitative and qualitative phases were connected, and the integration of the results (Morgan, 1998; Creswell et. al., 2003). The qualitative data phase was built on the first quantitative phase, and the two phases were connected at the intermediate stage of the study (Ivankova et al., 2006). Within the MMSE design, the qualitative data was used to explain the quantitative or numeric data through an in-depth exploration of participants' views (Rossman & Wilson, 1985; Tashakkori & Teddlie, 1998; Creswell, 2003).

The proposed study used a survey as the quantitative component and a follow-up open-ended questionnaire and focus group as the qualitative components (see Table 3.1). The survey was used to explore leaders' perceptions of their knowledge of MTSS and their training in MTSS and as a means of rating similarities and differences between

participants. The survey allowed for the collection of data from a broad range of participants and provided quantitative data on school leaders' understandings of MTSS, training in MTSS, and experience implementing MTSS. The educational leaders' open-ended questionnaire and focus groups provided a deeper understanding of school leaders' perspectives of MTSS.

Study Population and Study Locales

According to the 2014 Massachusetts Census Bureau, Massachusetts is comprised of 50 cities and 301 towns that make up 14 counties. The 14 counties are Berkshire, Franklin, Hampshire, Hampden, Worcester, Middlesex, Essex, Suffolk, Norfolk, Bristol, Plymouth, Barnstable, Dukes, and Nantucket. The 2014 Census Bureau statistics on Massachusetts population reported the following: 48.4% male, 51.6% female, 79.2% over age 18, 14.8% over age 65, 83.2% white (non-Hispanic), 8.8% Black or African American, .5% Native American or Alaska native, 6.3% Asian American, .1% Native Hawaiian or other Pacific islander, 2.1% other race, 3.1% two or more races, and 11.2% Hispanic or Latino. These demographics provided a general frame for predicting the potential demographics of the participants in the study. The DESE website did not provide the demographics of its educational leaders on its site.

Counties. I was interested in understanding the research questions within the context of the rural and town school districts in Western Massachusetts. These districts are unified in multiple ways, especially with regards to school leaders and special education. For instance, the special education directors in the region collaborate through the Western Massachusetts Special Education Directors group. This is comprised of special education directors in Franklin County, Berkshire County, and Hampshire

County. The group is primarily comprised of those directors in the rural and town districts because they serve similar population, encounter similar challenges, and are responsible for providing services in areas that are typically under-resourced and that lack a public profile like the districts in Springfield and Holyoke, two large urban school districts in Western Massachusetts that serve fundamentally different populations and have different educational challenges. Additionally, the Western Massachusetts region is unique because the rural and town districts in the region are comprised of a large number of rural and town schools with a large population of educators and students with sufficient consistencies and similarities that allow them to be examined in a single research study. For instance the three counties that comprised the region have similar numbers of districts (16 to 17 districts), students (7,720 to 17, 462), students with disabilities (1499 to 3107), leaders (41 to 53), elementary schools (27 to 34), middle schools (5 to 11), and high schools (9 to 14) (publicschoolreview.com, 2016).

Consequently, this study will contribute to the field as a systematic examination of MTSS and educational leadership in a large number of rural and town districts that have not before been examined in a single study of this type. Furthermore, the findings of this study will have a practical impact on the region as well as on rural and town school districts nationally. This region is comprised of school districts in the three counties in Western Massachusetts.

Berkshire county. Berkshire County is 946 square miles (see Figure 3.3). The population in 2015 was 126, 715. The county is made of 30 towns. According to the 2010 census demographics, 92.5% white, 2.7% Black or African American, 1.2%

Asian, .2% American Indian, 1.2% other race, and 2.1% two or more races. Latinos and Hispanics made up 3.5% of the population. There were 31.3% of people with a Bachelor's degree or higher. There were 51.6% females, and 48.4 were males. The median age was 44.7 years old. The median income was $48, 907.00. In 2015, 11.6% of the population was living below the poverty line. The schools in Berkshire County that were asked to participate in the study consisted of 34 elementary schools, 7 middle schools, and 12 high schools (publicschoolreview.com, 2016). Participants were chosen amongst 53 building administrators in Berkshire County.

Berkshire County has seventeen different towns and/or districts (see table 3.1). Berkshire County has a total of 15,737 students. There are 7,711 females and 8,026 males. There are 356 students that are English Language Learners (ELL). There are 2,892 students that have special needs. There are 5,438 students that are economically disadvantaged. There are 785 African American students, 222 Asian students, 1,027 Hispanic students, 12,896 White students, 31 Native American students, 18 Native Hawaiian/Pacific Islander students, and 751 students that identify as Multi-Race/Non-Hispanic (publicschoolreview.com, 2016).

Franklin county. Franklin County is 699 square miles (see Figure 3.4). The population in 2010 was 71, 372. The county is made up of 25 towns. According to the 2010 census demographics, 94.2% people were white, 1.1% people were Black or African American, 1.3% people were Asian, .3% people were American Indian, 1.0% people were other race, and 2.1% of the people were two or more races. Latinos and Hispanics made up 3.2% of the population. There were 34.4% of the people had a Bachelor's Degree or higher. There were 51.2% females and 48.8% were males. The

median age was 44.2 years old. The median income was $52,002.00. There were 11.3% of the population living below the poverty line. The schools in Franklin County that were asked to participate in the study consisted of 27 elementary schools, 5 middle schools, and 9 high schools (publicschoolreview.com, 2016). Participants were chosen amongst 41 building administrators in Franklin County.

Franklin County has sixteen different towns and/or districts that are listed in Franklin County (see Table 3.2). Overall, Franklin County has a total of 7,720 students. There are 3,706 females and 4,014 males. There are 133 students that are English Language Learners (ELL). There are 1,499 students that have special needs. There are 2,523 students that are economically disadvantaged. There are 100 African American students, 107 Asian students, 573 Hispanic students, 6,617 White students, 14 Native American students, 4 Native Hawaiian/Pacific Islander students, and 306 students that identify as Multi-Race/Non-Hispanic (publicschoolreview.com, 2016).

Hampshire county. Hampshire County is 545 square miles (see Figure 3.5). The population in 2010 was 158,080. The county is made up of 20 towns. According to the 2010 census demographics, 88.7% of the people were white, 2.5% of the people were Black or African American, 4.5% of the people were Asian, .2% of the people were American Indian, 1.5% of the people were other race, and 2.5% of the people were two or more races. Latinos and Hispanics made up 4.7% of the population. There were 43.2% of the people had a Bachelor's Degree or higher. There were 53.2% females and 47% were males. The median age was 36.6 years old. The median income was $59, 505.00. The population had 11.7% of the people living below the poverty line. The schools in Hampshire County that were asked to participate in the study consisted of 27

elementary schools, 11 middle schools, and 14 high schools (publicschoolreview.com, 2016). Participants were chosen amongst 52 building administrators in Hampshire County.

Hampshire County includes seventeen different towns and/or districts (see Table 3.3). Hampshire County has a total of 17,462 students. There are 8,556 females and 8,906 males. There are 513 students that are English Language Learners (ELL). There are 3,107 students that have special needs. There are 3,922 students that are economically disadvantaged. There are 432 African American students, 634 Asian students, 1,591 Hispanic students, 14,069 White students, 33 Native American students, 33 Native Hawaiian/Pacific Islander students, and 667 students that identify as Multi-Race/Non-Hispanic (publicschoolreview.com, 2016).

Participants. The participants for the study were recruited from the educational leaders from rural and town districts in Western Massachusetts. I defined "rural" as a municipality that has fewer than 500 people per square mile (MacDougall & Campbell, 1995). Town districts in the three counties fell into two categories (1) distant which are territories within an urban cluster that are more than 10 miles and less than or equal to 35 miles from an urbanized area and (2) remote which are territories inside an urban cluster that is more than 35 miles from an urbanized area (nces.ed.gov). These district leaders were an understudied group, which represented the majority (79%) of the rural and town districts in Massachusetts (Massachusetts Rural Access Commission, 2013)**.** These districts share common problems including increases in poverty, increases in minority populations, and increases in special education students. Additionally, these districts are part of a national struggle as poverty and students eligible for free or

reduced lunch increase (Johnson et. al., 2014). These issues present specific and shared challenges for the school leaders in Western Massachusetts as they try to implement MTSS, especially because education policy research is still dominated by research in large urban settings (Johnson et. al., 2014).

For the purposes of this study, the term educational leader means a school building administrator and included Principals, Assistant Principals, Deans of Students, Community Coordinators, Special Education Directors & Leaders, and Head Teachers. I selected educational leaders because members of each of these categories are responsible for developing, implementing, and/or monitoring MTSS interventions in their schools (Averill & Rinaldi, 2011).

Sample population. There was a minimum of 53 educational leaders in Berkshire County (publicschoolreview.com, 2016). There was a minimum of 41 educational leaders in Franklin County (publicschoolreview.com, 2016). There was a minimum of 52 educational leaders in Hampshire County (publicschoolreview.com, 2016). Together, there was a minimum pool of approximately 146 school leaders that represented the sample population for this study. The Department of Elementary and Secondary Education (DESE) website did not list any information about school administrators, so I was unable to collect current demographic data. Therefore, I collected demographic data as part of my initial survey (see Table 3.3). I collected information about participant's gender, age, race, current position, past positions held in schools, highest degree completed, number of years they had worked in schools, the type of schools they had worked in (for instance, elementary, middle, high school,

alternate school, and segregated setting), and whether or not they had an administrator license.

   Participant selection. Educational leaders from Berkshire, Franklin, and Hampshire counties were the sample frame; the people that had a chance to be included amongst all of those selected made up the sample frame. For the purpose of this study, the sample frame for the Phase 1 Survey Component, were all school-based leaders in Western Massachusetts. Because all school leaders in the region were eligible to participate in this study, the sample were those eligible participants who agreed to participate and who completed the survey. The sample frame for the Phase 2: Questionnaire and Focus Groups were the participants from the Survey. All participants in the survey were invited to participate in the Phase 2 activities. Participants who agreed to participate were provided with a consent form for Phase 2 activities. All Phase 1 participants who returned a completed consent form were asked to participate in Phase 2.

Phase One: Survey

   Phase one of the proposed study involved the administration of a survey about MTSS. The survey was administered to all school leaders from the participant population who returned a consent form.

   Survey Instrument. The survey was electronically administered. The items for the survey were chosen from three validated studies on MTSS that used surveys (Wakeman et. al., 2006; Schwierjohn, 2011; Hoover et. al., 2008). Some of the items were modified to specifically focus on leaders' knowledge, training, experience, and readiness to implement MTSS. The survey instrument primarily consisted of closed-

ended items. The terms RTI and MTSS were both used because some professionals in the field may not have understood that they are different acronyms for the same initiative.

I worked with a professional statistician to make sure each question was related to one of my research items. I also assessed the items to make sure each one provided the specific information I was looking for. I utilized a majority of close-ended items in order to maintain control over the variability in responses and to increase the likelihood that participants would complete the survey. I designed the survey to end automatically if someone did not consent to take the survey.

I used a monetary incentive of two, $100 Amazon gift cards to be used as raffle prizes for participants who completed the close-ended survey. Participants that completed the open-ended part of the survey were also entered into a raffle for a $100 Amazon gift card. Participants that competed a focus group were also entered into a raffle for a $100 Amazon gift card.

I had a small group of educators take the survey to get feedback. This also gave me a rough estimate of how long the survey would take to complete. The survey took approximately 5 minutes, with a range of 3 minutes for some responders and as much as 10 minutes for one person. I included this information when I sent out my initial recruitment letter. This piloting of the survey helped to eliminate items that were not needed and helped me to create better and more representative choices for items (e.g., I added "Transgender" as an option for the gender question based on feedback). The feedback also helped me to provide more precise definitions and a better flow of questions and answers (e.g., I adopted a four-point Likert scale based on feedback). I

also changed the item format (open or closed) to ensure responses were aligned to my research questions.

I administered the survey using Survey Monkey. Survey Monkey is an easy to use survey format that many people are familiar with. Prior to administration, I also conducted a usability test of the survey with the teachers who completed the paper usability test of the survey. This ensured that the administration of the electronic format was consistent to the administration of the paper format.

Organization of Survey Items. Each section of the survey was drafted to provide different information about school leaders (see Appendix C). The first section looked at school leader demographics. The second section solicited information about their training, current knowledge, experiences, and beliefs on RTI/MTSS. The third section used a Likert scale to measure how qualified participants felt about leading specific parts of MTSS (universal screening, progress monitoring, data-based decision making, positive behavior interventions). The fourth section of the survey drew information about what participants felt were the most important leadership skills for implementing RTI/MTSS. The final section of the survey thanked the respondents and invited them to participate in the follow up questionnaire and focus group.

Section one. Section one collected information about current school leaders' demographics (see Appendix C). There were ten items. First, participants had to give consent to participate in the survey. Next participants provided their demographic information about the type of school they currently worked in, the highest degree they completed, their race, their gender, their age, their current position, other positions in

education they had, if they hold a Massachusetts school administrator license, and how many years they had worked in schools.

  Section two. Section two used closed ended, yes/no items to garner information about participant's leadership training, experience, and readiness to implement RTI/MTSS (see Appendix C). There were nine items in this section. The first item asked participants if their school currently implements RTI/MTSS. The next item asked participants if they had primary responsibility for implementing RTI/MTSS. The third item asked participants if they believed RTI/MTSS are important to improving student outcomes. Items four through nine used a Likert scale, Strongly Agree, Agree, Disagree, and Strongly Disagree. The fourth item asked participants if they felt knowledgeable about RTI/MTSS. The fifth item asked participants if they had adequate formal training in RTI/MTSS.   The sixth item asked participants if their university courses provided them with information on RTI/MTSS. The seventh item asked participants if their professional development provided them with information on RTI/MTSS. The eighth item asked participants if they believed their school was implementing RTI/MTSS effectively. The ninth item asked participants if they felt well prepared to implement RTI/MTSS at their school.

  Section three. Section three explored leaders' specific experience leading specific components of MTSS (see Appendix C). There were five items in this section and participants responded using a Likert scale, Strongly Agree, Agree, Disagree, and Strongly Disagree. The first item asked participants if they felt well prepared to lead data-based decision making. The second item asked participants if they felt well prepared to lead universal screening. The third item asked participants if they felt well

prepared to lead progress monitoring. The fourth item asked participants if they felt

well prepared to lead positive behavior intervention supports. The fifth item asked

participants if they felt well prepared to analyze data.

Section four. Section four identified leaders' perspectives on the essential

leadership skills needed to implement RTI/MTSS (see Appendix C). There were eight

items in this section. Each item used a Likert scale Strongly Agree, Agree, Disagree,

and Strongly Disagree. The five specific leadership skills included in the questions were

leaders must have expertise to implement RTI/MTSS successfully; leaders must train

staff to implement RTI/MTSS successfully; leaders must create an RTI/MTSS

leadership team to implement RTI/MTSS successfully; leaders must communicate and

reinforce the expectation for data-based decision-making to implement RTI/MTSS

successfully; leaders must schedule data days throughout the year to ensure that

instruction and interventions are informed by student data; leaders must provide

instructional and intervention support to all staff to implement RTI/MTSS successfully;

leaders must share student outcomes with staff, students, and parents; and leaders of

successful RTI/MTSS create frequent opportunities to celebrate and communicate

success.

Section five. There were two items in this section. Section five asked all

participants if they wanted to be entered into a drawing for a $100 gift card, and if so,

participants had to provide their email address. Then participants were asked if they

wanted to participate in a focus group about MTSS.

Survey administration. I used individual district and school websites to locate

the email addresses and phone numbers of each of the three counties' principals, vice

principals, special education directors, deans of students, and/or other school-based

leaders. I used this information to create my participant base. Each participant was

emailed the self-administered survey via Survey Monkey. Follow-up emails were made

to leaders that had not responded after two weeks, to ask them to complete the survey.

A second email reminder was made after an additional two weeks of no response.

Close ended survey analysis. All survey data was exported from Survey

Monkey as an SPSS file, which was analyzed using SPSS. First, I examined the data

using descriptive statistics. Descriptive statistics helped me to understand the patterns

and distribution of participant responses. I looked at the percentage of responses for

each choice for each item. Items that had consistent responses were considered for

follow-up open-ended question development. Additionally, items that appeared to have

responses that were bi-modally distributed reflected differences in opinions or

perceptions. These were also considered as I developed and refined the open-ended

items.

Phase Two: Questionnaire & Focus Groups

Open-ended questionnaire. The final section of the survey asked respondents

to indicate if they would participate in a potential focus group. After the data analysis of

Phase One, a follow up, open-ended questionnaire was created via survey monkey (see

Appendix D). The close-ended survey data was used to create the seven open-ended

items for the qualitative part of the survey. The open-ended questions more deeply

examined leaders' specific experiences with the specific components that make up

MTSS, and their training needs. There were seven items in this section. Item one asked

participants to define MTSS. Item two asked participants to provide an example of how

they used data collection in their school. Item three asked participants to provide an example of how they tiered instruction in their school. Item four asked participants to provide an example of how data informed their decision-making. Item five asked participants to provide an example of how they used research-based interventions. Item six asked participants to provide an example of how they used universal screening. Item seven asked participants what they would like more training in.

The questionnaire was administered to the educational leaders that completed the survey and indicated they were willing to answer follow-up questions. These questions, created from a compilation of the leaders' responses to the surveys, helped me gain a deeper and clearer understanding of the leaders' knowledge of RTI/MTSS. They included items on school leaders' own experiences implementing MTSS. The open-ended items were also administered using Survey Monkey, consistent with the procedures for the survey administration.

The open-ended questionnaire data was analyzed using the words and meanings of words spoken by the participants. I looked for any changes in participant's opinion or position, in order to analyze internal consistency. Additional analysis was given to topics that received little to no attention. Specific responses based on experiences were given more weight than vague and impersonal responses. Finally, analysis considered the big ideas.

Open-ended question analyses. I employed qualitative data analytic procedures to analyze the open-ended items. This included:

Step 1: I analyzed the follow-up questionnaire responses using descriptive interpretation, creating a rich description of the participants' perspectives for each question.

Step 2: The data was organized, categorized, instrumentally coded and re-coded, and condensed into major codes and minor codes.

Step 3: Themes were identified and interpreted. I included my own analytic ideas that shaped and refined my thinking and provided insights for analysis.

Step 4: I used an audit trail to track and report revisions or changes to trace the progress toward the final product.

Step 5: Finally, responses were examined in comparison to researched definitions, and alternative understandings were considered and the interpretations from the questionnaires were written into a report.

Focus groups. To create the focus group questions, I used information from the close-ended and open-ended questionnaire. The focus groups were used as a method of data collection that brought respondents together to discuss data and provided more information on MTSS training, skills, experiences, professional perspectives on the usefulness of RTI/MTSS, and the leadership skills needed to implement RTI/MTSS (Weiss, 1998). The focus groups provided an even deeper understanding of leaders' knowledge, skills, and training in MTSS. Some of the close-ended survey data was presented and discussed with the focus groups, as part of the focus group questions. The six focus group questions were: (1) What do you think about leaders reporting high knowledge but reporting mixed levels of formal training? How are school leaders learning about MTSS? (2) What do you think caused the mixed responses about

implementing MTSS effectively? What is missing that all school leaders need to implement MTSS effectively? (3) Why do some leaders not feel well prepared to lead universal screening, progress monitoring, and data analysis and decision-making? What training or support would they need to be well prepared? (4) What training would the school leaders want who do not feel well prepared to implement PBIS? Should this take place in training programs? Why doesn't this training take place? (5) What is needed to give school leaders the necessary supports to train and prepare teachers and staff to implement MTSS? Are these skills provided in leadership training programs? What should leadership training programs do to prepare school leaders to train teachers and staff? (6) What training do you need in MTSS and what does it look like?

The focus groups involved organized discussion with the selected group of individuals to gain information about their views and experiences with MTSS. The focus groups allowed me to obtain several perspectives about MTSS, allowing for insight into people's shared understandings of MTSS and the ways individuals were influenced by other understandings of MTSS, in a group setting.

Participants were recruited via the initial survey with incentives. The focus groups were approximately one hour long, and held in person with myself, as the moderator, and an assistant moderator. The focus groups were done with leaders that completed the surveys in Phase One and Phase Two, who agreed to complete the follow-up questions and participate in the focus group. Participants in the focus group were given a choice to participate in person as well as via skype. All focus group participants chose to participate in person.

A comfortable room was reserved at a High School, for the first focus group. This site was chosen because it was a location that was close to most leaders that chose to participate in the first focus group. Two weeks later, another comfortable room was reserved at another high school, for the second focus group. This site was chosen because it was a location that was close to most leaders that chose to participate in the second focus group. Instrumentation, including two high-quality audio recorders were procured to make sure that recording of the groups was possible.

As moderator, I professionally facilitated the focus group discussions and provided a clearly presented topic, guidelines, ground rules, pre-determined questions, mild and unobtrusive control, clear introductions, clear conclusions, pauses, probes, and an established permissive environment. An assistant moderator handled logistics, took careful notes, and monitored recording equipment. The assistant moderator debriefed with me and provided feedback on analysis and reports.

Focus group questions were open-ended. Dichotomous questions (yes/no) were not asked. Attributes and/or influences were inquired about instead of using "why" questions. "Think back" questions were used to take people back to an experience and not forward to the future. Different types of questions were used like an opening question, introductory question, transition questions, key questions, and ending questions. Most importantly, questions that got participants involved were used (reflection, examples, choices, rating scales, drawings, etc.). Questions that fostered ownership (What can you do…?) were used. Questions were sequenced from general to specific. Serendipitous questions were saved for the end of the discussion.

Myself, the lead researcher, trained the assistant moderator to make sure that notes were clear and consistent. Notes contained information that was easily identifiable and organized. The notes contained quotes, key points/themes, follow-up questions that could be asked, and big ideas or thoughts the assistant moderator had. Notes were recorded following a standardized recording form. Tape recording was spot checked to ensure proper operation.

Focus group analyses. I employed qualitative data analytic procedures to analyze the focus group items. This included:

Step 1: Systematic analysis started during the focus group. Systematic reporting was done with clear, verifiable procedures, systematic analysis, and appropriate reporting practices.

Step 2: Inconsistent comments, vague comments, were probed for understanding.

Step 3: Participants were offered a summary of their responses to seek confirmation.

Step 4: After the focus group, a diagram of seating arrangement was drawn.

Step 5: The moderator and assistant moderator debriefed. Themes, interpretations, and ideas were noted.

Step 6: The field notes were labeled and filed, including audiotapes and other materials.

Step 7: Shortly after the focus group a back-up copy of tapes were made.

Step 8: A report of the focus group was prepared in a question-by-question format with quotes, by the lead moderator.

Step 9: Later, results were compared and contrasted by categories. The focus group data was analyzed according to the words used by participants and the meanings of the words. The analysis also considered the context by finding the triggering stimulus and then interpreting the comment in regard to the environment. The tone and intensity of the comment was examined. Internal consistency was analyzed by tracing participants' changes in opinion, or changes in position, after their interactions with others. The frequency of the topics discussed were analyzed to understand if these topics were more important or of special interest to participants. Special consideration was given to what was not said and what topics received little attention. The intensity with which participants talked about a topic will be noted (i.e., speed or excitement in the voice or slow and deliberate speech). Responses that were specific and based on experiences were given more weight than responses that were vague and impersonal.

Step 10: Emerging themes were documented. Analysis considered the big ideas. A day or two after the focus group, big ideas were given time to percolate. The assistant moderator reviewed the process and verified big ideas.

Step 11: Findings were described using quotes.

Step 12: Finally, the report was written in narrative style with some quotes, and sequenced by question order.

Step 13: The report was shared for verification with other researchers, revised, and finalized.

Ethical Considerations. Ethical considerations were considered during the research-planning phase. First, honesty was considered. Evaluators provided as much information as possible to potential participants, so they could decide whether to

participate. Participation was more globally approached since the study looked at different districts' leader's understandings of MTSS and used individual response information as extra data and not the sole source of data.

Informed consent, confidentiality, and anonymity were also important ethical considerations. Participants had the choice of taking the initial survey or not. I included informed consent as a part of the initial request to complete the survey. Once they finished, they had a choice of indicating that they were willing to participate in the next two phases or not. Once they received the second survey, they once again had a choice of participating or not, and the same is true for the invitation to the focus group. Confidentiality was also essential. Adding a name or email to the survey was optional. For those who chose to include their name or email, I ensured confidentiality and anonymity by making sure to code all surveys as they came in with a number. I kept a separate list of the name/district of the respondent and the number on their survey in a locked cabinet. I then had the coded surveys compiled and analyzed by Survey Monkey.

The final two ethical considerations are high competence and reciprocity. The researcher carried out the study with the highest competency possible. This means that I followed the quality indicators of survey and mixed method research. Reciprocity addressed the feedback of the study results to all stakeholders. I will disseminate the results of my dissertation in a brief report to the school systems in each of the rural counties I solicited for participation.

CHAPTER IV

RESULTS & FINDINGS

This chapter is organized around the five research questions of the study. For the purpose of presenting the results and findings, each research question will be presented with accompanying data that was collected, from the close-ended survey, the open-ended survey, and the focus group data. Some research questions only used data from the close-ended survey and focus groups, others used data from the open-ended survey and focus groups. The data for each research question will be provided, along with themes and sub-themes that emerged for each question.

This study looked at whether school leaders perceive themselves as knowledgeable and prepared to implement MTSS in their schools. The five research questions that drove this research study were:

(1) What are school leaders' (specifically Principals, Vice/Assistant Principals, Deans of Students, Community Coordinators, Special Education Directors, and Head Teachers) in rural counties in Western Massachusetts current knowledge of MTSS implementation?

(2) What experience do these school leaders have with implementing MTSS?

(3) What training on MTSS did these school leaders receive?

(4) Do these school leaders feel prepared to implement MTSS?

(5) What additional knowledge, training and supports do these school leaders believe they would need to effectively implement MTSS?

Descriptive Findings

The sample was comprised of 61 administrators in various public-school

districts across Western Massachusetts. Most of the leaders worked in elementary schools, were white, female, and were between 40 and 59 years old. Most leaders had their master's degree, their administrative license, and were principals in schools. Most of the leaders had been working in schools for ten to twenty-nine years (See Table 4.1).

Research Question 1: School Leaders' Current Knowledge of MTSS

Survey items. Two items for the survey were related to leaders' knowledge of MTSS implementation. Results for item 14, the majority of leaders stated that they felt knowledgeable about RTI/MTSS. Results from item 13 revealed that all of the school leaders reported that RTI/MTSS are important to improving student outcomes. These findings indicated that most leaders valued MTSS and believed they were knowledgeable of MTSS.

Open-ended responses about leaders' knowledge of MTSS. Forty-two participants responded to Open Response Item 1, which asked leaders to define MTSS. The responses were collapsed into 12 codes, with five major codes, out of twelve, that encompassed most of the responses. I examined the number of participants by code, as well as the number of times the codes were used. Twenty participants named MTSS rather than providing a definition of the term. Most used the terms "Massachusetts Tiered System of Support" or "Multi-Tiered System of Supports." The Massachusetts DESE adopted the term "Massachusetts Tiered System of Support" in state education policies, so each of these participants had accurate names. However, the majority of participants inaccurately described the main components that comprise the system of MTSS. For example, one respondent simply stated, "tiered system of support."

Fifteen participants used the term "student needs" and thirteen participants used "interventions or supports" in their responses. The use of these terms did not represent an accurate understanding of MTSS but represented a basic knowledge of MTSS as part of a system to support students. Eleven people used "tiered system" twelve times in their responses. These responses were not complex and lacked a deeper understanding of the complex nature of MTSS. For example, one participant stated, "identify students not making progress in general education classes and then giving them support."

Only six of the participants used "specific tiered information" in their responses, and used such language ten times in their responses. For example, one participant stated "MTSS (Multi-Tiered System of Support or Massachusetts Tiered System of Support) meets the needs of most students (80%) via regular classroom instruction, while 15% of the students need additional (tier 2) support for academics and/or behavior, and 5% need intensive (tier 3) support for academics and/or behavior. MTSS is the system through which those structures are created, student needs are identified, interventions are established and implemented, and student-level data is reviewed to move students in and out of tiers as necessary." This response clearly demonstrated a higher understanding of MTSS as a system of academic and behavior supports for all students. Only four of the participants included "academic and behavior" in their responses, and used such language six times. For example, one participant stated "MTSS is cohesive and comprehensive in the goal of meeting the needs of all learners. MTSS addresses academic as well as the social, emotional, and behavioral development of children from early childhood to graduation. MTSS aligns resources and support for students receiving instruction and for teachers and other support staff who are delivering the

instruction." These responses were most accurate, and included multiple components of the MTSS system, along with emphasis on alignment of supports for both students and staff.

Four people used "PBIS, RTI, LRE" in their responses. For example, one participant stated, "It is part of the PBIS system and we just did a worksheet on the tier system and how well we are meeting the criteria for meeting student needs." This response made the connection between PBIS and MTSS, but it was inaccurate because PBIS is part of MTSS and not vice versa. One participant used "inclusion" in their response. This participant stated, "A system by which students are remediated in skill deficits in progressively more restrictive environments, so that inclusion is encouraged." This response was not accurate. MTSS is part of inclusive practices, and inclusion does not promote more restricted learning environments. Three people used "identification" in their responses. For example, one participant stated "Multi-tiered systems of support to identify and meet the needs of learners with diverse learning profiles." The universal screening and progress monitoring components of MTSS do provide a means to identify students that are struggling. However, MTSS is a system that supports the progress of all students, not just students with different learning profiles.

Definition of MTSS. Another way I examined the quality of the responses was to compare the responses with definitions from the literature. The first definition is "MTSS is often used as an overarching construct for PBIS and RTI. It is a school-wide, three tiered approach for providing academic, behavioral, and social supports to all students based on their needs and skills" (Ziomek-Daigle, J., Goodman-Scott, E., Cavin, J., & Donohue, P., 2016). The second definition was MTSS is "used to make decisions

about changes in instruction or goals and applying child response data to important educational decisions" (Batsche, 2005). The two definitions provided a comprehensive understanding of the system of MTSS for students and staff. Out of the forty-two responses, the majority of participants (23 people) used "MTSS" in their responses, fifteen participants mentioned "tiers", nineteen participants included "supports", twelve participants included "based on needs and skills", eight people used "instruction", six people mentioned "interventions", and six people mentioned "using data". Few leaders mentioned social and behavioral supports, or using data to make educational decisions, as part of their definition of MTSS. Only eight of the participants provided a definition somewhat consistent with the two definitions from the literature (Cook, Lyon, Kubergovic, Wright, & Zhang, 2015; Harlacher, Sakelaris, & Kattelman, 2014; Sugai & Horner, 2009; Sugai & Simonsen, 2012; Batsche, 2005). For example, one participant stated "I'm not as familiar with MTSS as I am with RTI. But treating them similarly, MTSS could be defined as a multi-tiered intervention system utilized to assess, instruct, monitor and determine growth based on data gathered. Followed by continued progress monitoring either individually or across program intervention tiers." This response included mention of the multiple tiers, the connection to RTI, system of interventions, data collection, and progress monitoring. However, this participant failed to include behavior supports, social supports, and using student data to make instructional changes. Remarkably, 81% of the participants did not provide a definition consistent with the definition from the literature, and only 4 leaders provided complete definitions of MTSS (Cook, Lyon, Kubergovic, Wright, & Zhang, 2015; Harlacher, Sakelaris, & Kattelman, 2014; Sugai & Horner, 2009; Sugai & Simonsen, 2012; Batsche, 2005).

Focus group responses about leaders' knowledge of MTSS. I also asked six educational leaders about their knowledge of MTSS during two focus groups. Focus group participants were asked to look at the survey data results. Specifically, focus group participants were asked why leaders reported feeling knowledgeable about MTSS when they also reported that they received minimal formal training in MTSS. Additionally, focus group participants were asked about how school leaders are learning about MTSS.

One of the main themes from the focus groups was leaders' lack of knowledge about MTSS. The following descriptors comprised this theme: lack of knowledge on MTSS implementation; lack of training on MTSS; leaders have to teach themselves about MTSS; age factors related to training that impact knowledge of MTSS and skills to implement MTSS; and leaders' perception issues with knowledge of MTSS. Leader 1 stated, "People feel knowledgeable about the pyramid, but don't know how to design and implement it in schools and get everyone on board to make it happen". All of the leaders from both Focus Groups stated that, "Formal training in MTSS does not exist." Leader 3 stated, "Training is not at the state level yet, so you have to seek out information and weave through it yourself". Leader 4 stated, "The high knowledge might actually be a false positive due to leaders' perceptions". Leader 5 stated, "RTI is new, but that may be because of my age."

Leaders did not receive formal training in MTSS, so they taught themselves about MTSS from what they could find from the state's website and other relevant research. Since there was no systematic training for leaders, each leader created their

own version of what MTSS is for their schools and districts. Additionally, leaders

created their own versions of MTSS implementation plans or approaches.

All of the focus group participants were middle-aged and questioned if their age

impacted their knowledge of MTSS. They wanted to know if younger educational

leaders received training in MTSS, which did not exist when they were in graduate

school or licensure programs. Finally, focus group participants stated that leaders

reported they had knowledge of MTSS because they knew at least one thing about it.

Most focus group participants stated that knowing what MTSS is, is very different from

knowing how to implement it. Most of the focus group participants wanted to know

how to implement MTSS but there was no training available to help them attain this

knowledge.

Summary of Leaders' Knowledge of MTSS

Seventy percent of the leaders reported in the survey that they felt

knowledgeable about RTI/MTSS. All the leaders believed MTSS helped students. The

open response questions and the focus groups provided a deeper understanding of those

survey responses. Few leaders understood that MTSS is a system of multiple tiers to

support the academic and behavioral needs of students, along with the instructional and

training needs of staff. A small number of leaders reported higher understandings of

MTSS in the open responses. Some leaders were confused about the relationship

between MTSS, RTI, and PBIS. Very few leaders defined MTSS accurately. Leaders

had different knowledge of MTSS, a result of leaders not receiving formal training in

MTSS. The leaders from the focus groups educated themselves about MTSS and how

to implement it. Therefore, each school and district received different knowledge about

MTSS, depending on what their leaders knew about MTSS. Most leaders knew what MTSS is, but they did not know how to implement it.

Research Question 2: Leaders' Experience Implementing MTSS

       Survey items. In the close-ended survey questions 11 & 12, the majority of leaders reported that their school or district was implementing RTI/MTSS. Most leaders had not had primary responsibility for implementing RTI/MTSS in their schools or districts. In question 18, about half of the leaders agreed, and some leaders strongly agreed that their schools were implementing RTI/MTSS effectively. Slightly less than half of the leaders disagreed, and some leaders strongly disagreed that their schools were implementing RTI/MTSS effectively. These findings indicated that most leaders had MTSS in their districts, but they were not primarily responsible for implementing it. The majority of leaders thought their schools were implementing MTSS effectively, but a significant number of leaders did not think their schools were implementing MTSS effectively.

       Open-ended response item two regarding data collection. The majority of the data on leaders' experiences implementing MTSS came from the first six open response items. Forty-two participants responded to Open Response Item 2, which asked leaders to provide an example of how they used data collection in their school. The responses were collapsed into fourteen major codes. I examined the number of participants by code, as well as the number of times the codes were used. Twenty people used non-specific approaches, and used such language twenty times in their responses, instead of explaining how they collected data in their schools. For example, one participant stated,

"We collect daily points." This response did not explain how they used data, it simply stated that they collected data.

Twenty people used "standardized assessments and curriculum-based measures" and used such language twenty-eight times in their responses. For example, one participant stated, "benchmark assessments, progress monitoring, and scheduled formative assessments". This response provides what the leaders used to collect data, but it did not explain how they used data collection in their school. Six people mentioned different content areas and used such language eleven times in their responses. For example, one participant stated, "The teachers do math, reading, and writing assessments on a regular basis." Again, these leaders shared that they collected data, but they did not explain how they used the data. Six people mentioned holding teams or meetings and used such language six times in their responses. For example, one participant stated, "through student referral sheet and SST meetings." Although these leaders were using data, it was unclear exactly what they were doing with the data.

Eight leaders mentioned "interventions/supports" and used such language nine times in their responses. For example, one participant stated, "progress monitoring for reading to determine if interventions are required to promote growth." These responses provided a higher understanding of how these leaders used data collection in their schools. They were using the data to make decisions regarding the supports students' need.

Only three leaders mentioned "screening/benchmarks" and used such language eighteen times in their responses. For example, one participant stated, "Data is collected

(MCAS scores, AP scores, attendance, failure rates, etc.) but it is often used to set long-term goals in my school. Rarely is data collected and used in an immediate way to assess or remediate student learning." This leader did explain how they used their data and their challenges with using data. Another participant stated, "Universal screening and benchmark assessments are conducted throughout the year on a specific schedule, and are cross-referenced with state testing and classroom assessments." This participant also explained what tools they used and when they used them, but failed to further explain how their use of data affected their work with their students. The majority of leaders' responses simply named assessments they used. For example, many participants made statements similar to "Benchmark Assessment Systems and MAPS." Most leaders could name data collection tools but struggled to explain how they used the data they collected to support students or staff.

Thirteen people mentioned "review data/make decisions" and used such language fourteen times in their responses. For example, one participant stated, "To identify students' instructional needs for support and enrichment." These responses exemplified a much higher understanding and explanation of how leaders used their data. They used data to directly and positively impact students.

The remaining codes used by leaders were: behavior data, teacher supports, placement/grouping, data usage, "hire an adjustment counselor", and "monitor IEP goals". One leader stated, "We have a data committee that meets once a month and we have been looking at discipline data and how we can curb our suspension numbers." This response was action-oriented. This leader used data to make decisions about their students. Three participants used "teacher support". For example, one participant

stated, "To help teachers determine instructional strategies for classes." This response was a higher-level response because this leader used data to help their teachers. Three participants used "placement or grouping" in their responses. For example, one participant stated, "All students complete NWEA progress monitoring-3 a year for reading and math. Data teams meet regularly to review progress and discuss appropriate interventions and grouping." This response was also a higher-level response because it provided a data collection tool, a set time line, progress monitoring, interventions, and how they used data to make decisions about tiered instruction for students.

One participant used "hire an adjustment counselor". They stated, "Utilized data to hire additional adjustment counselor to support students with special education needs as well as develop specific support class and support system." This response was an accurate example of how leaders should use data. This response used data to make change that students need. It was systematic and exemplified supports for both students and staff. Finally, one participant used "monitor IEP goals." This leader stated, "progress monitoring of IEP goals". This was one of only a few responses that mentioned special education. This response was an accurate example of how leaders should be using data.

Definition of data collection. Another way I examined the quality of the responses was to compare the responses with definitions from the literature. The definition I adopted was "take data from screening tools and then create goals and benchmarks to establish standards. Data should be used to provide an accurate picture of student performance, interpret and validate school curriculum, make meaningful

instructional changes for students, establish and manage increasingly intensive tiers of

support, and evaluate the process at all tiers to ensure the system is working"

(www.rtinetwork.org). Leaders inconsistently aligned their responses to the definition

and none provided a response that completely aligned to the definition. Out of the forty-

two responses, twenty leaders used data to monitor progress. Seventeen leaders used

data to determine baseline student academic performance, and twelve participants used

data to make meaningful instructional changes. For example, one leader stated, "We

collect behavioral data via our student support center that we review bi-weekly to

determine whole-school needs (training for teachers) and targeted behavioral

interventions for students." This response was important because it mentioned using

data to support students and staff. Seven leaders used data for benchmark criteria. Only

four leaders used data to support student behavior or evaluate their instructional

practices, and only two participants used data to evaluate the success of their school

curriculum.

Open-ended response item three regarding tiered instruction. Forty-two

leaders responded to Open Response Item 3, which asked leaders to provide an example

of how they use tiered instruction in their school. The responses were collapsed into

eight major codes that encompassed most of the responses. I examined the number of

leaders by code, as well as the number of times the codes were used. Seventeen leaders

mentioned specific and non-specific "academic and behavior supports", and used such

language twenty-five times in their responses. For example, one leader stated "SEL

class with SPED teacher and Adjustment Counselor, for our most needy special

education students. All day and any time support provided in identified space with

Adjustment Counselor." This response included tiering supports for staff and students, which is aligned to MTSS.

Thirteen leaders used "based on data and monitoring" and used such language fifteen times in their responses. For example, one leader stated, "Our tiered system of instruction occurs within math and ELA curriculum. Students are monitored throughout the year and based on performance and teacher input, are placed or re-placed within a three-tiered setting." This response was higher-level because it included specific subject areas, progress monitoring, and data from students and teachers.

Eighteen leaders mentioned "tiers" thirty times. For example, one participant stated, "Tier 1 - classroom, Tier 2 Title-1 (during scheduled intervention blocks), and Tier 3 SPED (during same scheduled intervention blocks)." This response clearly demonstrated an understanding of how tiers operate in MTSS, but tier two and tier three do not necessarily have to be Title 1 services or special education. Students without learning disabilities can receive tier two services and supports. Another leader stated

In literacy: Tier 1 is regular instruction for all. Tier 2 is additional support in reading and writing for the 15% of students who need more than Tier 1 can provide (this has traditionally been provided via students being assigned to the Learning Center for 1 period per day). Tier 3 is intensive reading intervention with a Reading Teacher 1 period per day. What is missing is accurate progress monitoring and movement of students within tiers. This response more accurately provided how instruction can be tiered for all students. It also revealed some of the real challenges of tiering instruction.

Seven leaders mentioned "based on student needs", and such language was used eight times in the responses. For example, one leader stated, "Meetings to review

students and determine appropriate classroom instruction and interventions or supports." This response included some of the process involved in how to make decisions to tier instruction. This response was higher level because it tiered instruction based on student needs and aligned needs with interventions and supports.

Only one leader used "knowledge of tiered instruction". This leader stated, "We know what to do, but we don't feel like we have the right tools or structures to do it yet." Only two leaders used "special education". For example, one leader stated, "Students who do not make progress in reading are given additional reading instruction, first in an inclusion setting, then in pullout settings, and if no progress is made, they are referred to special education." One leader discussed the schedule they used for tiering. This leader stated, "three times a year for progress monitoring and respond as needed." This response was not accurate. It appears as if they are discussing progress monitoring and not tiered instruction. Finally, two participants used content specific responses. One leader stated, "Data helps drive student focus on who may get Tier 2 and 3 pull out and supports in reading and math." This response was accurate because it mentioned using data to make decisions about tiered instruction. However, tier two supports are not necessarily done in a pull-out model.

Definition of tiered instruction. Another way I examined the quality of the response was to compare the response with definitions from the literature. The definition of tiered instruction is that "Lessons can be tiered according to students' readiness, learning profile, or interests" (Tomlinson, 1999). Out of the forty-two responses, twenty-seven participants included that they tiered instruction based on student readiness. Seventeen participants mentioned differentiating instruction. Only

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three participants stated that they tiered instruction based on students' learning profiles. None of the leaders stated that they tiered instruction based on students' interests.

Open-ended response item four regarding data-based decision-making.

Forty-two leaders responded to Open Response Item 4, which asked leaders to provide an example of how data informs their decision-making. The responses were collapsed into nine major codes that encompassed most of the responses. I examined the number of leaders by code, as well as the number of times the codes were used. Eleven leaders used "provide supports for students" and used such language fourteen times in their responses. For example, one leader stated, "Student enrichment and supports are assigned based upon assessment scores and academic progress through regular data review." This response accurately described how data was used to make decisions about students.

Ten leaders used "instruction" and used such language twelve times in their responses. For example, one leader stated, "Hiring needs, SEL programming, overall course and teacher schedule, faculty meetings, and topics." This response was strong because it showed how data was used to make systematic changes for students. Six leaders used "provide interventions". One leader stated, "It identifies students who are not making adequate academic progress and is the springboard to developing an intervention plan." This response was accurate because it showed how intervention plans are designed around student needs. However, it did not include student behavioral needs, only academic, which is limiting. Four leaders used "staff and student support". One leader stated, "Data helps me know what to focus on with my staff and

with the students I teach." This was a higher-level response that correctly included both students and staff support as part of data-based decision-making.

Only two leaders used "course offerings". For example, one leader stated, "Course offerings because of student needs and academic support classes added based on student needs." Another leader stated, "We use the data in collaboration meetings", an incomplete representation of data-based decision-making. One leader stated, "Data teams meet 3 times per year to go over student data, form intervention groups according to data, and progress monitor between data catches", a much more thorough, and in-depth response. Only one leader mentioned special education. The leader stated, "Students who are unable to make progress are considered eligible for special education through learning disability laws." This response very broadly discussed the student identification process but did not overtly mention the relationship between special education and MTSS. One leader used content specific information in their response. This leader stated, "Our MCAS data has been flat, as well as our DIBELs data so our team revamped our literacy plan to address this data." This response was a good example of data-based decision-making. Very few leaders provided responses that connected data-based decision-making with special education or courses they teach. The majority of leaders used data to make decisions about instruction, interventions, and supports for students.

Definition of data-based decision-making. Another way I examined the quality of the responses was to compare the responses with definitions from the literature. The definition of data-based decision-making is: A structured problem-solving process and integrated data-collection system, based on the RTI and PBIS

approaches, is utilized at each tier of the model. The effectiveness of instruction at each

tier is determined by collecting data about students' progress in a recommended

monitoring schedule. With its emphasis on evidence-based instruction and

collaborative, iterative problem-solving, MTSS acknowledges that instruction and/or

contextual issues, not student inability, could be the reason why students are not

learning (Higgins, Averill, & Rinaldi, 2011).

Twenty-two leaders used data to make decisions about academic instruction. For

example, one leader stated, "Grade Levels meet frequently to review data to drive

where student instruction focus needs to be." Nineteen leaders collected data about

student progress on a monitoring schedule. For example, one leader stated, "We

examine the results after each assessment period and determine intervention groupings

at each grade level." Fifteen leaders used a structured problem-solving process as part

of their data-based decision-making. One leader stated, "Monthly data meetings at each

grade level." Fourteen leaders reported they have an integrated data collection system.

For example, one leader stated, "Discipline data drives PBIS boosters." Leaders used

data to make decisions about instruction, progress monitoring, and solving problems,

but twelve leaders gave incomplete responses and only two leaders emphasized using

data to change instruction or support staff in ways that will positively impact students.

More leaders emphasized a focus on students' deficits rather than using data to improve

instruction.

One leader reported they didn't use data. Another leader said they didn't have a

good data collection system. These responses were concerning because data is what

drives decisions about supports that staff and students need. If some leaders are not

using data, or not creating effective data collection systems, then they will not be able to improve the progress of their staff or students.

Open-ended response item five regarding research-based interventions. Forty-two leaders responded to Open Item 5, related to their use of research-based interventions. The responses were collapsed into ten codes. Fourteen leaders mentioned specific intervention tools thirty times in their responses. Most of the responses were similar to this leader who stated, "Our staff has training in Wilson, Foundations, and Orton-Gillingham". This leader had trained their staff in tools, but it is unclear if the tools were being used correctly and with fidelity. Most leaders were able to name some research-based interventions tools or assessments but did not explain how they used them.

The rest of the codes received had very few responses. These included differentiation, instruction, content specific, track time and fidelity, PD, testing interventions progress monitoring, UDL, planning, and meetings. One leader mentioned using co-teaching classes to support all learners. Leaders lacked understanding on how to use research-based interventions.

Definition of research-based interventions. I also compared the responses to definitions from the literature. The definition I used was; "contains explicit description of practice, a clear definition of the setting and implementers who use the practice, identifies the individuals who are expected to benefit, and includes the specific outcomes expected" (What Works Clearinghouse, 2008). Sixteen leaders provided an academic example of a research-based intervention. For example, one leader stated, "This year we will be using Wilson Reading for our Tier 3 reading intervention." This

statement did not specify in detail which staff were using Wilson Reading or the outcomes expected. Twelve people gave an example of a research-based intervention but did not mention how they used it. One leader stated, "SEL programming." It is unclear what SEL practice this leader used, the setting, the implementers, the individuals that would benefit, or the outcomes expected. Ten responses demonstrated a lack of knowledge about research-based practices. One leader stated, "I don't think I use research-based interventions in my classroom." Only six leaders gave a clear definition of the settings and implementers who used the practice. One leader stated, "Our reading specialist bases her instruction on Orton-Gillingham methods; our clinical team utilizes CBT-based techniques for intervention and support." Only five leaders provided an explicit description of their research-based practice. One leader stated, "We use DIBELs as a pre-screener for Title 1 intervention." Only three leaders mentioned a research-based behavior program and only one leader mentioned a research-based social skills program.

The majority of leaders were unable to clearly explain how they used research based interventions. In the field, research based interventions are the same as evidence based interventions or practices. Some leaders may be confused about the different terms. Leaders did not have a strong understanding of how to use research based interventions for academic learning, and very few leaders knew about research based interventions for behavior.

Open-ended response item six regarding universal screening. Forty-two leaders responded to Open Response Item 6 regarding universal screening. The responses were collapsed into six codes. Twenty-four leaders described specific tools

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and approaches they used. The majority of leaders named tools and approaches instead of how they used those tools to conduct universal screening. Most leaders mentioned tools like STAR, Fastbridge, depression screening, DIBELS, Reading Street, Go Math, AIMS WEB, benchmarking, and SBIRT, but did not describe the use of those tools. Seven leaders described specific content or skills. One leader stated, "This will be used this year at the middle school level to identify those at risk for reading difficulties." This response did not explain how the universal screening will be done. The response also did not describe a specific skill.

The remaining four major codes were guidance, progress monitoring, interviews, and instruction, and they had few responses. One leader stated, "completed through the guidance department." Another leader stated, "they use universal screening for benchmark testing 3 times per year along with weekly and bi-weekly progress monitoring." This was one of the strongest responses because it explained how they actually used universal screening and provided a frequency. Another quality response was,

We screen all students for reading assignments and writing samples at the start of every year. We use the Landmark College Readiness Assessment to determine the skills that students will need to transition successfully to college through guidance interviews with students & parents. This response indicated the leader used universal screening to find out what supports students needed to apply and get into college. Finally, another leader stated, "Benchmarks and formatives to assess where students are and design instruction accordingly." This response is accurate because it provided detail

on how they used their universal screening to help them design instruction that students need.

None of the responses mentioned universal screening of staff to support and improve their instructional skills and relationships with all students and staff. It is also important to note that this open response item received many responses that did align with the question. Responses from seventeen leaders revealed that they did not understand the value of universal screening. One leader stated, "I don't think universal screening is applicable in our setting." Another leader stated, "I do not use universal screening." Two other leaders stated they do not know what universal screening is. The lack of knowledge about universal screening was concerning because it is one of the foundational and initial practices that must be used to effectively implement MTSS. It is also one of the best practices to be used for staff and students to gather information about their skills and to identify areas for improvement.

Definition of universal screening. A definition of universal screening is, the first step in identifying who are at risk for learning difficulties. It is a mechanism for targeting students who struggle to learn when provided a scientific, evidence-based general education. Universal screening is typically conducted three times per year. Universal screening measures consist of brief assessments focused on target skills that are highly predictive of future outcomes" (Jenkins, Hudson, Johnson, 2007; Jenkins, 2003).

Seventeen leaders mentioned academics in their responses about universal screening. For example, one leader stated, "This will be used this year at the middle school level to identify those at risk for reading difficulties." Six people included how

many times they do universal screening. One leader stated, "that is done in kindergarten and upon entry for all students." Only four leaders mentioned universal screening for behavior and only one person mentioned universal screening for social skills. Since half of MTSS is PBIS or SEL, it was concerning that few leaders mentioned this.

Focus groups about leaders' experiences implementing MTSS. I asked the six educational leaders in the focus groups about their experiences implementing MTSS. Focus group questions 3 and 4 provided responses to research question 2, regarding leaders' experiences implementing MTSS. Focus Group Question 3 asked leaders, why do some leaders not feel well prepared to lead universal screening, progress monitoring, and data analysis and decision-making? What training or support would they need to be well prepared?

The codes for focus group question 3 revealed leaders did not receive training in data collection or other parts of MTSS and the information about MTSS that was available was not easy for leaders to teach to their staff. Leaders did not have time to create PD on MTSS for their staff, they lacked expertise in MTSS, and teachers were not being given leadership roles to support leaders to implement MTSS in the schools. The code included the following descriptors: training is missing in data collection and universal screening, teachers and leaders need the same training, leaders' training is not user-friendly and is too time consuming, leaders have to teach themselves, leaders may misunderstand MTSS, new leaders are overwhelmed, leaders have to know too much, schedule conflicts prevent training, and teachers can lead.

Leader 1 stated, "Progress monitoring training and data based decision making are based in other frameworks besides MTSS, but universal screening is more specific to MTSS". This statement was not correct because universal screening is part of PBIS and RTI. Trained leaders should know that baseline data or universal screening is a part of high quality instruction for students and high quality instructional leadership for staff. Leader 3 stated, "Leaders and teachers get different training…Leaders need training in data analysis, progress monitoring, and what it looks like in the field between teacher and student". This statement revealed that leaders and staff were not getting the same training. Therefore, leaders and staff did not have the same skills or knowledge to work together to help students be successful. Leader 4 stated, "Maybe new leaders. Leadership and MTSS are a lot to take on. The role and with everything they are learning and the changes, the shifts, and taking that data and interpreting it and then presenting it to staff and then it's selling it too. You gotta sell it and get buy in". This leader pointed out that new leaders were overwhelmed with everything that they had to know and do, therefore more complex initiatives like MTSS were not implemented. Leader 5 stated, "We are having growth pains about using things… and there's a lot of frustration in that learning curve about figuring out how to use it and what we are assessing to access the data once it's uploaded, and that's a lot of hurdles to get over before you get to the point of assessing what we are doing wrong". This response exemplified leaders struggles to fully understand everything they needed to know and do, especially in regard to data collection and use. Leader 6 stated,

> As an administrator you are looking at it at a different level. If we are expected
> to teach the teachers I want you to show me what it looks like. Show me the

actual practical application in the classroom so I can do it. Let me see a model of

this. Right now, we are making the instructional materials for our staff all by

ourselves. It's so much work for us just to facilitate our school moving forward.

This response was common amongst the leaders in the focus groups and it is important

to understand. Leaders were not given high quality instruction or PD in initiatives like

MTSS, and therefore struggled to lead their staff to implement MTSS. In order for

teachers and students to receive high quality training and instruction, the leaders of the

schools must be given high quality instruction first. Leaders need high quality training

in MTSS that is packaged and designed so that they can easily and effectively role it out

to their staff and students.

Focus Group Question 4 asked leaders, what training would the school leaders

want who did not feel well-prepared to implement PBIS? Should this take place in

training programs? Why doesn't this training take place? The code for focus group

question 4 was leaders' misunderstanding of PBIS and school-wide systems. The code

included the following descriptors: lack of leadership training; getting staff to do PBIS;

PBIS is not special education; training is expensive; and use staff to do PD.

Leader 1 stated, "People pull parts out but do not have the bigger system of

MTSS in place". Many leaders in the focus groups spoke specifically about their

knowledge and experience with PBIS or RTI, but very few leaders had knowledge and

experience with MTSS. Leader 3 stated, "MTSS is not a top priority because there are

so many initiatives to train leaders that they may defer it to others". Many leaders in the

focus groups were not using MTSS in their schools. Leader 2 stated, "There is a lack of

training on systems –what systems are and how they go together". This response was

evident amongst the leaders in the focus groups. They spoke of parts of MTSS but not how all the parts fit together to make the system of MTSS. For example, leader 6 stated, "Our numbers at our school are down significantly from what we had…we have implemented the PBS model". Leader 4 stated, "We have the pyramid model at the preschool level. We do quite a bit of PBIS. We are a PBIS district and we are doing it all day long in every building. It's a district wide initiative in our district. It's not just a special education thing. That's the bottom line".

If leaders were not given high quality PD or training directly, then districts and schools hired consultants to provide training. This outside training was expensive for smaller districts. Leader 6 stated, "I came from a smaller district where if you don't collaborate with other districts for the trainings then it makes it prohibitive for one district to afford PD. To hire consultants is oodles of money. Smaller districts have trouble with that."

Summary of Leaders' Experiences Implementing MTSS

Sixty percent of leaders did not have primary responsibility for implementing RTI/MTSS. Thirty-eight percent did not think their schools were implementing RTI/MTSS effectively. Forty-eight percent of leaders gave non-specific approaches in their open responses to how they use data collection in their schools. In open response item two, most leaders reported they had data but didn't apply it. Most leaders used data to provide supports for students. Few leaders used data to support staff, provide courses for students, monitor student progress, or determine eligibility for special education. One leader stated they did not have a good data collection system. One other leader stated they did not use data enough. In general, leaders did not use data to

support students' behavioral needs or to evaluate their own systems. They had weak data collection processes and did not understand that data collection was for all students. Finally, leaders' knowledge of system level data collection was poor. Leaders did not receive training in data collection or other parts of MTSS, and training was not easily transferred to staff.

Most leaders understood tiered instruction because differentiation has been around for long time. Leaders claimed to tier instruction to meet students' academic and behavior needs. However, only three leaders tiered instruction based on students' learning profiles. Leaders knowledge of tiered instruction as part of a bigger system was also poor. They did not have a solid understanding of progress monitoring and how all the pieces of MTSS function together. Some leaders were confused about which tier special education existed in, a major deficit in their knowledge. One leader provided supports to students as part of their data-based decision-making processes. Most of the supports provided were academic, with few behavior supports mentioned. Leaders knowledge of system-level data-based decision-making was weak. Most leaders knew what academic research-based interventions were, but few mentioned how they used them. Few leaders mentioned research-based behavior interventions. Most leaders emphasized the academic components of MTSS and not the behavioral components of MTSS. Many leaders named universal screening tools for academics, but few mentioned universal screening tools for behavior or social skills. Leaders did not understand the systemic connections and usage of universal screening for staff and students. They also did not use universal screening for behavior very often.

Leaders understood parts of MTSS but did not understand MTSS as a system. Leaders did not receive adequate training in MTSS or school-wide systems. They reported a lack of adequate formal training in MTSS. They understood individual components of MTSS but did not know how the entire system functions as a cohesive unit. Some of the challenges leaders faced in getting training included, (1) they did not have the time to get the training, (2) training was not easily accessible for leaders to get and understand on their own, (3) training was expensive for small districts. In order for MTSS to become a central element of schools, the state and leadership training programs need to provide high quality training that is easily accessible for all leaders to do and easy to implement in their schools. Leaders need to be provided with the instructional, tiered supports of MTSS at the administrative level, so they can successfully implement MTSS with their staff and students.

Research Question 3: MTSS Training Leaders Have Received

Survey items. In the close-ended survey results, question 15 to 17, more than half of the leaders agreed they had adequate formal training on RTI/MTSS. However, almost half of the leaders disagreed that they had adequate formal training on RTI/MTSS. This discrepancy is important to understand. Some leaders reported they received adequate formal training in MTSS and some reported they did not receive adequate formal training in MTSS. Most of the leaders did not think their university courses provided them with training in RTI/MTSS. However, most leaders reported they were getting PD on RTI/MTSS. These findings indicated that leaders have received different training in MTSS, mainly from PD and not from university courses.

Additionally, with the limited information available on MTSS from the state, leaders may not have known what adequate formal training in MTSS looks like.

Focus group responses to the MTSS training they received. I asked the six focus group participants about the training they received in MTSS. The major code for focus group question 2 was leaders' knowledge of MTSS implementation. The code included the following descriptors: lack of knowledge on MTSS implementation; lack of training for leaders; MTSS is not a priority; use resources creatively; staff resistance; and schedule challenges.

All of the leaders stated, **"Training is missing. None of us were trained"**. Leader 5 stated, **"My district is focusing on UDL not MTSS"**. None of the leaders in the focus groups were trained in MTSS, and some districts had other priorities like UDL, instead of MTSS. Leader 1 stated, **"We want a tiered system where we are one full system. We are not doing implementation effectively, but we started implementing it"**. This response showed that leaders were attempting to implement MTSS but were struggling to do it correctly. Leader 2 stated, **"We need a model, components, plug and play, but it doesn't exist"**. Leaders need high quality training and support to implement MTSS. Leader 3 stated, **"When I am in the field, I would not say 60% are using it effectively or even 60% know what MTSS is"**. Leaders were not seeing MTSS happening. Leader 4 stated, **"We have been relatively successful developing different kinds of programs implementing different curriculum and using available resources like staff, or creative planning like schedules, or whatever else. It's all about using your resources most effectively. It's going from *my* students to *our* students"**. This leader made the point that MTSS can be done if all staff get on board to do it together. Leader 6 stated, "We have

some teachers that you want to give them positive feedback, but they are resistant because they think it's an attack on them, rather than me helping them. People are resistant. They are set in their ways". Some leaders were experiencing push-back from their staff when new initiatives like MTSS were being rolled out. Leader 4 stated, "I feel like we are supported we are being trained, we are going to a class and I feel very supported. Honestly, I feel I support staff as well, so it's not just about me, but it's about supporting teachers and staff." This response emphasized the need for leaders to support and train their staff. Leader 6 stated, "Finding a common planning time… I see that as an issue". Some leaders did not have flexible schedules or time to work with all of their staff. For example, leader 5 stated, "We've done trainings with our paras and they complain about never having the chance to talk to teachers about what they should be doing".

Summary of the Training Leaders Have Received in MTSS

Since the state offers limited formal training to leaders in MTSS, leaders were left on their own to make sense of MTSS and teach their staff about MTSS. Without a formalized system to train leaders in MTSS, schools and districts are getting different information about what MTSS is. Some leaders were not getting any training in MTSS. Most of the training leaders were receiving was coming from PD, and not from universities. If Universities can offer training in MTSS as part of leadership training programs, then more leaders will have the skills to implement MTSS in their districts. The training needs to be high quality, so leaders can easily teach it to their staff, it must also be accessible to leaders, so they have the time to do it correctly and the funds to

pay for it, and leaders need tiered supports to implement it successfully with their staff and students.

Research Question 4: Leaders Preparedness to Implement MTSS

Survey items. In survey question nineteen, more than half of the leaders agreed that they felt well prepared to implement RTI/MTSS, while a third did not feel well prepared to implement RTI/MTSS in their schools. In four of the five questions about leaders' perceptions of their ability to lead different parts of RTI/MTSS, the majority of leaders felt prepared. Leaders' abilities to lead universal screening was evenly split between those who felt well prepared to do it and those who felt not well prepared to do it. These findings indicated that most leaders felt prepared to implement all of the parts of MTSS except universal screening.

The eight close-ended questions, questions 25-32, that comprised the final section of the close-ended survey were questions about the leadership skills needed to lead RTI/MTSS. The majority of leaders agreed that in order for leaders to implement RTI/MTSS successfully, (1) leaders need expertise in RTI/MTSS, (2) leaders must train their staff in RTI/MTSS, (3) leaders must create an RTI/MTSS leadership team, (4) leaders must communicate and reinforce the expectation of data-based decision making, (5) leaders must schedule "Data Days", (6) leaders must provide instructional and intervention support to staff, and (7) leaders must create frequent opportunities to celebrate and communicate success.

Focus group responses about leaders' preparedness to lead MTSS. I asked the six focus group leaders focus group question 5, which asked leaders what is needed to give school leaders the necessary supports to train and prepare teachers and staff to implement MTSS? Are these skills provided in leadership training programs? What should leadership training programs do to prepare school leaders to train teachers and staff?

One of the major themes for focus group question 5 was district and state commitment to do MTSS and provide high quality training to all staff. The following descriptors comprised the theme: leaders committed to do MTSS, the state needs better information on MTSS for leaders, accountability for MTSS is needed, administrative licensure needs improvement, different programs need different standards, a common language is needed, leadership training needs to be more accessible to leaders, teachers can be leaders, resources matter, and leaders have competing priorities which impact training.

Leader 1 stated, We want one system of support. We need to do it with the entire administrative team and they all need agreement on a clear understanding of what MTSS looks like in the district. It has to be the chosen initiative to get everyone on board, and MTSS is getting there. You would have to say MTSS is part of the expected system and everything else is under it. We can't have silos. We take so much time on emergencies and we need to spend time changing the system. It won't happen unless everyone is on board-unless it is our only focus…DESE needs more than a link in the special education department webpage about MTSS. We need a clear understanding of what MTSS is and how to do it. Special education is not MTSS.

This response clearly made the case for getting district and school leaders on board to do MTSS together. This leader was asking for MTSS to be their district's priority because it can improve schools. This leader was also asking for better information at the state level to support leaders to implement MTSS successfully.

Leader 3 stated, "I am wondering if at some point there will be an accountability data component that includes MTSS. Then everyone will take notice of it. It should be part of the educator evaluation system". This response recommended that leaders be held accountable to do MTSS. Then all leaders would do it because they had to. One way to hold leaders accountable is to make it part of leaders' evaluation systems.

Leader 1 also stated, "We need to make MTSS as common as differentiation". This response emphasized the need to educate people in the field about MTSS, so more people know about it and use it. There may be fear associated with MTSS because people have not been trained in it.

Leader 6 stated, "If something is already prepared for us as administrators, and that is something that we actually could edit to suit the needs of our own staff, where we can add things to an existing program, that would be so much easier. It's all about the time". This response made an important point about providing leaders with high quality training in MTSS that they can easily differentiate and modify to meet the needs of their specific schools and staff. Training cannot just be one day. Leaders need to be given the time to learn all the parts of MTSS and how the system functions as a whole. They also need to be taught how to train their staff in MTSS and implement it with their students.

Summary of Leaders Preparedness to Implement MTSS

Most leaders felt prepared to lead MTSS and all of the different components of MTSS, except universal screening. Leaders knew what leadership skills were necessary to lead MTSS. Leaders wanted district and state commitments to provide high quality training and information on MTSS. Training needs to be accessible for leaders and leaders need to be held accountable to do it. Leaders lacked understanding in universal screening, which is one of the most important, fundamental, and initial practices that needs to be in place to implement the larger system of MTSS for students and staff. Additionally, leaders lacked a complete knowledge of MTSS and they had not been formally trained in MTSS, but yet they felt prepared to implement MTSS. Perhaps the culture of school leaders is one that has been deprived of high quality training for so long that leaders actually accept low quality training and accept getting whatever limited training the state gives them. When leaders finally get formal training in MTSS, maybe then they will realize they deserve better training and supports to lead schools, and they will demand high quality and sustainable training for themselves.

Research Question 5: Training and Support Educational Leaders Need

Open-ended responses. Twenty-two participants responded to Open Response Item Open 7, that asked leaders what they would like more training in. The responses were collapsed into ten codes. Nine leaders stated they would like training in MTSS. For example, one participant stated, "I would like more training for my staff and for general education teachers in the implementation of RTI/MTSS as it pertains to 9th-12th graders." This response did not mention that the leader wanted training in MTSS nor did it clarify if they wanted training in RTI or MTSS. This leader thought RTI and

MTSS were the same thing. Four leaders wanted training in different interventions. For example, one participant stated, "PBIS initiatives and the roles of various staff people at the high school in carrying out tier 2 and 3 interventions." Again, it is interesting that this person also did not mention MTSS, but PBIS. It appears that leaders still are struggling with understanding that MTSS is made up of RTI and PBIS. The major codes that received very few responses were progress monitoring, data-informed decision-making, inclusion, PBIS, universal screening, assessment tools, staff training, and what the district wants. It is assuring that one leader did request training in universal screening, which is training leaders need. Two responses were very general. One person wanted "staff training". Another person stated, "In all the specifics of what the district wants to happen." These two responses were very vague. Perhaps these leaders are not passionate about their own training, or perhaps they have never had a choice and did not know how to answer this question.

Focus group responses about the training leaders want. I asked the six leaders in the focus groups focus group question 6, which asked them what training they need in MTSS and what it should look like? One of the main themes for focus group question six was in-depth training aligned to meet students' needs that cover RTI, PBIS, and SEL. The following descriptors comprised this theme: on-going trainings that provide conversations and sharing best practices, MTSS integrated into EPP plans, an MTSS Leadership Academy, district commitment, flexible staffing, training that stays current, RTI training, and PBIS training.

Leader 3 stated, "A total, very comprehensive, in-depth training, or information building, or education, around the components of MTSS, as opposed to skirting on the

surface of it. I would love to see one component where one piece is extracted, and training goes very deeply". Leader 3 continued and stated, "The training would be a full day of videos, conversations like watching teachers do progress monitoring and then we evaluate what we see as actual good progress monitoring. We can develop what good progress monitoring is. I would like to see in depth trainings diving deep with lots of collegial conversations about how other leaders are managing to train teachers in it". This response made it clear that this leader wanted in-depth training to understand MTSS fully. This leader also wanted training in each component of MTSS, along with working with other leaders to make sense of it. Additionally, leader 2 stated, "A leadership academy, on MTSS, over the course of the school year. Do some deep dives into topics each day and identify what exists and does not exist in your system. Hands on training and a road map you can customize to your district and school". This response suggested training that is hands on with a planning guide, that can be customized to specific schools and districts.

Leader 1 stated, "An educational plan, that defines the system of support, so you submit a specific implementation plan for MTSS for each student's accountability. We need an expectation of what intervention of MTSS looks like". This response made the suggestion to integrate MTSS into existing systems that support students to make progress.

Leader 1 stated, "How do I get everyone on board first? We need one clear understanding". This response emphasized the need to get district and school leaders on board to make MTSS happen. Additionally, a common language would help synthesize

district and staff understandings of MTSS, which will support successful implementation.

Leader 5 stated, "Staffing models that promote flexible groupings". This response mentioned the importance of time and schedules to make MTSS happen.

Leader 6 stated, "One thing I would like to see more of is with the RTI model is behavior management training and how to help the teachers, because our demographics are changing, we have a lot of children in crisis". Additionally, leader 4 stated, "Our RTI model needs some work. Absolutely. Our numbers for special education referrals are too high". Both of these responses specifically mentioned RTI, but not MTSS or PBIS. These responses exemplified a lack of system-level knowledge about MTSS.

Summary of Training Leaders Need

Leaders wanted high quality training in MTSS, that is easy for them to understand, and easy to get their staff to do. They wanted training that is in-depth, customizable, aligned to meet students' needs, and covers RTI, PBIS, and SEL. Leaders wanted on-going trainings that provide conversations and share best practices. They wanted MTSS integrated into other initiatives. Leaders wanted an MTSS Leadership Academy with training that stays current. Some leaders' responses did not include MTSS at all, and mentioned RTI, PBIS, interventions, or progress monitoring specifically. None of the leaders mentioned training in leading system-level initiatives like MTSS.

CHAPTER V

DISCUSSION

This MMSE study was designed to understand Massachusetts' school leaders' knowledge, experience, and readiness to implement MTSS in public schools. This study examined the perspectives of Massachusetts' school leaders regarding their knowledge of MTSS, which provide school leaders with the most current skills they need to lead their schools today. Specifically, this study looked at whether school leaders perceived themselves as knowledgeable and prepared to implement MTSS in their schools. My study did provide conclusive answers to each of my research questions, and also provided new insights about school leaders and the quality of training they receive.

Summary of Findings

I found that the leaders did not have substantive knowledge of MTSS. This covered a range of aspects of the MTSS model. School leaders lacked a clear understanding of the basic elements of MTSS like universal screening. They were generally unable to correctly define MTSS, and the knowledge of MTSS (for most leaders) was limited to a more superficial understanding of one or more elements of MTSS, consistent with Spanneut and colleagues (2012). In general, the leaders lacked a comprehensive understanding of the model itself, or of the ways that specific elements of the model functioned within a systematic approach. The school leaders were also not well prepared to implement MTSS, although they differed with respect to their own perceptions of preparedness. Most felt prepared to implement MTSS, consistent with Spanneut and colleagues (2012), but didn't appear to possess the necessary knowledge and skills to successfully implement the model. One of the major shortcomings was the

school leaders' limited understanding of the importance of assessment, like universal

screening, as a driving force behind all MTSS models. This is a novel finding. While

most of the school leaders were able to identify different assessments that were used in

the schools, they generally lacked an understanding of the relationship between

assessment and instruction for staff and students, along with assessment of students'

social, emotional, and behavioral skills. Subsequently, their perceived models of MTSS

weren't based on data-based decision-making, or research-based interventions, which

are fundamental components of MTSS (Higgins, Averill, & Rinaldi, 2011).

The school leaders also indicated varying levels of training and support. The

majority needed additional training, and they cited the lack of training on the part of

their teacher training programs as one of the issues. This was consistent with prior

research (Bineham, et. al., 2014) and was also consistent with my review of the

leadership training programs, which were devoid of training on MTSS, RTI, or PBIS.

Although many of the school leaders reported that they completed their programs prior

to MTSS, most did complete their programs during the time when RTI and PBIS were

being implemented in schools nationally. The school leaders seemed focused on the

notion that MTSS was a novel and unique model as opposed to a combined model of

tiered interventions that was essentially combining RTI and PBIS models into an

integrated approach to student learning. This finding was surprising because it revealed

a major shortcoming in the leaders' understanding of how MTSS developed as a policy

initiative that unified RTI and PBIS models. Nonetheless, most leaders also failed to

receive any adequate training on RTI or MTSS, a major gap in their educational

experiences. One of the greatest concerns was that many of the school leaders explained

that they had to teach themselves about MTSS. Considering their limited initial

knowledge and understanding, such an approach will likely contribute to inconsistent

and inaccurate implementation of MTSS models.

Research Question 1: Leaders Knowledge of MTSS

With respect to Research Question 1, "What are school leaders' in rural counties

in Western Massachusetts current knowledge of MTSS implementation?" I found the

majority of leaders felt knowledgeable about RTI/MTSS despite the lack of training

most of them have received. Few leaders understood that MTSS is a system of multiple

tiers to support the academic and behavioral needs of students, along with the

instructional and training needs of staff. This was consistent with McHatton (2010). All

of the leaders in the focus groups were experienced leaders and they believed that their

age could have something to do with their lack of knowledge around MTSS. When

they were in their graduate programs, MTSS did not exist. Some leaders seemed

confused about the relationship between MTSS, RTI, PBIS, and special education.

However, school leaders were generally able to accurately or adequately define MTSS,

consistent with Dulaney (2013). The lack of knowledge leaders had on MTSS is a result

of leaders not receiving formal training in MTSS. Most leaders knew what MTSS was,

but they did not know how to implement it.

The findings were consistent with the majority of leaders in the studies who

reported that their training programs and PD did not provide them with the practical

skills or school wide supports they needed in special education, data analysis,

monitoring and evaluating programs, and aligning policies and practices. Furthermore,

leaders in the studies stated that they received little training in special education and

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RTI (Gumus, 2015; Bustamonte & Combs, 2011; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Braun et. al., 2011; Edmonds et. al., 2005; McHatton et. al., 2010; Eddy & Rao, 2009; Spanneut et. al., 2012). Dulaney's (2013) study showed that most of the superintendents did not understand the MTSS language, since they did not have a state-wide focus on MTSS. A gap exists between RTI materials being provided and its alignment with the state's definition and vision of RTI implementation (Mohammed et.al., 2009).

Leaders need high quality training to have the knowledge and skills required to provide quality leadership in schools. The findings were inconsistent with Darling-Hammond (2007), who made the point that leaders need career-staged training in specific skills that are explicitly imbedded into the larger systems like MTSS and special education, so they understand the bigger picture. All of the authors from my literature review made strong arguments that investment in leadership training is imperative to improving schools.

Research Question 2: Leaders Experience Implementing MTSS

With respect to Research Question 2, "What experience do these school leaders have with implementing MTSS?" I found most of the leaders didn't have primary responsibility for implementing RTI/MTSS. This was consistent with Bineham (2014). Leaders knowledge of data usage, tiered instruction, and researched-based interventions was limited. This was consistent with Spanneut and colleagues (2012). Leaders knowledge of tiered instruction as part of a bigger system was weak. Some leaders were confused about which tier special education exists in. Leaders knowledge of system-

level data-based decision-making was also weak. They didn't connect all of the parts of MTSS into one system. This is consistent with Dulaney (2013).

Most leaders emphasized the academic components of MTSS and not the behavioral components of MTSS. Many leaders named universal screening tools for academics, but few mentioned universal screening tools for student behavior and social skills. Leaders did not understand the systemic connections and use of universal screening for staff and students. Leaders did not understand that MTSS supports both the academic and behavioral progress of all students. These findings make me wonder if staff are not getting trained to address students' behavior needs, then this may be why staff are having so many challenges meeting students' behavior needs.

Leaders had limited knowledge of MTSS which is a direct result of the lack of training they had received in MTSS. These findings were consistent with Spanneut (2012) who examined the self-identified professional development needs of a population of public school district building-level principals in New York State. The authors emphasized the importance of principals being trained in practical knowledge of current effective practices. Due to the fact that the leaders received no training in MTSS, their experiences implementing MTSS effectively were limited.

These findings were inconsistent with Mellard (2012) and Bineham (2014) who examined principals, general education teachers and special education teachers' perceptions of the implementation practices of RTI. The authors of the two articles highlighted the importance of principal leadership in implementing RTI. Principals who led RTI, had better systems of RTI in place.

Research Question 3: Training Leaders Received in MTSS

With respect to Research Question 3, "What training on MTSS did these school leaders receive?" I found leaders wanted training in MTSS implementation. Formal training in MTSS does not currently exist. The information that the state of Massachusetts has on its website in regard to MTSS, is not easy for leaders to understand or teach to their staff. On the website, MTSS is put with the Special Education information, which confused many leaders. The gaps and inconsistencies in the information leaders were provided on MTSS was problematic. This is consistent with Mohammed (2009). Training was not easily accessible for leaders to get and understand on their own. The leaders in the focus groups were all leading different initiatives in their schools and districts. Only one of the leaders in the focus group was currently trying to train her staff in MTSS. All of the leaders in the focus groups said they had never received training in MTSS. Leaders faced many challenges like limited resources, schedule conflicts, staff resistance, and training obstacles that impacted the training leaders received, and the training leaders could give to their staff. Since the state did not offer formal training to leaders in MTSS, leaders were left on their own to make sense of MTSS and teach their staff about MTSS, if they were motivated to learn about it. Leaders training needs did not seem to be a top priority for the state, universities, districts, or schools. Leaders did not seem to have a voice in getting the training they needed at the state, university, or district levels. This is a novel finding. Leaders simply took the PD they were given and did their best to fill in the gaps with their own understandings. PD and formal training for leaders needs to be looked at more

closely and redesigned, to ensure that all leaders are getting high quality training in current initiatives like MTSS.

These findings were consistent with the authors in my literature review who showed that collaboration and commitment of educational leaders and staff is needed across states, universities, and districts to align policies, licensure requirements, PD, and evaluation systems to build quality sustainable preparation programs. Leaders need courses and on-going PD in current initiatives like MTSS and special education, and the specific skills required to lead these initiatives in their schools (Gumus, 2015; Bustamonte & Combs, 2011; Fields & Egley, 2005; Darling-Hammond et. al., 2007; Vogel & Weiler, 2014; Braun et. al., 2011; Edmonds et. al., 2005; McHatton et. al., 2010; Eddy & Rao, 2009; Spanneut et. al., 2012). Spanneut and colleagues (2012) showed that leaders were not referencing school reform initiatives like MTSS, but rather specific skills. This could be the result of how leaders are receiving professional development and training, in pieces, rather than as parts of a larger system, like MTSS. This perspective is concerning because although specific skills like data collection are important, MTSS needs a system with clear leadership to sustain it over time.

These findings were inconsistent with Mohammed (2009) who identified that school leaders must identify and build the required expertise-knowledge, skills, and abilities for successful implementation. There is limited and confusing information on MTSS at the state level in Massachusetts. The leaders in my study were unable to clearly identify the skills they needed, and they did not understand system-level implementation. The leaders also did not share any responses in regard to their power, control, choice, and voice in the PD and training they received.

Research Question 4: Did Leaders Feel Prepared to Implement MTSS

With respect to Research Question 4, **"**Do these school leaders feel prepared to implement MTSS?" I found the majority of leaders felt well prepared to implement RTI/MTSS despite the lack of training they had received. This is a novel finding. Most leaders felt prepared to lead the different components of MTSS, except universal screening. Leaders knew what leadership skills were necessary to lead MTSS. Leaders lacked a complete knowledge of MTSS and they had not been formally trained in MTSS, but yet they felt prepared to implement MTSS. Leaders felt knowledgeable about MTSS but, yet they were not implementing it correctly, or implementing it at all. Leaders thought they were implementing MTSS, even though they were only implementing some pieces of MTSS, and not the whole system.

Since the majority of leaders are only doing parts of MTSS, the system is not in place to connect all of the parts, to positively impact instruction and learning for staff and students. Many leaders did not know what universal screening is. Universal screening is the starting point to implementing MTSS for staff and students. If leaders do not know where staff and student's skills are at when they start school, leaders cannot make the decisions required, to provide the appropriate supports, to help staff and students make effective academic and behavioral progress. Leaders and staff needs will also not be known, so targeted PD cannot happen. If leaders are not doing high quality data collection and analysis, the justifications behind supporting some students but not others, becomes very subjective, and students can end up getting blamed for their lack of progress.

These findings were consistent with Dulaney (2013) who found that the capacity of staff and learning communities must be built at every level of the system, so improvement is sustainable. Leaders felt knowledgeable about MTSS but had gaps in their understandings of all of the parts of MTSS, and the system of MTSS. If leaders were trained in MTSS they could implement it effectively.

These findings were inconsistent with Mohammed (2009) who identified the following leadership considerations for MTSS implementation (1) define the roles of general education, special education, and the state department, (2) identify applicable policy at the federal, state, local, and school levels, (3) identify and build the required expertise-knowledge, skills, and abilities for implementation, and (4) construct leadership teams at different levels of administration-state, local, and school. None of the leaders clearly stated any of Mohammad's (2009) considerations as part of their responses in regard to MTSS implementation.

Research Question 5: Training Leaders Need

With respect to Research Question 5, "What additional knowledge, training and supports do these school leaders believe they would need to effectively implement MTSS?" I found the majority of leaders wanted training in MTSS or specific components of MTSS like RTI or PBIS. Research Question 5 received the least amount of responses from the open response questions and the responses from leaders in the focus groups. Many of the leaders in the focus groups wondered if younger leaders were getting training in MTSS as part of the graduate and licensure courses. Thirteen colleges and/or universities that offer a Masters in Educational Leadership in Massachusetts do not offer any specific courses in MTSS. Most of the courses offered

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by these institutions are general leadership courses, law courses, research courses, equity courses, or curriculum courses. Very few programs offered courses in data, building teams of staff, supervision, and building school partnerships. Most of the programs offered general seminars in school leadership. A major concern that stands out from the surveys and focus groups is that there appears to be no sustainable, systematic structure in place to train and develop school leaders in MTSS. Leaders feel prepared to implement MTSS even though they are not trained in MTSS. This is a novel finding. In the culture of educational leaders, do leaders implement initiatives even when they don't know what they are? If this is true, this can negatively impact the progress staff and students can make in schools. Also, do leaders have any voice in the PD they get? There seems to be a divide in what leaders need to know, and what training leaders are given.

These findings are consistent with the four studies in my literature review that included RTI or MTSS (Mellard, Prewett, & Deshler, 2012; Bineham, Shelby, Pazey, & Yates, 2014; Mohammed, Roberts, Murray, & Vaughn, 2009; Dulaney et. al., 2013). They emphasized that in order for leaders to implement and sustain initiatives like MTSS, stakeholders at all levels (state, district, university) must share an investment and responsibility in creating a comprehensive framework for MTSS. The authors of the four studies on RTI and MTSS were clear that these initiatives require leaders trained in RTI/MTSS that can organize staff PD, create leadership teams, and align policies to practice. Additionally, McHatton (2010) discussed that many preparatory programs update their courses but have not reformed their programs overall.

These findings are also inconsistent with the four studies in my literature review that included RTI or MTSS (Mellard, Prewett, & Deshler, 2012; Bineham, Shelby, Pazey, & Yates, 2014; Mohammed, Roberts, Murray, & Vaughn, 2009; Dulaney et. al., 2013) because very few leaders in my study mentioned the different levels (state, district, university) in any of their responses. The leaders in my study also did not mention a shared investment amongst the different levels or the alignment of policies and practice.

Additionally, Darling-Hammond and colleagues (2007) stated the alignment of preparation programs to standards is not sufficient to cultivate and sustain effective leadership, "Robust implementation of the standards through strong, tightly related coursework and clinical experiences, reinforced by a continuum of supports upon entry into the career, appears to be necessary to secure transformed practices" (Darling-Hammond, p. 149). None of the leaders in my study provided a detailed description similar to Darling-Hammond. Many of the responses were very brief and some exemplified leaders that did not care at all about the training they need.

How the State and Institutes of Higher Education Should Respond to the Current Need

High quality, sustainable training for school leaders in MTSS is non-existent. The different levels (state, university, and district) should regularly convene to develop a clear, statewide model of MTSS that includes specific training leaders will receive so they will implement MTSS successfully. Collaborative teams across levels are needed to implement MTSS (Dulaney et.al., 2013). Teams need to do collective inquiry, make

data driven decisions, and participate in on-going PD. Standards for school leaders must include how leaders will be trained to meet those standards.

State, university, and district leaders must adhere to the MTSS principles themselves, and systematically be able to (1) universally screen leaders about their knowledge of MTSS, (2) collect data and make decisions about leaders skills and knowledge of MTSS, (3) provide leaders with research-based interventions to support them to understand and implement MTSS, (4) monitor the progress of leaders MTSS implementation in their schools, and (5) tier PD in MTSS and supports for leaders who need it. Additionally, leaders need job-embedded, and sustainable PD in MTSS that includes an evaluative component to ensure that leaders fully understand MTSS and can successfully instruct their staff to implement it.

The state should develop and implement a formal accountability system and/or incentive system to require compliance with implementation, consistent with mandates for requirements under the IDEA of 2004. Universities need to work with the state and districts to align the MTSS criteria for administrative licensure programs and district-level PD in MTSS. The state needs to provide comprehensive, packaged training materials that are easily accessible to leaders and their staff, with clear steps to implementation at the leadership level, staff level, and student level. These packages should be developed with university training programs in order to establish a consistent and uniform set of MTSS training systems. The training should consider the varied challenges and impediments faced by school leaders charged with implementing MTSS. Guides and training should address the challenges like limited resources, schedule conflicts, and staff resistance, providing strategies and potential solutions.

Future Research

It is important for future studies to look more closely at the quality of training systems educational leaders have received across the different levels (state, university, district), along with how leaders construct knowledge. Are the different levels working together? Training and education for school leaders needs to be systematically aligned between the state, colleges and universities, and school districts. The training needs to be comprehensive and integrated not separate concepts that are not clearly tied together in one system. Training and education needs to be systematically aligned in every school in every district. Otherwise, each level is providing different information to leaders, which is confusing and problematic. Additionally, a solid training structure must be in place to guarantee that leaders will always receive high quality training.

Future studies should look at the amount the state, universities, and districts have been financially investing in training and education of their school leaders. How are leaders creating PD for their staff? Investment must be made at the state, university, and district levels to ensure that training for leaders is of the highest quality. Leaders do not have the time to train themselves in new approaches or recreate their own trainings into trainings for their staff. If leaders' training is high quality and well designed, they should be able to use it for their staff. Training for leaders should mirror the high-quality system of MTSS, using universal screening, tiered instruction, data collection, and progress monitoring. Training should meet the learning needs of all leaders and staff. Low quality training/information materials, and non-existent training in MTSS, were serious barriers in the literature and in the data I collected from the focus groups.

Future studies should also look at how evaluations of leaders are done and what happens with the information that is gathered on leaders. It would be helpful to know what happens when leaders are unprepared to lead. How do leaders know what trainings they need to improve the work they do every day? How do leaders have a voice in getting the training they need? It is important to know what leaders of schools know or do not know, about leading their staff and students. Leaders' evaluations should be tied to current best practices like MTSS, and they should explain what leaders know or do not know, and the training they will be provided to improve.

Research should also conduct training impact studies, to determine if training is resulting in the desired changes in knowledge and skills among school leaders responsible for implementing MTSS. Too many districts are providing PD that is not aligned with best practices and does not include outcomes on whether or not the PD was used, or if the PD positively impacted staff and students. Similar to the MTSS supports staff and students receive, leaders would be provided with research-based PD and training that is high quality. Leaders would be universally screened, and progress monitored, to determine the tiered supports and training they need, to successfully lead MTSS at the beginning of each school year. Consideration and differentiation of supports would be given to leaders based on their education backgrounds, training programs, and years in the field. At the end of each school year, leaders would be evaluated through observations and interviews of staff and students, along with student outcome measures, to determine leaders progress or lack of. New plans to train and support leaders would be developed for the following year. Districts would be held accountable to report their leadership training procedures and practices to the state as

part of their accreditation process. Districts that were able to show solid leadership support programs, would be provided with specific incentives and recognition.

Finally, future studies should examine how MTSS is actually implemented in schools. To date, all of the work completed including this study, have used surveys, interviews, or focus groups to understand leaders' perceptions of MTSS. Considering the current push toward mandated implementation of MTSS, the field needs to evaluate implementation in order to develop effective systems of implementation with associated guides that leaders can use to implement MTSS in their schools and districts. These guides could also be used by the state to monitor implementation. It is imperative for the information on MTSS, and the steps required for successful implementation, to be universally designed for all leaders. Additionally, training and information on leaders should be easy to monitor and modify to meet the needs of all districts and produce clear outcomes on leaders skills.

Limitations

First, my research was limited to educational leaders in western Massachusetts that responded to my survey. The majority of the leaders were principals in elementary schools who were white, female, middle aged, with master's degrees and administrative licenses. I encountered issues with my emailed survey. Some of the school's firewalls prevented my survey from getting to the leaders. A significant number of leaders also changed jobs over the summer or changed email addresses. These issues impacted the number of close-ended surveys that were completed.

Second, some of the leaders in the focus groups also told me that some of the language I used in my close-ended survey questions could have confused people.

Specifically, they mentioned the use of "adequate", "effective", and the combination of RTI and MTSS that I used throughout the survey. Some leaders felt that my terminology was too vague, which possibly led to some of the vague responses. Third, there is a lack of research on leaders' training and experiences with MTSS, so I did not have a large amount of studies to build off of or use.

I was left with questions about leader's lack of knowledge about universal screening, data collection, research-based interventions, and systematic approaches like MTSS. I should have asked more questions about these specific components of MTSS in my focus groups. In hindsight, I also think I should have asked more questions about the PD leaders are currently receiving in MTSS. Additionally, it could have been helpful to know more about the trainings leaders received in PBIS and RTI, to get a sense of what worked for leaders and what did not.

Finally, as much as I tried to use IOA in the scoring of my open response questions, and my focus groups, I need to account for biases that could have occurred. In some of the open responses that were hard to understand, I was able to put them in a more general code and also assign them to my "uninterpretable" category when needed. The focus groups were more straight-forward. My assistant and I checked out the audio recordings, notes, and transcriptions together to make sure there was IOA. In the focus groups I also asked confirming questions after people spoke, to make sure I understood exactly what they were saying.

Conclusion

My research expands our understanding of leadership training. Leaders need formalized, aligned, and sustainable structures established across all levels (state,

university, and district) for training that is current, and easy to access. MTSS starts with training leaders to use the MTSS model at the state, university, and district levels. Massachusetts needs to prioritize training for school leaders in order to improve outcomes for staff and students. ESSA's new mandates may help with this if there is accountability tied to the training leaders receive. ESSA clearly defines the principal as the leader of the school. ESSA focuses on developing effective principals to improve the outcomes of all students. Under the law, principals must collaborate on state and district implementation plans, in a bottom-up, not a one-size-fits-all approach. ESSA differentiates professional learning for principals from professional learning for teachers (ESSA, 2015). Monies will be dedicated to developing better support systems for principals, in hopes of improving the overall quality of principals in the field (ESSA, 2015).

Universities, colleges, and licensure programs in Massachusetts will be interested in these findings and what it means for the field. Training for leaders needs to be looked at. Job-embedded training for leaders makes sense. It is accessible and applied in real time, to benefit their schools. Training for leaders should follow the MTSS system using universal screening, tiered instruction, data-based decision-making, progress monitoring, PBIS, so that leaders know first-hand what MTSS should look like in their schools. They will be able evaluate their MTSS system, which ultimately evaluates their own progress or lack of. Leaders can use MTSS with their staff and then the staff can use it with their students. Emphasis needs to be placed on leaders being instructional leaders and not managers of buildings. Leaders need to teach and support their staff in MTSS, with high quality PD, positive relationships, a flexible schedule to

support staff, a common language, clear roles and responsibilities, so staff can implement MTSS with their students. The findings could lead to changes in the way school leaders are trained and evaluated. An MTSS Academy for school leaders could be created. An updated structure to train school leaders could also be created.

Massachusetts has provided leaders with confusing information about MTSS and too many name changes. MTSS should not be on the special education web page on DESE's site. Leaders need a clear explanation of how PBIS and RTI, are the two major components of MTSS. Additionally, leaders need to understand the relationship between MTSS and special education. The Blueprint for MTSS also needs to be rewritten. It is confusing and hard to follow. Leaders do not have the time to transcribe the Blueprint into comprehensive training for their staff. A comprehensive training program on how to implement MTSS needs to be provided to leaders. The training needs to align the policies and procedures of MTSS at the state, university, and district levels. MTSS needs to be sustainable at all levels of the system. State, district, and university training programs need a formal and sustainable framework to collaborate, define roles, build teams, build skill capacity, create PD, share a common language, and connect their MTSS practices and programs to existing policies as part of each levels' (state, district, university) accountability and evaluation systems.

In summary, the gap between the research on MTSS, ESSA, leadership training in MTSS, and leadership practices still needs to be closed. A priority must be placed on high quality training and education for leaders if we want high quality education for all of our students. MTSS holds promise for schools, if the state, universities, and districts can commit to work together to make it happen. In 2013, the authors (Dulaney et. al.,

2013) one of the only research articles on MTSS and leaders that I found published these findings (1) Districts must develop an MTSS framework and promote a common language based on that framework, (2) a district-wide culture of collaboration must exist, (3) capacity of staff and learning communities must be built at every level of the system so improvement is sustainable (Dulaney et.al., 2013). It is now five years later, and I am not clear about the progress that has been made with MTSS in Massachusetts.

APPENDIX A

INTRODUCTORY EMAIL

An example of the introductory email that will be given out to educators

I am hoping you can take a few minutes to participate in a survey that will expand research in the field of educational leadership. My name is Jodi Drury, Ed.S. I have spent the majority of my life living and working as a special educator in the Berkshires, and my dissertation is a mixed method study to understand your perspectives about RTI/MTSS. Specifically, I am researching MTSS in Western Mass from the lens of school leaders in order to understand ways to improve educational leadership training programs to align with RTI/MTSS Initiatives. I would appreciate if you could take a few minutes to answer some questions on this topic. Thank you!

APPENDIX B

ONLINE SURVEY CONSENT FORM

You are being invited to participate in a research study titled "Educational Leaders' Perspectives on Their Preparation, Practice, and Professional Development in MTSS". This study is being done by Jodi Drury, Ed.S. from the University of Massachusetts Amherst. You were selected to participate in this study because you are an educational leader in Western Massachusetts

The purpose of this research study is to understand school leaders' perceptions of their knowledge, training, experience, and ability to implement Multi-Tiered Systems of Support (MTSS) in public schools. If you agree to take part in this study, you will be asked to complete an online survey/questionnaire. This survey/questionnaire will ask about your education and professional experience with RTI and MTSS. The survey will take you approximately 10 minutes to complete.

Each participant that completes the survey will be entered into a drawing for two $100.00 Amazon gift cards. Participants that take the follow up survey will have their name entered twice, and those participants that agree to the focus group will have their name entered three times.

You may not directly benefit from this research; however, we hope that your participation in the study may improve leadership training and development programs in RTI and MTSS.

We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach of confidentiality is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by securing and maintaining confidentiality along with properly disposing of all data after the research and report are completed.

Your participation in this study is completely voluntary and you can withdraw at any time. You are free to skip any question that you choose.

If you have questions about this project or if you have a research-related problem, you may contact the researcher, Jodi Drury, Ed.S. at 413-329-0616. If you have any questions concerning your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.
 By clicking "I agree" below you are indicating that you are at least 18 years old, have read and understood this consent form and agree to participate in this research study. Please print a copy of this page for your records.

I Agree   I Do Not Agree

Section II – Information about RTI/MTSS
Please answer the following questions.

Does your school/district currently implement RTI/MTSS?

☐ Yes, if yes, how many years?   _____   ☐No

Have you had primary responsibility for implementing RTI/MTSS in a school/district?

☐ Yes - if yes, how many years?   _____   ☐No

Do you believe RTI/MTSS are important to improving student outcomes?

☐ Yes ☐No

I feel knowledgeable about RTI.

☐ Yes, if yes, how many years?   _____   ☐No

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I have had adequate formal training on RTI/MTSS.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

My University courses provided me with information on RTI/MTSS.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

My Professional Development provided me with information on RTI/MTSS.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I believe that my school is implementing RTI/MTSS effectively.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I feel well prepared to implement RTI/MTSS.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I feel well prepared to lead data-based decision making.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I feel well prepared to lead universal screening.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I feel well prepared to lead progress monitoring.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I feel well prepared to lead PBIS.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

I feel well prepared to analyze data.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Section III – Leadership of RTI/MTSS
Please indicate if you Agree, Strongly Agree, Disagree, or Strongly Disagree to the
  following statements

Leaders that have expertise in RTI/MTSS implementation are essential to
  implementing RTI/MTSS?

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Leaders must train staff in RTI/MTSS to implement RTI/MTSS successfully?

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Leader must create an RTI/MTSS leadership team to implement RTI/MTSS
  successfully?

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Leaders must communicate and reinforce the expectation for data-based decision-
  making to implement RTI/MTSS successfully.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Leaders must schedule "Data Days" throughout the year to ensure that instruction and
  interventions are informed by student data.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Leaders must provide instructional and intervention support to all staff to implement RTI/MTSS successfully?

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Leaders must share student outcomes with staff, students, and parents.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Leaders of successful RTI/MTSS create frequent opportunities to celebrate and communicate success.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree

Section IV
Questions for you
To be entered in the drawing for a $100 gift certificate, please type in your email below.

Are you willing to participate in a focus group as part of this study?

☐ Yes   ☐No

Section V
Open Responses about MTSS

Define MTSS.

Provide an example of how you use data collection within your school.

Provide an example of how you do tiered instruction within your school.

Provide an example of how data informs your decision-making.

Provide an example of how you use research-based interventions.

Provide an example of how you use universal screening.

I would like more training in (please respond below).

PHASE TWO: SAMPLE QUESTIONNAIRE/OPEN-ENDED QUESTIONS

This follow-up questionnaire has been designed to gather more information about participants' level of proficiency with RTI/MTSS. Participants' responses will be coded according to actual definitions and what is currently seen as best practices in RTI/MTSS.

(1) Define MTSS.

(2) Provide an example of how you use data collection within your school.

(3) Provide an example of how you do tiered instruction within your school.

(4) Provide an example of how data informs your decision-making.

(5) Provide an example of how you use research-based interventions.

(6) Provide an example of how you use universal screening.

(7) I would like more training in (please respond below).

APPENDIX E

PHASE THREE: SAMPLE FOCUS GROUP QUESTIONS

The focus group questions have been designed to initiate a conversation with participants about some of the close-ended survey responses, to solicit leaders' knowledge, attitudes, perspectives, and experiences with implementing RTI/MTSS. For example, I want to gain a deeper appreciation for how participants were trained in RTI/MTSS (within University coursework, professional development, etc.). I also want to know what training leaders need in RTI/MTSS. The six focus group questions were:

(1) What do you think about leaders reporting high knowledge but reporting mixed levels of formal training? How are school leaders learning about MTSS?

(2) What do you think caused the mixed responses about implementing MTSS effectively? What is missing that all school leaders need to implement MTSS effectively?

(3) Why do some leaders not feel well prepared to lead universal screening, progress monitoring, and data analysis and decision-making? What training or support would they need to be well prepared?

(4) What training would the school leaders want who do not feel well prepared to implement PBIS? Should this take place in training programs? Why doesn't this training take place?

(5) What is needed to give school leaders the necessary supports to train and prepare teachers and staff to implement MTSS? Are these skills provided in leadership training programs? What should leadership training programs do to prepare school leaders to train teachers and staff?

(6) What training do you need in MTSS and what does it look like?

APPENDIX F

SAMPLE OF SCORING FORM

Scoring Form Used for the Six Open Response Definitions

A sample of the scoring form that was used to help rate the reliability of the six open response questions.

1)Define MTSS
MTSS, often used as an overarching construct for PBIS and RTI, is a school-wide, three-tiered approach for providing academic, behavioral and social supports to all students based on their needs and skills (Ziomek-Daigle, J., Goodman-Scott, E., Cavin, J., & Donohue, P., 2016).

NAME - Multi-tiered system of support		
School-wide		
Tiered		
Supports		
Academic Support		
Behavioral Support		
Social Supports		
Based on Needs and Skills		

MTSS is defined as "the practice of providing high-quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals, and applying child response data to important educational decisions" (Batsche et. al., 2005).

Instruction		
High Quality Instruction		
Interventions		
High Quality Interventions		
Interventions matched to student need		
Progress Monitoring		
Frequent Progress Monitoring		

Progress monitoring informs decisions about changes in instruction or goals		
Uses Data		
Uses data to make educational decisions		

2)Provide an example of how you use data collection within your school

One example of using data collection would be to take data from district screening tools, and then create goals and benchmarks to establish standards. For example, "having approximately 80% of the students reach the benchmark criteria established by the screening tool." (http://www.rtinetwork.org/essential/tieredinstruction/tier1/accurate-decision-making-within-a-multi-tier-system-of-supports-critical-areas-in-tier-1)

Percent of students		
Benchmark criteria		
Screening tool		

Data should be used to:
1. Give an accurate and reliable picture of student performance.
2. To interpret and validate school curriculum
3. To make meaningful instructional changes for students
4. To establish and manage increasingly intensive tiers of support
5. To evaluate the process at all tiers to ensure the system is working. (http://www.rtinetwork.org/essential/tieredinstruction/tier1/accurate-decision-making-within-a-multi-tier-system-of-supports-critical-areas-in-tier-1)

Have data - but don't talk about using it		
Have data and review it, but don't talk about using it		
Baseline student academic performance		
Baseline student behavioral performance		
Progress monitor		
Evaluate success of school curriculum		
Evaluate success of school instruction		
Make meaningful instructional changes		
Manage increasing intensity of tiered support		

Evaluate the success of the MTSS school wide system		

3) Provide an example of how you tier instruction.
A tiered lesson addresses a particular standard, key concept, and generalization, but allows several pathways for students to arrive at an understanding of these components.
Lessons can be tiered according to students' readiness (ability to understand a particular level of content), learning profiles (style of learning), or interests (student interest in the topics to be studied) (Tomlinson, 1999).

Incomplete answer		
Allows differentiation of instruction		
According to readiness		
According to learning profile (learning style)		
According to interests		

4)Provide an example of how data informs your decision-making

A structured problem-solving process and integrated data-collection system, based on the RTI and PBIS approaches, is utilized at each tier of the model. The effectiveness of instruction at each tier is determined by collecting data about students' progress in a recommended monitoring schedule. With its emphasis on evidence-based instruction and collaborative, iterative problem solving, MTSS acknowledges that instruction and/or contextual issues, not student inability, could be the reason why students are not learning (Higgins, Averill, and Rinaldi, 2011)

No response		
Incomplete response		
Say "I don't use data"		
We don't have a good system		
Structured problem solving process		
Integrated data collection system		
Collect data about student progress on monitoring schedule		
Data drives decision making about academic instruction		

5)Provide an example of how you use research-based interventions

Any claim that a practice or procedure is "evidence-based" should be framed in the context of (a) explicit description of the procedure/practice, (b) clear definition of the settings and implementers who use the procedure/practice, (c) identification of the population of individuals who are expected to benefit, and (d) the specific outcomes expected (http://ies.ed.gov/ncee/wwc/EvidenceSnapshot/570).

No response		
Uninterpretable response		
Behavioral example		
Academic example		
Social example		
Provided explicit description of procedure/practice		
Gave an example of a research-based intervention by didn't say how used it.		
Gave clear definition of the settings and implementers who use the procedure/practice		
Gave expected student outcomes		

6) Provide an example of how you use universal screening

RTI Action Network
In the context of an RTI prevention model, universal screening is the first step in identifying the students who are at risk for learning difficulties. It is the mechanism for targeting students who struggle to learn when provided a scientific, evidence-based general education (Jenkins, Hudson, & Johnson, 2007). Universal screening is typically conducted three times per school year, in the fall, winter, and spring. Universal screening measures consist of brief assessments focused on target skills (e.g., phonological awareness) that are highly predictive of future outcomes (Johnson, E., Mellard, D. F., Fuchs, D., & McKnight, M. A., 2006)

No response		
Uninterpretable response		
Incorrect response		
How many times a year conducted		
Area: behavioral		
Area: social skill		

Table 1.1
Massachusetts Blueprint for MTSS Standards

Standard	Description	Conditions for School Effectiveness
Leadership& Governance	School committee and district leaders evaluate the effectiveness of policies & procedures regarding student achievement data to promote continuous improvement of instruction and high achievement for all students. Leadership decisions and actions related to school goals are regularly communicated to the community to promote support and financial commitment.	School has effective systems in place to provide resources, interventions, and supports (staffing, instruction, operational needs). School has effective school leadership. Principal makes staffing decisions based on the school improvement plan and student needs Principal makes effective and strategic use of resources and has sufficient budget authority to do so.
Student Support	District provides high quality programs to all students, including academic and behavior support services to maintain high rates of attendance for students and staff to promote high rates of graduation.	School schedule provides adequate learning time for all students in core subjects. Students that are not making effective progress are provided tiered instruction. School provides a safe environment and provides students with positive behavior supports. School develops strong working relationships with families and community organizations to support students' academic progress and social and emotional progress.
Financial & Asset Management	The district uses student achievement data as a factor in the overall budget process. The district acquires resources to provide for and sustain the advancement and achievement for all students enrolled in the district. The district regularly assesses the effectiveness and efficiency of its budget to meet changes and unanticipated events.	

| Human Resources & Professional Development (PD) | The district recruits quality staff and provides supports to develop and retain effective professional staff who can advance achievement for all students. | PD opportunities for staff are differentiated and diverse. The school provides structures for regular collaboration to improve curriculum and instruction. PD and collaboration are evaluated for effectiveness on raising student achievement.

Principal can make staffing decisions based on school improvement plan and student needs, adhering to policies, budget, and superintendent's approval. |
| Curriculum & Instruction | District develops curriculum and instruction practices to attain high levels of | Curriculum is aligned with state curriculum and MCAS performance levels, in addition to amongst different grades and across different classrooms.

Instructional practices are based on evidence from high quality research and include research-based reading an math programs. Staff have a common understanding of high-quality evidence-based instruction and a system for monitoring instructional practices. |
| Student Assessment | District and school leaders use student assessment results and other data to improve student achievement and inform all aspects of its decision-making (policies, instruction, assessment, and supervision). | The school uses a balanced system of formative and benchmark assessments. . |

Table 2.1

Content of Research

	(a) alignment of leadership training programs	(b) leadership theory and practice	(c) leadership training courses	(d) leadership training in special education	(e) professional development for leaders	(f) RTI & MTSS implementation	(g) leadership of MTSS
Qualitative							
Braun (2011)		X			X		
Bustamonte (2011)	X		X				
Darling-Hammond-(2007)	X				X		
Dulaney (2013)	X		X		X		X
Edmonds (2005)		X					
Fields & Egley (2005)		X					
Gumus (2015)	X		X				
Mellard (2012)						X	X
Mohammed (2009)	X					X	X
Vogel (2014)	X				X		
Surveys							
Bineham (2014)	X	X	X		X	X	X
Eddy & Rao (2009)	X		X				
McHatton (2010)		X		X	X		
Spanneut (2012)					X		
Total	8/14	5/14	5/14	1/14	7/14	3/14	4/14

Table 2.2

Methodological Indicators for Qualitative Research (Brantlinger et. al., 2005)

Method	Indicators Essential
1. Interviews	(1) Appropriate participants selected (2) Reasonable interview questions (3) Adequate recording mechanisms (4) Participants are represented fairly (5) Confidentiality ensured
2. Observations	(1) Appropriate settings and people (2) Sufficient time in field (3) Researcher fits into site (4) Research has minimal impact on setting (5) Systematic field notes collected (6) Confidentiality ensured
3. Document Analysis	(1) Documents are meaningful and relevant (2) Documents stored carefully (3) Documents are described and sufficiently cited (4) Confidentiality of documents ensured
4. Data Analysis	(1) Results are sorted and coded in a systematic way (2) Rationale provided for what was included or not included in report (3) Documentation of methods used to establish credibility are clear (4) Researcher's personal position is provided (5) Conclusions are substantiated with quotes from participants, field notes, and evidence of documentation inspection (6) Connections are made with related research

Table 2.3

Methodological Rigor of Qualitative Studies

	Method				
	Number of indicators				
Lead Author	1	2	3	4	met
Braun (2011)	X	NA	NA	X	9/11
Bustamonte (2011)	NA	NA	X	X	8/10
Darling-Hammond (2007)	X	X	NA	X	13/17
Dulaney (2013)	X	NA	NA	X	7/11
Edmonds (2005)	X	NA	NA	X	7/11
Fields (2005)	X	NA	X	X	9/15
Gumus (2015)	X	NA	NA	X	10/11
Mellard (2012)	X	X	NA	X	5/17
Mohammed (2009)	X	NA	NA	X	7/11
Vogel (2014)	NA	NA	X	X	7/10
# met all criteria	2/8	0/2	0/3	0/10	81/124

Table 2.4

Interviews Indicators

Essential

Study	Appropriate Participants Selected	Reasonable interview questions	Adequate recording mechanism	Participants represented fairly	Confidentiality ensured
Braun (2011)	0	1	1	1	1
Darling-Hammond (2007)	1	1	1	1	1
Dulaney (2013)	0	1	0	1	1
Edmonds (2005)	1	1	0	1	1
Fields (2005)	1	1	0	0	1
Gumus (2015)	1	1	1	1	1
Mellard (2012)	1	0	0	0	1
Mohammed (2009)	1	1	0	1	1
#met	6	7	3	6	8

Note. 1=the indicator was included within the article. 0=the indicator was not included within the article.

Table 2.5

Observation Indicators

	Essential					
Study	Appropriate setting/part selected setting	Sufficient time in field	Researcher fits into site	Researcher has minimal impact on	Field notes collected systematically	Confidentiality ensured
Darling-Hammond (2007)	1	1	0	0	0	1
Mellard (2012)	1	0	0	0	0	0
#met	2	1	0	0	0	1

Note. 1=the indicator was included within the article. 0=the indicator was not included within the article.

Table 2.6

Document Analysis Indicators

Study	Essential			
	Meaningful documents found and relevance established	Document stored carefully	Documents sufficiently described & cited	Confidentiality of documents ensured
Bustamonte (2011)	1	0	1	1
Fields (2005)	0	0	1	0
Vogel (2014)	1	0	1	0
#met	2	0	3	1

Note. 1=the indicator was included within the article. 0=the indicator was not included within the article.

Table 2.7

Data Analysis Indicators

Study	Essential					
	Results sorted and coded in systematic way	Rationale provided for what was included or omitted	Doc. Methods used to establish credibility	Researcher's personal position provided	Conclusions substantiated	Connections to related research
Braun (2011)	1	1	1	0	1	1
Bustamonte (2011)	1	1	1	0	1	1
Darling-Hammond (2011)	1	1	1	0	1	1
Dulaney (2013)	1	1	0	0	1	1
Edmonds (2005)	0	1	0	0	1	1
Fields (2005)	1	0	1	0	1	1
Gumus (2015)	1	1	1	0	1	1
Mellard (2012)	1	0	0	0	0	1
Mohammed (2009)	1	1	0	0	1	1
Vogel (2014)	1	1	1	0	1	1
# met	9	8	6	0	9	10

Note. 1=the indicator was included within the article. 0=the indicator was not included within the article.

Table 2.8

Survey Indicators

Author	Population Description	Sampling specified	Questions described- form & content	Mode of data collection described including length of time it took to collect data	Data analysis described including time involved	Results presented clearly including response rate	Total
McHatton et. al.	1	1	1	0	1	0	4/6
Spanneut et. al.	1	1	0	0	0	0	2/6
Bineham et. al.	1	1	0	1	0	1	4/6
Eddy & Rao	1	1	1	1	1	1	6/6

Note. 1=the indicator was included within the article. 0=the indicator was not included within the article.

Table 3.1

Berkshire County School District Data **(from DESE website 2014-2015 profiles)**

District	# of Students ELL (%)	Special Ed. (%)	Low Income (%)	Racial	Minorities
Adams-Cheshire	1,386	3 2	3.2	38.6	4.8
Berkshire Hills	1,340	2.2	15.6	24.7	14.8
Central Berkshire	1,722	.5	14.5	24.6	7.8
Clarksburg	170	0	23.5	28.8	4.8
Farmington River Reg.	127	0	17.3	27.6	3.9
Florida	90	0 3	4.4	28.9	5.5
Hancock	43	0	18.6	25.6	2.3
Lanesborough	217	0	22.1	24.9	5.6
Lee	695	3.9	12.8	27.9	15.1
Lenox	740	2.2	8.4	17.2	12.1
Mount Greylock	550	.2	12.7	15.3	7.9
North Adams	1,503	.9	26.3	49.6	16.3
Pittsfield	5,715	4.2	20.4	43.6	29.6
Richmond	161	0	2.5	13	7.9
Savoy	46	0	21.7	37	10.8
Southern Berkshire	773	1.6	14.6	27.7	11.3
Williamstown	459	.7	11.8	17.2	18.3

Table 3.2

Franklin County School District Data (from DESE website 2014-2015 profiles)

District	# of Students	ELL (%)	Special Ed. (%)	Low Income (%)	Racial Minorities (%)
Conway	170	0	14.7	9.4	4.7
Deerfield	443	.9	18.7	14.7	11.6
Erving	146	0	2.6	29.5	15.8
Franklin County Regional Vocational	501	0	28.5	30.5	3.4
Frontier	609	.3	19.9	14	11.4
Gill-Montague	975	5.2	21.1	36.6	29.8
Greenfield	1,682	3.3	15.8	44.4	19.6
Leverett	134	0	17.9	23.1	17.1
Mohawk Trail	974	3	20.3	29.6	8.4
New Salem-Wendell	157	0	21	39.5	12.8
Orange	650	0	23.	146	15.1
Ralph C. Mahar	712	.3	16.6	33.8	14.6
Rowe	69	0	20.3	26.1	5.8
Shutesbury	156	.6	19.2	19.2	21
Sunderland	209	7.2	16.7	27.3	29.2
Whately	133	0	15.8	23.3	3.8

Table 3.3

Hampshire County School District Data (from DESE website 2014-2015 profiles)

District	# of Students	ELL (%)	Special Ed. (%)	Low Income (%)	Racial Minorities (%)
Amherst	1,206	15.5	19.8	29.2	51.8
Amherst-Pelham	1,445	5	19.2	18.3	39.8
Belchertown	2,374	6	16.5	16.3	8.7
Chesterfield-Goshen	158	0	18.4	22.2	3.8
Easthampton	1,554	1.4	17.1	24.1	16.6
Gateway	945	5	18.1	27.2	7.2
Granby	889	.4	15.1	17.5	9.4
Hadley	624	3.4	33.5	14.9	14.6
Hatfield	460	0	19.3	9.3	7
Northampton	2,702	3.4	20	23.2	27.9
Pelham	121	0	22.3	11.6	18.2
Pioneer Valley	932	0	15.9	20.2	6.4
South Hadley	1,906	2.4	15.8	23.3	18.2
Southampton	546	2.4	20.7	14.1	10.8
Ware	1,292	1.1	17.4	44.4	12.5
Westhampton	150	1.3	27.3	10	6
Williamsburg	158	2.5	19	13.9	10.

Table 4.1

Participant Characteristic Demographics

Participant Characteristic Demographics							
Gender		**Race**		**Age**		**School Type**	
Female	34	White	59	(30-39)	6	Elementary	35
Male	27	Black	1	(40-49)	28	Middle	19
		Hispanic/Latino	1	(50-59)	20	High	29
				(60-69)	7	Alternative	5
						Segregated	4
Degree Attained		**Current Position**		**Years Worked in Schools**			
Bachelors	1	Principal	22	1-9 Years		3	
Masters	42	Vice Principal	9	10-19 Years		19	
CAGS	13	Dean	7	20-29 Years		27	
Ed.S	1	Teacher Leader	5	30-39 Years		8	
Ed.D./Ph.D.	4	Sped Dir.	14	40-49 Years		4	
		Other	4				

Table 4.2

Survey Open Response Question 1

Major Code	#People	# Codes	Description of Code	Example Response(s)
Named MTSS	20	22	Used MA Tiered System of Support in response, and/or also included support for students	MA Tiered System of Support
Data General/ Progress Monitoring	3	6	Used screening, interventions, supports, data collection, and student outcomes in response	A statewide approach to identifying students and implementing responses to academic and behavioral challenges through targeted interventions combined with data collection and progress monitoring to improve outcomes for students
Interventions/Supports	13	18	Used monitor progress, review data, academic & behavior supports, inclusion, tiered instruction, interventions, identification of students, and instruction in response	Identify students who are not making effective progress in general ed. classes and then giving them support.
Student Needs	15	17	Used data and/or Multi-Tiered System of Support in response	Multi-tiered System of Support where opportunities for intervention are provided to meet students' learning needs based on their performance levels.

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Major Code	#People	# Codes	Description of Code	Example Response(s)
Tiered System General	11	12	Used tiered system, behavior, Delivery system, and across District, school, and classroom	MTSS is a multi-tiered, wrap around service and support delivery system to ensure the highest quality learning experiences for all students.
Specific Tiered Information	6	10	Used tiered interventions, tier1, Tier 2, tier 3, systems, and Structures	MTSS (Multi-Tiered System of Support OR Massachusetts Tiered System of Support) meets the needs of most students (80%) via regular classroom instruction, while 15% of the students need additional (tier 2) support for academics and/or behavior, and 5% need intensive (tier 3) support for academics and/or behavior. MTSS is the system through which those structures are created, student needs are identified, interventions are established and implemented, and student-level data is reviewed to move students in and out of tiers as necessary.
Academic/Behavior General	4	6	Used percentages in tiers, academic, and social emotional development	MTSS is cohesive and comprehensive in the goal of meeting the needs of all learners. MTSS addresses academic as well as the social, emotional, and behavioral development of children from early childhood to graduation.
PBIS/RTI/LRE	4	4	Included remediation, RTI, PBIS, and LRE in response	It is a part of the PBIS system and we just did a worksheet on the Tier system and how well we are meeting the criteria for meeting student needs.
Inclusion	1	1	Used inclusion in response	A system by which students are remediated in skill deficits in progressively more restrictive environments, so that inclusion is encouraged.

Major Code	#People	# Codes	Description of Code	Example Response(s)
Identification	3	3	Included enhance education and identify students not making progress in general ed. Class	Multi-tiered systems of support to identify and meet the needs of learners with diverse learning profiles.
Elementary Grades	1	2	Included elementary grades in Response	MTSS is tiered student specific instruction. We offer tiered instruction to provide intensive individualized instruction for each grade K-5.

Note. Open Response Question 1 had 42 total responses.

Table 4.3

Survey Open Response Question 2

Major Code	# People	#Codes	Description of Code	Example Response(s)
Standardized Assessments	10	16	Included specific standardized Assessments like MCAS, BAS, and GRADE	In my school we triangulate incoming 9th graders placement in math ELA and based on a review of prior MCAS scores, information gathered from EWIS and performance on a criterion based assessment. This information is reviewed and decisions for instruction are made.
Curriculum-Based Measures	10	12	Included progress monitoring, formative assessments, criterion- based assessments	Benchmark assessments and progress monitoring. Scheduled formative assessments.
Behavior Data	4	4	Included discipline data,	We have a data committee and we have been looking at behavior discipline data and how we can curb our OSS numbers.
Content Area General	6	11	Included ELA, reading, writing, and math in response	The teachers do math, reading and writing assessments on a regular basis.
Teacher Support	3	3	Included determine training for teachers and support teachers with Instructional strategies	To help teachers determine instructional strategies for classes.

Major Code	# People	#Codes	Description of Code	Example Response(s)
Teams/Meetings	6	6	Included meetings, discussions, teams, and committees	Through student referral sheet and SST meetings.
Interventions/Supports	8	9	Included interventions and/or supports in response.	Progress monitoring for reading to determine if interventions required to promote growth.
Screening/Benchmarks	3	18	Included universal screening, benchmarks, attendance, failure rate, progress, and RTI data	Data is collected (MCAS scores, AP scores, attendance, failure rates, etc.) but is often used to set long term goals in my school. Rarely is data collected and used in an immediate way to assess or remediate student learning.
Placement/Grouping	3	3	Included student placement in interventions and/or classes	ALL students complete NWEA progress monitoring-3 a year for for reading and math. Data teams meet regularly to review progress and discuss appropriate interventions and grouping.
Review Data/Make Decisions	13	14	Included review and reference class, grade, school, district, and national norms; educational gaps; instructional decisions; school and student needs; department work; and tier 2 interventions	To identify students instructional needs, for support and enrichment.
Data use	1	1	Rarely used immediately to assess or remediate student learning	Data is collected (MCAS scores, AP scores, attendance, failure rates, etc.) but is often

Major Code	# People	#Codes	Description of Code	Example Response(s)
				used to set long term goals in my school. Rarely is data collected and used in an immediate way to assess or remediate student learning.
Non-Specific Approaches	20	20		We collect daily points.
Hire an Adjustment Counselor		1	Included hire and additional counselor	Utilized data to hire additional Adjustment counselor to support students with SE needs as well as develop specific support class and support system
Monitor IEP Goals	1		Included progress monitor IEP goals	Progress monitoring of IEP goals.

Note. Open Response Question 2 had 42 total responses.

Table 4.4

Survey Open Response Question 3

Major Code	#People	#Codes	Description of Code	Example Response(s)
Academic & Behavior Supports	17	25	Specific and non-specific academic and behavior supports	SEL class with SPED teacher and Adjustment Counselor, for our most needy SE students. All day/any time support provided in identified space with Adjustment Counselor.
Based on Data & Monitoring	13	15	Included monitor SEL needs, team meetings for teachers and students, identification, performance, and progress	Our tiered system of instruction occurs within math and ELA curriculum. Students are monitored throughout the year and based on performance and teacher input are placed or re-placed within a three tiered setting.
Tiers	18	30	Included tiers, tier 1,2,3 and special education tier 3	Tier 1- classroom, Tier 2 Title-1 (during scheduled intervention blocks) Tier 3 SPED (during same scheduled intervention blocks.
Use of tiered Instruction	1	1	Included missing accurate progress monitoring and Movement in tiers	What is missing is accurate progress monitoring and movement of students within tiers. We know what to do, but we don't feel like we have the right tools or structures to do it yet
Based on Student Needs	7	8	Included students learning needs, learning styles, and interventions,	Meetings to review students and determine appropriate classroom instruction and interventions/supports.
Special Education	2	2	Included special education	Students who do not make progress in reading are given additional reading instruction, first in an inclusion setting, then in pullout settings, and if no progress is made, they are referred to special education.

Major Code	#People	#Code	Description of Code	Example Response(s)
Schedule	1	1	Included specific schedule	3 x a year for progress monitoring respond as needed
Content Specific	2	4	Included math, ELA or Reading	Data helps drive student focus on who may get Tier II and III pull out and supports in Reading and Math.

Note. Open Response Question 3 had 42 total responses

Table 4.5

Survey Open Response Question 4

Major Code	#People	#Codes	Description of Code	Example Response(s)
Provide Supports for	11	14	Included supports, SEL, PBIS, academic, behavior and remediation	Student enrichment and supports are assigned based upon assessment scores and academic progress through regular data review
Provide courses based on student needs	2	2	Included course schedule and offerings	Course offerings b/c of student needs; Academic support classes added based on student needs.
Staff & Student Supports	4	4	Included focus topics for staff and students	Data helps me know what to focus on with my staff and with the students that I teach.
Meetings	3	3	Included data meetings and collaboration meetings	We use the data in collaboration meetings.
Monitor Student Progress	3	3	Included progress monitor.	Data teams meet 3 times per year to go over student data, form intervention groups according to data and progress monitor between catches
Provide Interventions	6	6	Included form intervention Groups, intervention plans, And tier 2	It identifies students who are not making adequate academic progress and is the springboard to developing an intervention plan.
Special Education eligibility	1	1	Included special education Eligibility	Students who are unable to make progress are considered eligible for disability laws.
Content Specific	1	1	Included content in response	Our MCAS data has been flat, as well as our DIBELs data so our team revamped our literacy plan to address this data.

Major Code	#People	#Code	Description of Code	Example Response(s)
Instruction	10	12	Included instruction, lessons, Groupings, hiring, and staff Schedule	Hiring needs, SEL programing, over-all course and teacher schedule, faculty meetings and topics.

Note. Open Response Question 4 had 42 total responses

Table 4.6

Survey Open Response Question 5

Major Code	# People	#Codes	Description of Code	Example Response(s)
Differentiation General	4	4	Included differentiated instruction & learning, and Tiers of supports	Differentiated Instruction
Specific Interventions	14	30	Included specific research-Based Intervention tools	Our staff has training in Wilson, Fundations, and Orton-Gillingham
Instruction	2	2	Included instruction and Co-teaching	Establishment of co-taught classes to support all learners.
Content Specific	3	5	Included reading, math, and writing.	Students with reading difficulties, math, and writing.
Track Time & Fidelity	1	1	Included time and fidelity	As needed tracking the time and fidelity to program (days off, snow days, any interruptions that could conflict with fidelity of repetition).
PD	2	2	Included PD and training	Local training by guidance and school adjustment counselors.

Major Code	# People	# Codes	Description of Codes	Example Response(s)
Testing, Interventions, Progress Monitoring	3	3	Included testing and interventions	We use research based testing systems and interventions to support students' needs.
UDL	1	1	Included UDL	We are focusing on UDL at the moment.
Planning	1	2	Included plans	We have an RBT this year and we do behavioral plans as well as safety plans as well as safety plans and review them. We also have building assistance meetings every Thursday.
Meetings	1	1	Included meetings	We have an RBT this year and we do behavioral plans as well as safety plans as well as safety plans and review them. We also have building assistance meetings every Thursday.

Note. Open Response Question 5 had 42 total responses

Table 4.7

Survey Open Response Question 6

Major Code	# People	#Codes	Description of Code	Example Response(s)
Specific Tools & Approaches	24	31	Included research-based interventions and assessment tools, screenings, and approaches	We will be piloting Fast Bridge this year. We have not had a universal screening tool in previous years, other than SRI which proved to be unreliable for our grade level
Guidance	1	1	Included information from Guidance and sending schools	Completed through the Guidance department via sending school identification
Progress Monitoring	1	1	Included progress monitoring	Use universal screening for benchmark testing 3 time per year along with weekly/ biweekly progress monitoring
Content/Skill Specific	7	8	Included reading, health, depression, OT,PT, speech, and writing	Depression screening.
Interviews	1	1	Included interviews	We use the Landmark College Readiness Assessment to determine the skills that students will need to transition successfully to college through guidance interviews with students and parents.
Instruction	1	1	Included instruction	Benchmarks and formatives to assess where students are and design instruction accordingly.

Note. Open Response Question 6 had 42 total responses

Table 4.8

Survey Open Response Question 7

Major Code	# People	#Codes	Description of Code	Example Response(s)
Interventions	4	4	Included interventions	PBIS initiatives and the roles of various staff people at the high school level in carrying out tier 2 and 3 interventions
Progress Monitoring	1	1	Included progress	The use of research-based interventions for academics and effective progress monitoring tools
MTSS	9	10	Included MTSS	I would like more training for my staff and for general education teachers in the implementation of RTI/MTSS as it pertains to 9-12 grades
Data informed decision Making	1	1	Included data informed decision making	Data informed decision-making
Inclusion	1	1	Included inclusion	Successful inclusion practices
PBIS	1	1	Included PBIS	PBIS initiatives and the roles of various staff people at the high school level in carrying out tier 2 and 3 interventions
Universal Screening	2	2	Included universal screening	Universal screening.

Assessment Tools	2	2	Included assessments	Math research-based interventions and benchmark assessments.
Staff Training	1	1	Included staff training	Staff training.
What district wants	1	1	Included district	In all specifics of what the district wants to happen

Note. Open Response Question 7 had 22 total responses

Table 4.9

Focus Group Question 1 Responses

Major Code	# People	# Codes	Description of Code	Example Responses(s)
Leaders Knowledge of MTSS	6	6	Lack of knowledge on MTSS implementation; lack of training on MTSS; leaders teach selves about MTSS; age factors related to training, knowledge of MTSS, Skills to implement MTSS; and perception issues with knowledge of MTSS	People feel knowledgeable about pyramid but don't know how to design and implement in schools and get everyone on board to make it happen. Formal training does not exist. You have to seek out information and weave through it yourself. In addition the high knowledge might actually be a false positive due to their perceptions. I mean you know even ten years ago I would not say this was something that was happening.

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Table 4.10

Focus Group Question 2 Responses

Major Code	# People	# Codes	Description of Code	Example Responses(s)
Leaders Knowledge of MTSS Implementation	6	11	Lack of knowledge on MTSS implementation; Lack of training for leaders; Leaders misperceptions of their knowledge of MTSS; MTSS is not a priority; use resources creatively; struggles of inclusion; staff resistance; change the culture of schools; support for staff; leadership challenges; schedule challenges	Training is missing. None of us were trained. My district is focusing on UDL. Leaders have different perceptions. We want a tiered system where we are one full system. We are not doing implementation effectively but we started implementing it. We need a model, components, plug and play, but it doesn't exist. When I am in the field, I would not say 60% are using it effectively or even 60% know what MTSS is. We have been relatively successful doing that with developing different kinds of programs implementing different curriculum and use of available resources meaning staff or creative planning like schedules or whatever else it's all about using your resources most effectively. Full inclusion is not appropriate really for all students certainly that is the ultimate goal LRE we always go back to that whole model but…

Major Codes	#People	#Code	Description of Code	Examples Response(s)
				We have some teachers that you want to give them positive feedback but they are resistant because they think it's an attack on them rather than let me help you. People are resistant. They are set in their ways.
				It's going from *my* students to *our* students.
				I feel like we are supported we are being trained, we are going to this class I feel very supported. Honestly I feel I support staff as well so it's not just about me but it's about supporting teachers and staff.
				I think a challenge for mid-level administration is to wrap their heads around this and present to district administration.
				Finding a common planning time… I see that as an issue.
				We've done trainings with our paras and they complain about never having the chance to talk to teachers about what they should be doing.
				That's where the growth mindset comes in.
				If there's a learning objective out of it it's that administrators know that they've got more to learn or that they can reinvent their buildings…It's about despite all of those limitations and lack of resources we can change things.

Table 4.11

Focus Group Question 3 Responses

Major Code	# People	#Codes	Description of Code	Example Response(s)
Leaders are not receiving training in data collection or other parts of MTSS & training is not easy for leaders to teach to staff	6	10	Training is missing in data collection and universal screening, teachers and leaders need same training, leaders training is not user-friendly and is too time-consuming, leaders have to teach themselves, leaders may misunderstand MTSS, new leaders are overwhelmed, leaders have to know too much, schedule conflicts prevent training, teachers can lead.	Progress monitoring and data-based decision making are based in other frameworks besides MTSS - universal screening is more specific to MTSS. Leaders and teachers get different training. Leaders need training in data analysis, progress monitoring, and what it looks like in the field between teacher and student. Maybe new leaders. It is a lot to take on. The role and with everything they are learning, and the changes shifts and taking that data and interpreting it and then presenting it to staff and then its selling it too. You gotta sell it and get buy in. We are having like growth pains about using things… and there's a lot of frustration in that learning curve about figuring out how to use it and what we are assessing and how to access the data once its uploaded and that's a lot of hurdles to get over before you get to the point of like now we have this pile of data and let's assess what we are doing wrong. We can't both be out of the building you know it's more important that he knows it right now, so he can…

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Major Code	# People	#Codes	Description of Code	Example Response(s)
				As an administrator you are looking at it at a different level and if we are expected to teach the teachers now I am coming a teaching stand point not from administrative. I want you to show me what it looks like show me the actual practical application in the classroom how I can do it. Let me see a model of this. Right now, we are making them all ourselves. It's so much work for us to do just to facilitate our school moving forward. I think that is really important to give ownership back to the teachers that are implementing it.

Table 4.12

Focus Group Question 4 Responses

Major Code	# People	# Codes	Description of Code	Example Responses(s)
Leaders misunderstanding of PBIS and school wide systems	6	5	Lack of leadership training; getting staff to do PBIS, PBIS is not special ed., training is expensive, use staff to do PD	People pull parts out but do not have the bigger system in place. It is not a top priority because so many initiatives to train leaders they may defer it to others. There is a lack of training on systems –what systems are and how they go together. Our numbers at our school are down significantly from what we had…we have implemented the PBS model. We have the pyramid model at the preschool level. We do quite a bit of PBIS We are a PBIS district and we are doing it all day long in every building. It's a district wide initiative in our district. Its not just a special education thing. That's the bottom line. I am just wondering if they feel they have given gen ed. staff enough tools. I came from a smaller district where if you don't collaborate with the trainings it makes it prohibitive for one district to afford PD. To hire consultants is oodles of money. Smaller districts have trouble with that. We have our own staff to provide PD.

Table 4.13

Focus Group Question 5 Responses

Major Code	# People	#Codes	Description of Code	Example Response(s)
District commitment to do MTSS and provide high quality training to all staff	6	10	Leaders committed to do MTSS, state needs better information on MTSS for leaders, accountability for MTSS is needed, administrative licensure needs improvement, different programs need different standards, a common language is needed, leadership training needs to be more accessible to leaders, teachers can be leaders, resources matter, leaders have competing priorities which impact training	We want one system of support. We need to do it with the entire admin team and they all need agreement on a clear understanding of what MTSS looks like in the district. It has to be the chosen initiative to get everyone on board and MTSS is getting there. You would have to say MTSS is part of expected system and everything else is under it. Can't have silos. We take so much time on emergencies and we need to spend time changing the system. It won't happen unless everyone is on board-unless it is our only focus. We were not trained in MTSS. DESE needs more than a link in the special ed. dept. webpage about MTSS. We need a clear understanding of what MTSS is and how to do it. Special ed. is not MTSS.

Major Code	#People	#Codes	Description of Code	Example Response(s)
				Wondering if at some point there will be an accountability data component that includes MTSS. Then everyone will take notice of it. It should be part of the educator evaluation system.
				The state focuses on districts but not on different programs.
				RTI is not special ed. but people feel it is special ed.
				MTSS is tucked in special ed. section of website. It needs to be taken out. MTSS is for everyone.
				Everywhere differentiation is MTSS should replace it. Make MTSS as common as differentiation.
				If something is already prepared for us as administrators because of the time and that is something that we actually could edit to suit the needs of our own staff where we can add things to an existing program because that would be so much easier because it's all about the time.
				Giving power back to people that are on the front lines to make decisions.
				What I felt was really important to produce and get my admin. certification in was not what the state felt was important.

Table 4.14

Focus Groups Question 6 Responses:

Major Code	# People	#Codes	Description of Code	Example Response(s)
In-depth training aligned to meet students' needs that cover RTI, PBIS, and SEL	6	8	On-going trainings that provide conversations and sharing best practices, MTSS integrated into epp plans, MTSS Leadership Academy, District commitment, Flexible staffing Training that stays current, RTI training, PBIS training	A total very comprehensive in-depth training or information building or education around the components of MTSS as opposed to skirting on the surface of it. I would love to see one component where one piece is extracted, and training goes very deeply. The training would be a full day of videos, conversations-watch teachers do progress monitoring and then we evaluate what we see as good progress monitoring. We can develop what good monitoring is. I would like to see in depth trainings diving deep with lots of collegial conversations about how other leaders are managing like how do leaders train teachers in it. An educational plan that defines system of support so you submit a specific implementation plan for MTSS for each student's accountability. We need an expectation of what intervention of MTSS looks like so what would the system look like? EPP plans? Initiatives best way is tack into something already there and make better rename with fluency and fidelity.

Major Code	#People	#Codes	Description of Code	Example of Response(s)
				A leadership academy on MTSS over the course of the school year. Do some deep dives into topics each day and identify what exists and does not exist in your system. Hands on training and a road map you can customize to your district and school.
				How do I get everyone on board first? We need one clear understanding.
				Staffing models that promote flexible groupings.
				One thing I would like to see more of is with the RTI model is behavior management training and how to help the teachers because some teachers because our demographics are changing we have a lot of children in crisis.
				Our RTI model needs some work. Absolutely. Numbers for special ed. referrals are too high.
				I think the RTI model I agree if they help them then we may not see the behavioral issues.

Figure 3.1
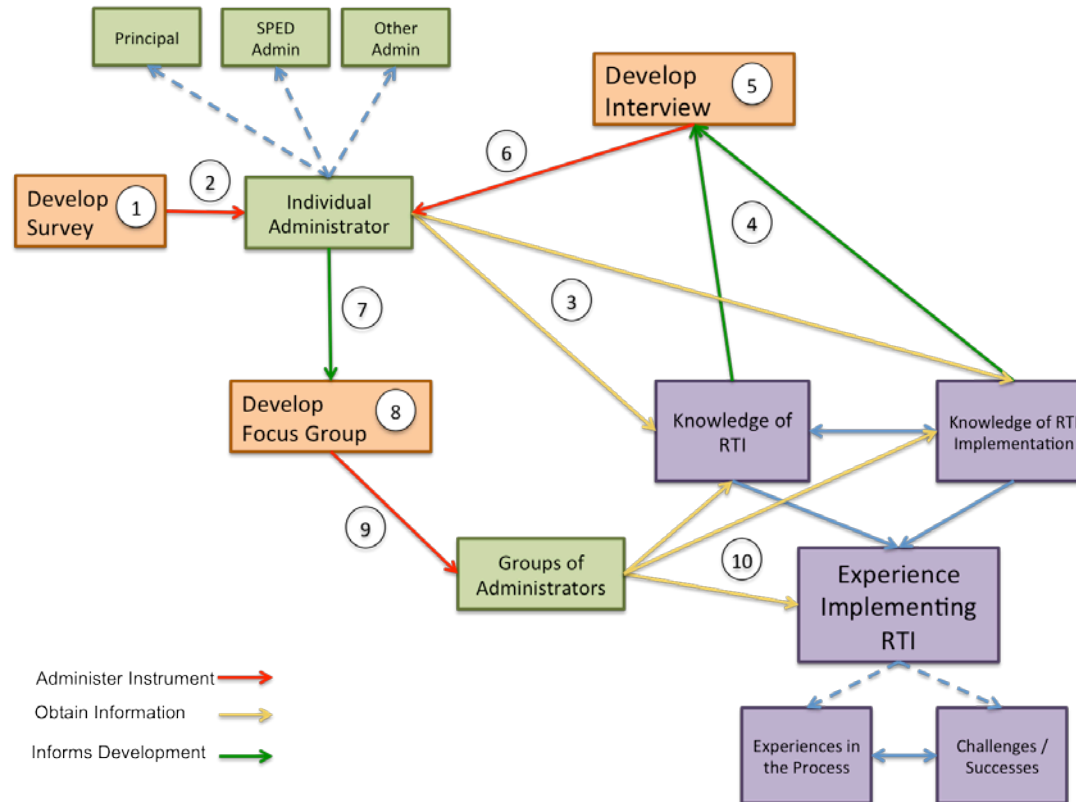
Diagram of the study with sequential notes

Figure 3.2

The Organizational step-by-step process of my proposed study.

1. I will create a survey from three validated surveys related to my research topic.

2. I will administer the survey to public school educational leaders in Western Massachusetts.

3. I will analyze the survey data using descriptive statistics.

4. I will use the findings from the survey results on leaders' knowledge of MTSS to create an open-ended questionnaire.

5. I will develop the questionnaire.

6. I will administer the standardized open-ended questionnaire to participants.

7. I will analyze the questionnaire responses using descriptive interpretation in which the goal is to create a rich description of the participants' perspectives. Then the data will be organized, familiarized to me, categorized, instrumentally coded and re-coded, and condensed. Themes will be identified and interpreted. The themes will include my own analytic ideas that shape and refine my thinking which provide insights for analysis. Finally, alternative understandings will be considered and then the interpretations from the open responses will be written in the report.

8. I will use the findings from the open-ended questionnaire to develop an interview protocol for the focus group interviews.

9. I will convene one focus group with a group of 7 to 10 leaders that share certain characteristics, and an assistant moderator to help me record the focus group. An open environment will be created and specific questions will be asked about MTSS. Participants will be encouraged to discuss and express their opinions and viewpoints. The goal is for the group to produce new understandings from their reactions and responses to what others say.

10. I will analyze the data from the focus groups using a professional transcriber to transcribe the audio recording. Then the data will be organized, familiarized to me, categorized, instrumentally coded and re-coded, and condensed. Themes will be identified and interpreted for the written report.

Figure 3.3
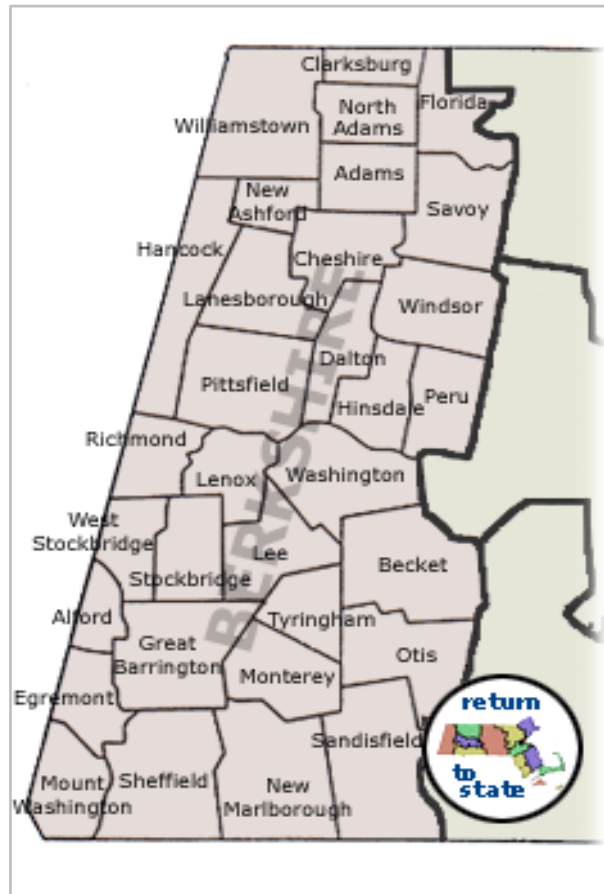
Map of Berkshire County towns
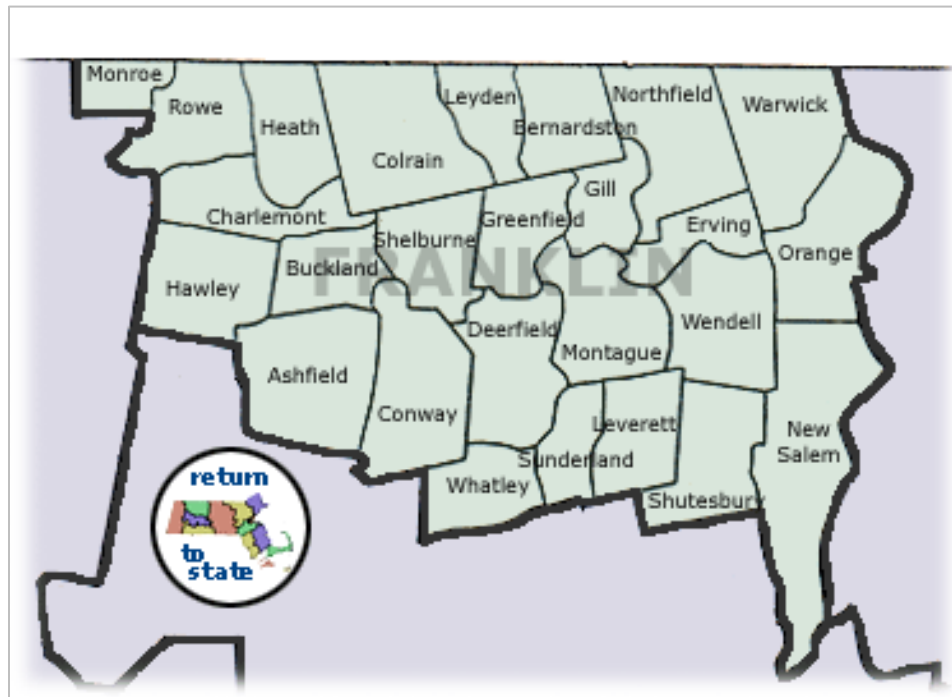
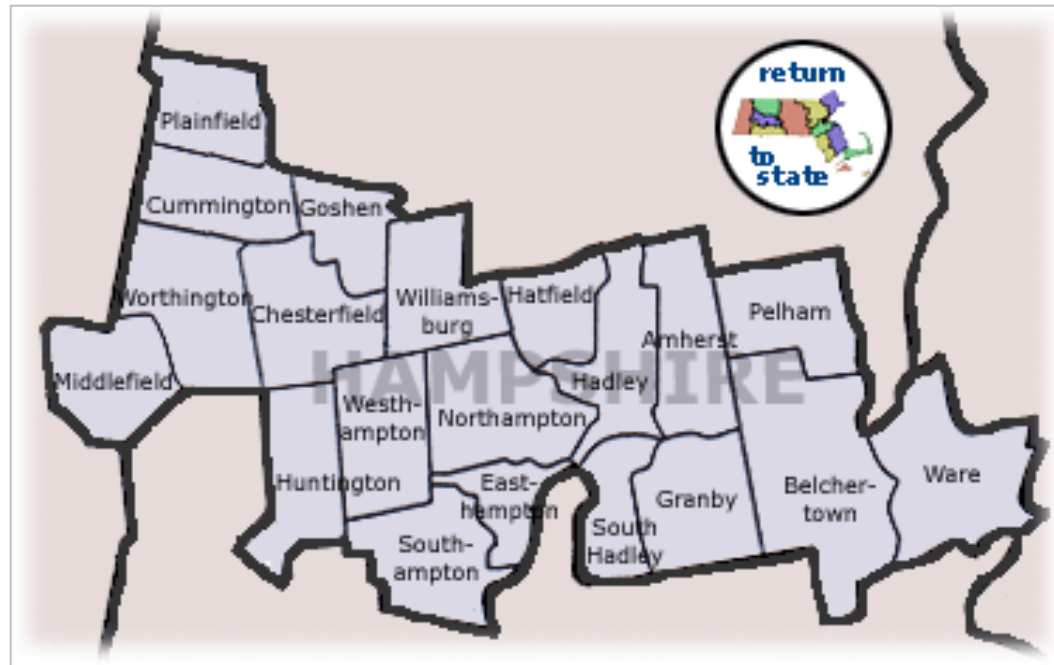*Figure 3.4*

Map of Franklin County towns

Figure 3.5

Map of Hampshire County towns

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