The Impact of the Multi-Tiered System of Supports (MTSS) and the Role Instructional Leaders and Teachers have on the Implementation of an MTSS Framework

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THE IMPACT OF THE MULTI-TIERED SYSTEM OF SUPPORTS (MTSS) AND THE ROLE
INSTRUCTIONAL LEADERS AND TEACHERS HAVE ON THE IMPLEMENTATION OF
AN MTSS FRAMEWORK

by

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for the degree of Doctor of Education
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ABSTRACT

The purpose of this study was to determine instructional leaders and instructional faculty’s knowledge of a Multi-Tiered System of Supports Framework as an intervention tool to support struggling students. The study analyzed instructional staff knowledge of the definition, purpose, and implementation of an MTSS Framework. This study also evaluated the extent to which school-based leadership utilizes MTSS data to inform decisions related to intervention around academics, behavior, and social-emotional learning. The results of the study indicated that school-based leaders had limited knowledge of the definition and purpose of a Multi-Tiered System of Support Framework. Instructional staff also had limited knowledge of the definition, purpose, and implementation of a Multi-Tiered System of Support Framework as a tool for intervention. As a result, further professional development at the school-based leadership and instructional level are needed so that all school personnel understand the benefits that the implementation of a Multi-Tiered System of Support Framework as an intervention tool can have on academic growth, positive behavior supports, and social-emotional learning.
This Dissertation is dedicated to my fellow educators and colleagues who never give up on students. This is for all educators who see something in students before they can see it in themselves, the educators who build relationships with students and through these strong educator-student relationships are able to intervene in difficult and trying situations whether the situation revolve around mental health, academic struggles, behavior, or social emotional well-being. Lastly, this work is dedicated to a group of individuals who pour their hearts into their profession because it is more than just a job; it is a calling, a passion, and a way of life. May we continue to support one another in building our students to be future leaders, mothers, fathers, husbands, wives, mentors, and meaningful contributors to society.
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CHAPTER ONE: INTRODUCTION

Background of the Study

For decades, students have been attending school, with the expectation of meeting the expectations. This includes meeting expectations surrounding academic performance, behavior, and emotional intelligence, which for the purpose of this study will be encompassed within the framework of the concept of social-emotional learning (SEL). But what happens when students fall short of this expectation. Faculty and staff in schools attempt to intervene and provide interventions and support for students who struggle. Intervention within schools is commonly referred to as a Multi-Tiered System of Supports (MTSS). In many schools across the nation, instructional leaders and instructional staff are attempting to implement an MTSS Framework as an intervention platform for academics, behavior support, and social-emotional learning (Durrance, 2023).

The MTSS center defines MTSS as follows:

A multi-tiered system of supports (MTSS) is a proactive and preventative framework that integrates data and instruction to maximize student achievement and support students’ social, emotional, and behavior needs from a strengths-based perspective. MTSS offers a framework for educators to engage in data-based decision making related to program improvement, high-quality instruction and intervention, social and emotional learning, and positive behavioral supports necessary to ensure positive outcomes for districts, schools, teachers, and students (Durrance, p.1).

Although defined parameters exist for an MTSS Framework, there is a lack of resources that address the complex nature of MTSS in practice at the middle and high school levels. Factors
that inhibit the successful implementation of an MTSS Framework at the high school level include but are not limited to a lack of resources, a lack of time, a larger student population compared to elementary schools, a lack of teacher training (professional development), and an unclear purpose (Durrance, 2023).

The purpose of implementing an MTSS Framework as a tool for intervention is to strengthen core instruction to reduce the need for intervention. To do this, it is suggested that an MTSS team be created and carefully selected. In addition, ongoing professional development is needed to ensure that instructional staff and instructional leaders have the tools needed to assist students who struggle through the implementation of an MTSS Framework (Baule, 2020).

This mixed method study gathered both qualitative and quantitative data regarding instructional staff perception of the instructional leadership team’s knowledge of the definition, purpose, and implementation of an MTSS Framework. In addition, instructional leaders also provided feedback on their knowledge and perception of the definition, purpose; and implementation of an MTSS Framework used as a platform for intervention. This study was conducted at one high school.

Quantitative analysis included surveys given to both instructional staff and instructional leaders. The survey data was scored using a five-point Likert Scale. In addition to survey data collected, instructional leaders were asked to provide responses to an additional six open ended questions. Based on the results of this study, further advancement related to the successful implementation of and MTSS Framework at the high school level are expected to be possible.
Response to Intervention (Rti)

Response to Intervention (Rti) is utilized to identify students who may struggle with academics, behavior, or a combination of the two. Rti is described a tiered approach to intervention. Evidence-based, high-quality instruction is provided, and a general screening of all students is conducted to determine which students may benefit from Rti intervention strategies. Rti strategies are utilized both within the general education classroom setting and the special education setting. For Rti strategies to be successful the following must be present; (1) high quality, evidence-based instruction, (2) ongoing student assessment, (3) tiered instructions, and (4) parent involvement (Conradi, Walker, McDaid, Johnson, & Strickland-Cohen, 2022).

Positive Behavior Intervention and Support (PBIS)

The Center on PBIS defines this framework as an evidence-based three-tiered framework to improve and integrate all the data, systems, and practices affecting student outcomes. (Conradi, et., al., 2022). Tier 1 serves all students and utilizes a proactive approach towards the prevention of unwanted behaviors. Tier 2 is designed for marginalized students who are more prone to behaviors (Conradi, et., al., 2022).

Tier 2 intervention strategies aim to address these potential behaviors before they occur. Tier 3 services students who need more intensive and specialized support. At this level, formal assessments are conducted to address and determine the student’s needs surrounding behavior. With the assessment, interventions are put into place to lessen or erase problem behaviors which in turn also has a positive impact on academic achievement (Baule, 2020).
The Multi-Tier System of Supports (MTSS)

Multi-Tiered System of Supports (MTSS) framework (MTSS) is a proactive and preventative framework that integrates data and instruction to maximize student achievement and support students’ social, emotional, and behavior needs from a strengths-based perspective. (Durrance, 2023) MTSS offers a framework for educators to engage in data-based decision making related to program improvement, high-quality instruction and intervention, social and emotional learning, and positive behavioral supports necessary to ensure positive outcomes for districts, schools, teachers, and students. (Bailey, 2017). MTSS is a three-tiered model. Tier 1 focuses on all students whereas Tier 2 focuses on approximately twenty percent of students needing additional support, and Tier 3 focuses on approximately five percent of a school’s population who need specialized support to service their academic, social-emotional, and/or behavioral needs (Oakes, Lane, & Germer, 2014). Within this framework, the problem is defined, analyzed and the strategies and interventions are implemented to support the problem being addressed. Lastly, interventions and strategies are evaluated (Durrance, 2023).

The Connection Between Rti, PBIS, and MTSS

A variety of states and school districts across America including Colorado, Florida, Kansas, Los Angeles, and Boston formally recognized a link between academic achievement and behavior. They are working to meld the student-centered academic supports of the Rti framework with the school-wide behavioral management system of PBIS into a single framework (Baule, 2020). Like Rti and SWPBIS, MTSS has the potential to improve long-term educational outcomes of all students regardless of ability level (Oakes, Lane, & Germer, 2014). The overarching purpose of the MTSS framework is to create sustainable systems-level change within the classroom environment and school environment.
As noted in Bailey (2017), in a recent review of state-wide MTSS-related systems, American Institutes for Research reported twenty-one states have explicitly adopted a multi-tiered system of supports framework within their educational setting that integrates both academic and behavioral supports into a single system-level framework. Many of these states continue to use the term Rti to describe the general educational framework, which is similar to MTSS. However, states with an MTSS framework are using Rti to describe their special education eligibility determination process, which creates a general level of confusion at the national level (Bailey, 2017).

Mercado (2018) asserts that Social-Emotional Learning (SEL) and behavior systems do not stand alone within the MTSS framework. Both SEL and behavior systems (PBIS) serve as the pillars to completing the ‘whole child’ within the educational context. Mercado (2018) defines Social Emotional Learning (SEL) as the process by which students acquire and effectively apply the knowledge, attitudes, and skills that are necessary to understand and manage emotions, understand empathy, maintain positive relationships, and make responsible decisions. Understanding behavior and SEL can allow educators to better support and provide interventions (Tier 2 and Tier 3 of the MTSS framework) to students who are struggling academically, as well as behaviorally and/or socially.

The image in Figure 1 illustrates the intersection between response to intervention (Rti), positive behavior interventions and supports (PBIS), and Multi-Tiered Systems of Support (MTSS)
Before MTSS existed, educators were familiar with the response to intervention (Rti) model. Rti refers to the practice of providing high quality multi-tier instruction and interventions matched to a student’s needs. Within Rti, students’ progress is monitored frequently to make decisions about instructional methods. Routinely collected data is also evaluated to determine the need to refer a student for special education support (Durrance, 2023).

The three-tiered MTSS model is as follows: Tier 1 represents all students and includes (1) classroom management, (2) instructional strategies, (3) curriculum design, (4) data-based decision making, (5) problem solving teams, and (6) staff development. Tier 2 represents some students, 10-15%. Tier 3 represents few students not to exceed five percent (Dulaney, et. al., 2013). The researcher’s topic of interest relates specifically to Tier 2 of the three-tiered MTSS model.

MTSS frameworks include aspects of both positive behavioral interventions and supports (PBIS) and the principles of response to intervention (Rti) along with aspects of SEL. MTSS
frameworks provide system-wide (school, district, and state) resources, strategies, structures, and evidence-based practices for assisting students who struggle with academics, behavior, social-emotional competencies, or a combination of all three factors (. MTSS encompasses both PBIS and Rti and includes, (a) increased instructional time, (b) targeted interventions, and (c) improved educational outcomes and includes evidence-based programs and interventions that will allow educators the ability to determine a student’s need for special education services (Durrance, 2023) while maintain a model of inclusion and equity.

MTSS Frameworks

![Multi-Tiered Systems of Support (MTSS)](image)

**Figure 2**
MTSS Frameworks (Durance, 2023)

**Research Questions**

The following research questions guided this study.

**Research Question 1**

1. To what extent do instructional leaders, which includes principals and assistant principals, consider an MTSS platform when making instructional decisions?
Research Question 2
2. What is teacher perception of the instructional leaders’ knowledge of the MTSS platform, with particular emphasis on integration and implementation of an MTSS Framework as an intervention measure?

Research Question 3
3. What role does professional development play in preparing teachers to implement Tier 2 MTSS interventions and strategies with fidelity?

Statement of the Problem
The phrases and acronyms of MTSS, Rti, and PBIS are often used interchangeably and as synonyms. All three phrases, however, are distinct from one another. Both Rti and PBIS are integrated into the three-tiered MTSS model. Instructional leaders and instructional personnel do not have adequate training and professional development surrounding intervention and the implementation of the MTSS model. There is a need to provide adequate training and professional development so that both instructional leaders and instructional personnel can implement an effective MTSS framework model that allows all students to achieve gains in an inclusive environment.

Purpose of the Study
The purpose of this study was to determine instructional leaders and instructional faculty’s knowledge of a Multi-Tiered System of Supports Framework as an intervention tool to support struggling students. This study also evaluated the extent to which school-based leadership utilize MTSS data to inform decisions related to intervention surrounding academic
success, behavior, and social-emotional learning (Durrance, 2023). There is a gap in the literature regarding the purpose and implementation of an MTSS Framework. Most literature surrounding MTSS is focused on elementary school students. This study conducted research at the high school level and probed instructional staff and instructional leaders’ knowledge of an MTSS Framework

**Significance of the Study**

The findings of this study may impact district leaders, instructional leaders, instructional staff, and students. It will serve as a starting point for instructional leaders in ensuring that their faculty and staff have the proper knowledge and training surrounding and MTSS framework. With proper knowledge and professional development surrounding an MTSS framework, both instructional leaders and teachers will be better equipped to provide support and interventions for students who are not performing on grade level, have a gap in their social emotional intelligence, and may not be meeting the expectation surrounding behavior and discipline.

**Definition of Terms**

**MTSS:** Multi-Tiered System of Support is a three-tiered framework that integrates response to intervention (Rti) and positive behavior interventions and supports (PBIS) (https://www.cde.ca.gov/ci/cr/ri).

**Rti:** Response to intervention refers to how a student responds to a specific intervention being utilized (https://www.cde.ca.gov/ci/cr/ri).
PBIS: Positive behavior interventions and supports are interventions and supports that are proactive versus reactive and they revolve around reinforcement of positive behaviors versus punishment for negative behaviors (Baule, 2020).

SEL: Social and emotional learning that is integrated into the PBIS model. Social and emotional learning targets the whole individual and goes beyond academic and behavioral aspects and is focused on the emotional well-being of the child as it correlates to their environment (Durrance, 2023).

Inclusion: Inclusion refers to including all students in the general education environment whenever possible, even if a student needs interventions or accommodations, if those interventions or accommodations allow the student to participate fully within the general education setting (www.fldoe.org).

Instructional Faculty: For this study, instructional staff refers to all staff that hold a professional educator’s certificate and can include guidance counselors, classroom teachers, and instructional support staff (www.fldoe.org).

Instructional Leader: For this study, an instructional leader refers to the principal, assistant principals, administrative teachers on assignment, and other personnel who are not classroom teachers that are part of the MTSS team including the school psychologist and the speech language pathologist (www.fldoe.org).

**Interventionist:** An interventionist is the individual or individuals providing intervention (Durrance, 2023).

**Culturally Responsive Teaching:** A pedagogy that supports instruction which takes into consideration the culture and lived experiences of each child, particularly marginalized students (Neumann-Boone, Kardambikis, & Donne, 2023).

**BIPOC:** this acronym refers to students from minority and/or marginalized groups and stands for Black, Indigenous, People of Color (Henry, Catagnas, Griffith, & Garcia, 2022).

**Trauma Informed Practices:** Represents a strengths-based framework focusing on how teachers, staff and administration can recognize and respond effectively to the impact of trauma on students (Neumann-Boone, Kardambikis, & Donne, 2023).

**Special Education:** For this study, special education will refer to students that have an IEP regulated by the Individuals with Disabilities Act (IDES) and students who have a 504 Plan which is regulated by section 504 of the Rehabilitation act of 1973 (www.fldoe.org).

**Zero-Tolerance:** School policies that mandate the application of predetermined consequences, most often severe and punitive in nature, that are intended to be applied regardless of the gravity of behavior, mitigating circumstances, or situational context (Neumann-Boone, Kardambikis, & Donne, 2023).

**Limitations**

The study has the following limitations:

1. Study participants may have intrinsic or extrinsic bias.
2. The results may be generalizable in a high school setting and cannot be generalized in a middle school or elementary school setting.
Delimitations

The delimitations set forth by this study are a limited sample size that includes one high school. Another delimitation of this study is that survey participants are voluntary and therefore may not represent the whole of the school. Another delimitation of this study is that some instructional leaders and instructional staff that were present at the beginning of the school year are no longer working in the school.

Assumptions

The study has the following assumptions:

1. The researcher assumed that the participants in this study provided honest answers to survey questions.
2. The researcher assumed that instructional leaders gave honest feedback to the open-ended interview questions.

Organization of the Study

This research study is organized into five chapters. Chapter one presents an overview of the study including the background to the study, problem statement, purpose of the study, research questions, conceptual framework, limitations, delimitations, and assumptions of the study. Chapter two presents an overview of the literature and chosen conceptual framework which informs the direction and scope of the study. Chapter three presents the methodology of the procedures for the study and details the data selection, collection, and analysis. Chapter four presents the results found in the study by answering each research question based on the data.
tested. Chapter five presents a summary of the study discussion of the findings and provides implications for practice and ideas for further research.

**Summary**

In summary, the role of MTSS and the integration of intervention within the general education classroom is integral to achieving inclusion. This study aimed to provide an effective analysis of the purpose and benefits of the integration of MTSS. In addition to an understanding of the purpose and benefits of MTSS, the researcher aims to provide school districts, instructional leaders, and instructional staff resources that will enable all stakeholders the ability to understand how to implement a successful MTSS framework. This will happen within teacher education, instructional leadership programs, and professional development within school districts to ensure that all relevant stakeholders are trained on how to successfully implement an MTSS framework within a school district. The goal of effective implementation of an MTSS framework is to ensure that every student can achieve success, behaviorally, social-emotionally, and academically in an inclusive environment which fosters equity.
CHAPTER TWO: LITERATURE REVIEW

Introduction

To move towards an environment of equity for students in our schools today, understanding the relationship between our students, our environment, and the role that intervention plays in bridging the equity gap is important. To provide an inclusive environment for our students, each student needs to be met where they are, academically, behaviorally, and from a social-emotional perspective. All students, however, are not performing at the same rate related to the three aforementioned factors.

Because of this, interventions are often put in place for students who are falling behind and are not performing at their desired level. This chapter is focused on the review of the literature pertinent to the present study. The literature will review the significance of a Multi-Tiered System of Support (MTSS) approach towards intervention. An analysis of the evolution of intervention will be discussed along with the significance of teacher preparation programs focusing on what MTSS is and how to implement an MTSS framework. In addition, the role of district and school-based leaders will be discussed in relation to effective evidence-based MTSS practices. Lastly, the role of effective professional development revolving around the successful implementation of an MTSS framework will be outlined. All the factors mentioned have a focus on equity and inclusion, which is the goal of our schools today.

MTSS Frameworks

Sailor, et al., (2021) defines MTSS as a set of practices and interventions that support academics and behavior, in addition to social-emotional learning competencies. Teachers and administrators need to be prepared to implement such strategies. An MTSS framework is broken down into three tiers: Tier 1 which represents all students, tier 2, which represents some students,
no more than twenty percent, and Tier 3, which represents a small number of students, three to five percent (Dulaney, et al., 2013). Tier 1 includes universal instruction and includes all students. Tier 2 provides extra assistance and instruction to students who are not grasping the learning target within the domain of Tier 1, and Tier 3 may or may not include special education but does include intensive, often 1:1 intervention (Durrance, 2023).

MTSS frameworks utilize a data-driven approach that allows institutions the ability to create a system that supports struggling students so that they do not fall further behind, but instead, make gains in one or all three areas surrounding academics, behavior, and social-emotional competencies (Jackson, 2021). An MTSS framework is created to eliminate barriers and produce positive outcomes. Barriers include but are not limited to a student’s (a) race, (b) socio-economic status, (c) English-language proficiencies, and (d) a student’s diagnosed or perceived disability (Jackson, 2021). Sailor (2015) suggests that there are three significant advances towards inclusive school-wide reform which include (a) an MTSS framework that has an embedded Rti which includes positive interventions and supports, (b) universal design for learning which includes the three following principles; representation, action and expansion, and engagement, and (c) collaborative instruction that includes general education and special education educators (Durrance, 2023).

Implementation of an MTSS framework allows educators the opportunity to increase aspects of student belonging and student connectedness. This can be achieved through positive student-teacher relationship building by the teacher being self-aware of their culture, biases, and identity that they bring to the school (Jackson, 2021). An effective MTSS framework promotes a students’ ability to bring their ‘full selves,’ including their culture, language, and sociopolitical background to school (Jackson, 2021).
MTSS frameworks need to account for successful application, accountability, and sustainability. The results of interventions are evidence-based practices that are systemic in nature and are necessary for students to benefit from the MTSS framework (Sailor, et al., 2021). The goal of providing interventions through an MTSS model is inclusion. There is a critical need to prepare incoming teachers and administrators as to the purpose and value and benefits of incorporating an MTSS framework as a process to provide support and intervention in schools (Sailor, et al., 2021). The study conducted by Sailor, et al., (2021) developed eighteen conceptual maps that act as rubrics to guide administrators and teacher educators to prepare course syllabi for their teacher preparation programs and to prepare school and district personnel on how to implement an evidence based MTSS framework.

MTSS frameworks include aspects of both positive behavioral interventions and supports (PBIS) and the principles of response to intervention (Rti) along with aspects of SEL (Durrance, 2023). MTSS frameworks provide system-wide (school, district, and state) resources, strategies, structures, and evidence-based practices for assisting students who struggle with academics, behavior, social-emotional competencies, or a combination of all three factors (Conradi, L. A., Walker, V. L., McDaid, P., Johnson, H. N., & Strickland-Cohen, M. K., 2022). MTSS encompasses both PBIS and Rti and includes, (a) increased instructional time, (b) targeted interventions, and (c) improved educational outcomes and includes evidence-based programs and interventions that will allow educators the ability to determine a student’s need for special education services (Durrance, 2023) while maintain a model of inclusion and equity.

A comprehensive MTSS framework is representative of the whole child and includes, as mentioned before, aspects of academics, behavior, and social-emotional well-being. Stakeholders represented within the MTSS framework are: (a) Family and community engagement, (b) district
and school-based administrators, (c) includes an integrated education framework, and (d) an inclusive policy and practice (Sailor, et al, 2021). Many MTSS models exist and most include, (a) universal screening of all students, (b) MTSS intervention separated into three tiers as previously discusses, and (c) integrated data collection and the formation of an assessment system to drive and inform decisions at each tier of the MTSS service delivery model (Durrance, 2023).

Many school systems today are utilizing an MTSS model which aims to also include an PBIS (Positive Behavior Intervention Supports). This proactive and inclusive model allows the authors of this article to revisit Wills REI of 1986 (Leach & Helf, 2016). It is important for teachers to distinguish between MTSS and special education. MTSS is a bridge to the special education realm (Leach & Helf, 2016). MTSS interventions happen within the general education setting and are provided to general education students, in hopes that such interventions can prevent the need for special education services or better help educators understand what special education services a student may need (Leach & Helf, 2016).

Evolution of Intervention: Rti to MTSS

Before MTSS existed, educators were familiar with the response to intervention (Rti) model. Rti refers to the practice of providing high quality multi-tier instruction and interventions matched to a student’s needs. Within Rti, students’ progress is monitored frequently to make decisions about instructional methods. Routinely collected data is also evaluated to determine the need to refer a student for special education support (Durrance, 2023).

Mercado (2018) asserts that Social-Emotional Learning (SEL) and behavior systems do not stand alone within the MTSS framework. Both SEL and behavior systems (PBIS) serve as
the pillars to completing the ‘whole child’ within the educational context. Mercado (2018) defines Social Emotional Learning (SEL) as the process by which students acquire and effectively apply the knowledge, attitudes, and skills that are necessary to understand and manage emotions, understand empathy, maintain positive relationships, and make responsible decisions. Understanding behavior and SEL can allow educators to better support and provide interventions (Tier 2 and Tier 3 of the MTSS framework) to students who are struggling academically, as well as behaviorally and/or socially.

The Role of General Education and Special Education Teachers

The need for general education teachers and special education teachers to work together is critical if educators want to provide an environment of equity and inclusion. When implementing an MTSS framework, it is critical that both general education teachers and special education teachers are part of the process and the student receiving MTSS supports are serviced within the general education setting as much as possible to promote an environment of inclusion, which in turn leads to equity.

Leach & Helf (2016) discuss and evaluate how Multi-Tiered Systems of Support (MTSS) strategies support both students with disabilities and general education students to support an inclusive environment. This MTSS framework supports collaboration between general education teachers and special education teachers. Leach & Helf (2016) offer suggestions to strengthen or establish an inclusive MTSS model that is both integrated and cohesive (inclusive).

Leach & Helf (2016) suggest that the most important individuals who have the capacity to impact the greatest integration of general education and special education students are school administrators. School administrators lead the charge at establishing a culture of collaboration and inclusion. District level special education administrators can assist school-based
administrators regarding the professional development and training of teachers, both special education teachers and general education teachers on how to implement both MTSS intervention models and PBIS models. The research of Leach & Helf compliment the research of Henry, et. al. (2022) and Neumann-Boone, et. al., (2023) that posit alternatives to zero-based discipline policies help to support an inclusive environment by focusing on PBIS, social-emotional, learning, culturally responsive teaching, and trauma informed teaching practices.

Leach & Helf (2016) analyze Will’s research and if this initiative were written today, it would have a more positive approach. This assumption is due to inclusion model which aims to include special education students within the general education classroom (Leach & Helf, 2016).

Subsequently, Howington-Cox (2021) analyzed the perceptions of teachers regarding Response to intervention (Rti) and the implementation of the intervention strategies. The results indicated if (a) there was a significant difference between the perception of Rti among general education teachers and special education teachers, (b) if a significant difference is found among special education and general education teachers regarding Rti, what is the difference between elementary school and middle school teachers regarding their perception of Rti, and (c) if there is a difference in perception of Rti among veteran and novice teachers based on years of experience (Howington-Cox, 2021).

The results and implications of this study citation concluded that there was no significant difference between perceptions in Rti based on area of certification, general education versus special education; school setting, elementary school, or middle school; or years of teaching experience from first year teachers to veteran teachers. The results of this study which examined teacher perceptions of Rti and the Rti process can assist school districts in providing cohesive implementation strategies for Rti through training and professional development. Teachers’
perceptions of Rti can be utilized to strengthen such training so that Rti can be implemented with success.

Both studies citations analyzed for the purpose of this research highlight the significance of teacher collaboration. General education teachers and special education teachers need to work together to support all students. Teachers who teach different content cannot teach in a silo and only focus on their content. It is becoming increasingly evident that teachers, no matter their discipline, need to have a broad scope of understanding of all aspects of the educational process, including MTSS and intervention if students are to be successful.

A Model of Inclusion

MTSS frameworks attempt to reach the goal of inclusion (Sailor, et al., 2021). MTSS frameworks should be equity based and cultivate an environment of strength, confidence, acceptance, and opportunity. This allows schools to create a learning environment where students feel safe, valued, and seen (Jackson, 2021).

Jackson (2021) found that MTSS represents a systemic approach that addresses student needs. MTSS can be used as a tool to address equity and should include (a) culturally responsive assessment and instruction, (b) promote early intervention (c) provide data-driven decision-making, (d) have a strong emphasis on quality instruction, (e) emphasize team-based decision-making and strong leadership, and (f) provide professional development that helps teachers examine bias and learn to use culturally responsive instruction and assessment (Jackson, 2021).

When talking about a model of inclusion, it is important to ensure that all students receive an equitable education. Based on past and current research, students of color represent a disproportionate number of students who receive referrals, have punishment that includes out of school suspension. In addition, a higher portion of students of color receive penalties and
punishments that include expulsion. Henry, Catangus, Griffith, & Garcia (2022) conducted a study that analyzed alternatives to zero tolerance policies related to discipline within the public school system. These authors assert that the disproportionate rate at which black, indigenous, people of color (BIPOC) students are disciplined leads to a higher, inequitable disproportionate rate of incarcerated individuals that fall into the BIPOC population (Henry, Catangus, Griffith, & Garcia, 2022).

Henry, et., al., designed a survey for school professionals that gauged the desire and effectiveness of the use of strategies that combat the school-to-prison pipeline statistic. These statistics posit that approximately forty percent of students who receive punitive punishment such as school suspension or school expulsion, which are examples of zero-tolerance strategies, are BIPOC students, while BIPOC students’ make-up approximately fifteen percent of the student population (Henry, Catangus, Griffith, & Garcia). The survey results indicated that school professionals did want to utilize effective alternative behavior alternatives to the zero-tolerance model but were not confident in how to utilize and implement these behavioral alternatives.

Zero-based tolerance alternatives include strategies and practices such as, (a.) culturally responsive teaching, (b.) trauma informed practices, (c.) a focus on social-emotional well-being, and (d.) a system of Positive Behavioral Interventions, and Supports (PBIS) (Neuman-Boone, Kardambikis, & Donne, 2023). Neumann-Boon, et., al, defines trauma informed practices as a strengths-based framework focusing on how teachers, staff and administration can recognize and respond effectively to the impact of trauma on students. They define social-emotional as the development of skills a person uses to respond to others and how they manage emotions to create
relationships. It is constructed through cultural interactions as well (Neumann-Boone, Kardambikis, & Donne, 2023).

In addition to utilizing trauma informed practices and focusing on social-emotional well-being, education professionals must also utilize culturally responsive teaching. Neumann-Boone, et., al, and Henry, et. I believe that culturally responsive teaching is a key factor that can mitigate the need for zero-based tolerance discipline policies. Culturally responsive teaching is defined as a Pedagogy that supports instruction which takes into consideration the culture and lived experiences of each child, particularly marginalized students (Neumann-Boone, Kardambikis, & Donne, 2023). Lastly, both Neumann-Boone, et. al., and Henry, et. al., posit that a strong system of Positive Behavioral Interventions, and Supports (PBIS), needs to be put into practice within the classroom and overall school setting to mitigate the reality of the school-to-prison pipeline. In the study performed by Henry, et. al., teachers were willing to implement these alternatives to zero-tolerance policies but lacked the training and skills needed to successfully integrate and implement these strategies into practice (Henry, Catagnus, Griffith, & Garcia, 2022).

**District and School-Based Leader’s Role in MTSS**

The role that both district and school-based leaders play in the successful understanding and implementation of an MTSS framework is critical to the success of students. In the case study, Dulaney, et al., (2013) attempt to study the efficacy and implementation of a state-wide, vetted Multi-Tiered Systems of Support (MTSS). This case study conducted attempted to offer a solution to differences that exist within the MTSS process across school districts (Dulaney, et al., 2013). This case study examines the perception of superintendents related to the opportunities
and obstacles presented within the MTSS framework and attempts to standardize the MTSS process throughout an entire school district (Dulaney, et al., 2013).

The population of this study includes sixty-six percent of superintendents in one state (Dulaney, et al., 2013). The case study was conducted a state located in the southwestern United States. This state includes forty-one school districts representing 562 elementary schools and 306 secondary schools. Seventy-eight percent of students within these schools are Caucasian, twenty-two percent are minority students and fifteen percent of students are Hispanic (Dulaney, et. al., 2013). These forty-one school districts are comprised of 26,000 teachers, 4,000 specialists, and 1,600 district and school-based administrators (Dulaney, et al., 2013). This case-study was conducted in the Spring of 2011. The study is comprised of a survey that twenty-seven of the forty-one superintendents completed. Nine of the twenty-seven superintendents who completed the survey were chosen to participate in an interview (Dulaney, et al., 2013).

The emic strategy stipulates that the survey must have the following: (1) common language, (2) district MTSS framework, (3) accountability at the district and school level, (4) implementation, opportunities, and obstacles, (5) a PLC process, and (6) capacity building strategies (Dulaney, et al., 2013). The survey is comprised of three sections: collaborative processes (11 questions), data-based decision making (11 items), and evidence-based practices (8 questions).

The results and implications of this study are that Dulaney, et al, (2013) attempted to survey all superintendents with the survey. Results of this study can be generalized to the population within the state, but not nationwide, given the diversity and distinct characteristics within each region within the United States. A strength of this case study is that it attempted a state-wide implementation of an MTSS framework versus a school or district level approach. A
weakness of this study is the subjective nature regarding the perception of the superintendent’s response to the success of an MTSS framework. This study relies on the opinion of individuals versus the analysis of empirical data. This could lead to skewed results.

This study conducted by Dulaney, et al., (2013) represents one example of an attempt to standardize an MTSS framework. Although the study has limited generalizability across the nation and lacks empirical results, it serves as a springboard for future research and implementation of a state-wide MTSS framework. This study could be replicated with additional data and added empirical data to strengthen the efficacy and implementation of a standardized MTSS Framework that could be utilized in many states and school districts across the nation.

Teacher Perception of District and School-Wide MTSS Training

Teacher perception of district and school wide MTSS training remains a key factor as to why MTSS framework implementation not only varies from school to school, district to district, but also teacher to teacher. If teachers have different perceptions as to the validity and relevance of what an MTSS intervention model supports, it will remain difficult to implement MTSS with fidelity.

In the study conducted by Meyer & Behar-Horenstein (2015) titled, team teachers’ perspectives on the implementation of Response to intervention (Rti) to better understand how school leaders and district leaders provide support for such intervention-(Meyer & Behar-Horenstein, 2015)?

Results of this study allowed the researchers to develop core themes to address items which include unmet teacher needs, coping with the effects of insufficient school and district leadership, and using coping skills to learn (Meyer & Behar-Horenstein, 2015,). This resulted in teachers utilizing learning strategies which are interdependent skills and coping
strategies which are a representation of an independent skillset (Meyer & Behar-Horenstein, 2015). Results and implications of this study indicate that the core themes from a teacher team’s implementation of Rti are (a) unmet teacher need which includes professional development, direct support, and tangible resources, (b) coping with the effects of insufficient school and district leadership which results in role uncertainty, process uncertainty, trial and error data based decision making, struggling students, and emotions that manifest as frustrations, and (d) using coping strategies to learn (Meyer & Behar-Horenstein, 2015). These coping strategies include collaborating, asking questions, initiating professional development, and observing other teachers (Meyer & Behar-Horenstein, 2015). The culminating result of this study led to participants in this study learning new skills. Although the findings of this study cannot be generalized, the findings of this study are useful in instituting systemic change regarding the training and implementation of Rti (Meyer & Behar-Horenstein, 2015). This study can be utilized for further research to assist in mitigating the vast array of different perceptions that teachers have regarding MTSS. A duplicate study can be conducted to expand upon the results of this study to standardize the role and therefore the perception of the implementation of an MTSS framework.

Dilemmas of a school and district-wide approach to MTSS prove to be a constant threat to the success of MTSS implementation. It is difficult for all personnel in a school, and even more so in the whole school district, to buy-in to a standardized approach towards the implementation of an evidence-based MTSS intervention model. This is due in large part to differences in teacher perception of the purpose and validity of an MTSS framework.

Fein, et al., (2021) attempt to replicate a 2016 study conducted by Smith. This study attempts to use an evidence based MTSS framework to provide intervention. The problem with a
school wide MTSS framework is training and understanding of what needs to be done for students who need interventions (Fein, et al., 2021). Teachers need to be educated as to what MTSS is and what role Tier II interventions (teacher interventions) play within the MTSS framework (Fein, et al, 2021).

Fein, et. al., (2021) conducted a cluster-randomized control trial with 44 schools. Moderate to strong effects were the results of this study on students’ ability to decode, word reading, and fluency skills for students in the ECRI schools (Fein, et al., 2021). The results of this study suggest that schools and districts can utilize the ECRI MTSS model to improve foundational reading skills. This replication study was performed at elementary schools and spanned over the course of two school years (Fein, et al., 2021).

Fein, et. al., (2021) attempts to analyze the impact that the ECRI model of MTSS had on foundational reading skills. They focused particular attention on students who present symptoms and a diagnosis of Dyslexia (Fein, et al., 2021). This falls under the SLD label within the IDEA legislation and would qualify a student for special education services if the intervention were not successful and a student needed more intensive support (Fein, et al., 2021).

The results and implications of this case-study add to the existing data that already exists surrounding evidence-based MTSS intervention models. Results of this study show that students that receive this intervention perform at higher levels on foundational reading skills (Fein, et al., 2021). Replication research is suggested for adding to the already existing research to better understand the evolution of intervention strategies. Replication studies are suggested so that educators do not use outdated strategies and are able to adapt to new research regarding the implementation of an evidence based MTSS framework (Fein, et al., 2021).
The Role of Professional Development, Teacher Preparation and MTSS

The role that professional development plays in the successful implementation of an MTSS framework is integral to a student’s success. Embedding foundations MTSS/Rti into teacher education programs and continuing training through ongoing professional development is critical (Prasse, et al., 2012). A better understanding of what MTSS is and how to successfully implement an MTSS model is necessary in both teacher education programs and continued professional development for teachers and administrators.

Teacher Preparation Programs

There is a critical need to prepare incoming teachers and administrators on the purpose, value, and benefits of instituting an MTSS framework as a process to provide support and intervention in our schools (Sailor, et al., 2021). Prasse, et al., (2012) addresses the need for teacher preparation programs to prepare aspiring teachers with the base knowledge and skill set that encompasses a general knowledge of Rti domains and provides steps for teacher preparation programs to achieve this goal. Skills needed for teachers are (a) an attitude and belief that all students can learn, (b) deep content knowledge with high levels of student engagement, (c) classroom management and organization skills, and (d) problem-solving skills that account for a teacher’s ability to collect and effectively analyze data to help guide effective instructional and remediation techniques (Prasse, et al., 2012). There is a positive correlation between teacher efficacy and positive student outcomes (Prasse, et al., 2012). The MTSS/Rti domains of practice for teacher education programs to implement are as follows: (a) decide upon which MTSS model needed to be used, (b) data-based decision making, (c) development of a problem-solving process, (d) a focus on high quality curriculum and instruction, (e) establish a safe and welcoming classroom environment, (f) collaborate with your team and collaborate among
general education and special education teachers, and (d) strong teacher efficacy with positive professional attitudes and an inclusive mindset (Jackson, 2012).

Teaching Educators How to Implement an MTSS Framework-Internal Professional Development

Relevant and meaningful professional development surrounding MTSS remains a challenging task for many schools and school districts. In the article, *Living in Tier 2: Educators’ Perceptions of MTSS in Urban Schools*, Braun, et. al, (2018) gather educators’ perception of what Tier 2 of the MTSS Framework is and what their role is regarding Tier 2 interventions. The authors of this study suggest, that although information and training regarding the practice and implementation of the MTSS framework has existed for years, educators are still facing challenges regarding the implementation of Tier 2 within the three tier MTSS Framework. Braun, et., al., assert that, despite multi-tiered systems of support (MTSS) being implemented for over a decade in the United States, practitioners are continuously challenged with implementing the framework to meet the needs of their students (Braun, et al., 2018).

This qualitative study was performed in high needs urban schools and revolves around the implementation of the MTSS framework. Nineteen educators were interviewed about their perceptions of what MTSS represents, the role of the multiple tiers of the MTSS framework, and what MTSS means. This study pays particular attention to Tier 2 of the three-tiered MTSS framework and pinpoints the purpose, strength or weakness of the Tier 2 teacher intervention and the results of said intervention(s) (Braun, et al., 2018).

Because of frequent change in the system and curriculum utilized to implement MTSS, educators within this study often felt confused as to how to properly identify and implement strategies and interventions and often could not decipher the difference among the three tiers within the MTSS framework (Braun, et al., 2018). Teachers also felt that Tier 2 interventions
were successful for students who needed limited support, but were not successful for students needing more assistance, such as on to one instruction or remediation (Braun, et al., 2018).

Results and implications of this study suggest that further research is needed regarding effective research-based Tier 2 MTSS intervention strategies that can be successful in urban school settings (Braun, et al., 2018). There is a lack of clarity and consistency regarding the implementation of the MTSS framework and little support is available for teachers to provide more intensive support for students who need more than a little extra help or small group instruction. More research is needed regarding Tier 2 of the MTSS framework and the transition of Tier 2 support to Tier 3 support (Braun, et al., 2018).

Mason, et al., (2019) developed a school district-initiated partnership with university faculty. This partnership aimed to implement a MTSS framework for mathematics. In evaluating several studies, teachers identified five barriers surrounding MTSS implementation (a) lack of adequate training, (b) lack of time to plan and implement MTSS, (c) insufficient resources and staff support (d) the MTSS process being too long, and (e) the elevated level of documentation needed to implement MTSS. First, you must establish a partnership (university), develop a plan, and then put it into practice. High quality professional development needs to be created revolving around the research. Eight schools were chosen to pilot this partnership to practice study (Mason, et al., 2019). Mason, et. al., (2019) suggests that the research-to-practice gap highlights that there is a lack of knowledge surrounding evidence-based practices surrounding MTSS. Integrity and fidelity of the implementation of an MTSS framework remain a problem across school districts in the nation.

Results and implications of this study are as follows, seventy five percent of schools indicated that time was the most significant barrier to implementation of an evidence based
MTSS model (Mason, et al., 2019). Other barriers included content knowledge of mathematics and school size. Change agents represented another barrier (Mason, et al., 2019). Because this case study was only conducted using eight schools in a specific region, there is little to no generalizability, this represents a key limitation of the study (Mason, et al., 2019).

**Successful Implementation of an MTSS Framework Using Evidence-Based Practices (EBPs)**

Successful implementation of an MTSS framework using evidence-based practices (EBPs) is critical for the growth and success of students. In a study conducted by Daye (2019) attempts to address problems related to the implementation of an MTSS framework at the high school level. Daye (2019) suggests that these problems are two-fold: (a) There is limited research regarding the implementation of MTSS at the high school level and (b) there are few examples of high schools successfully implementing an MTSS framework. Daye (2019) also asserts that secondary educators’ perspectives are necessary for the creation of a successful MTSS framework at the high school level. This study attempts to provide meaningful research that will guide school districts for the successful creation and implementation of a secondary MTSS framework by providing feedback from (secondary) stakeholders (Daye, 2019).

Daye (2019) utilized a generic qualitative approach for the purpose of her study to gain insight into the perspectives of stakeholders and experts on the topic of the implementation of an MTSS framework at the high school level. Data was collected via interviews with stakeholders and experts. Stakeholders were considered individuals involved with the MTSS process at the high school level in the state of Utah (Daye, 2019). Stakeholders included Principals and other members of the school leadership team that participated in the MTSS process (Daye, 2019). Experts were considered individuals with expertise on the MTSS framework and included a
consultant, a university faculty member and District level Rti and PLC coordinators. The chain sampling method was used to determine expert criteria (Daye, 2019).

Results and implications of this study indicate that leadership and the role of leadership is an element that stood out in this qualitative study regarding the implementation of an MTSS framework at the High School level (Daye, 2019). In addition to the role of leadership, the stakeholder and expert interviews provided feedback supporting the significance of collaboration among teachers and school leaders, combined with training and professional development regarding the successful implementation of an MTSS framework at the high school level (Daye, 2019). Discussion was had distinguishing the role between MTSS and Special Education as separate entities. Stakeholder and expert perceptions regarding MTSS at the high school level provides valuable information that can guide future research and practice to help fill the gap between research versus practice (Daye, 2019). This study indicated that there is a need for increased professional development around the definition, purpose, and implementation of an MTSS framework at the high school level (Daye, 2019).

Mahoney (2020 evaluated Evidence Based Practices (EBPs) that support implementation of an MTSS model. The results from this study indicated there is sufficient training and implementation of an EBP model of MTSS at the elementary level, there is little professional development, training, and implementation of MTSS models such as a positive behavior intervention and academic intervention. Fur seeks to determine EBPs that will support implementation of a Multi-Tiered System of Support at the secondary level with adequate training and professional development that supports both general education and special education teacher’s knowledge of how to implement such interventions and support the inclusion model (Mahoney, 2020).
Evidence Based Practice Models (EBPs) can include an analysis of strategies such as checklists (reading fidelity), check-in, check-out with students, and an analysis of such intervention as an attendance contract and behavior plan (Mahoney, 2020). The results and implications of this study suggest that an evidence-based practice model of MTSS will allow special education teachers to be future coaches within the field (implementors of interventions) and will be able to lead training and professional development surrounding intervention and an approved evidence-based MTSS model (Mahoney, 2020). Implications of the inclusion model will allow for both general education and special education teachers the ability to be systemically trained in the implementation of evidence-based practice MTSS strategies that will benefit both special education students and general education students who are being serviced in the same inclusive classroom (Mahoney, 2020).

In evaluating and analyzing studies that have a focus on the implementation of professional development, it is evident that more needs to be done to ensure that teachers and school-based personnel are receiving adequate and quality training, so they can implement successful MTSS strategies to support our students and help them achieve success.

The Significance of Implementation with Fidelity

It is not only important to design an MTSS model using evidence-based practices. It is just as important to be able to implement the MTSS framework with fidelity to ensure its success. In the study, Tier 2 intervention in positive behavior support: a survey of school implementation. Rodriguez, et al., (2016) expands upon the research of Mitchel, et. al., (2011) and Hoyle, et. al., (2011). This study surveyed school personnel to identify what schools are suing as their Tier 2 MTSS intervention measure. It also evaluated how the interventions are used to support student outcomes (Rodriguez, et al., 2016).
Results and implications of this study indicated that more research is needed document Tier 2 of the three-tiered MTSS framework (Rodriguez, et al., 2016). The most common Tier 2 intervention cited was CICO (check in/check out). Two differences were found in this study in comparison to that of Hoyle (1) a high percentage of respondents reported the use of behavior contracts (69%) as a tier 2 intervention and (2) a limited number of middle school participants (18%) reported utilizing social skills instruction as a tier 2 intervention (Rodriguez, et al., 2016). Although the study targeted participants in many states, most participants are comprised of mostly two states. This represents a limitation of the study because it limits generalizability (Rodriguez, et al., 2016).

In a similar study by Scott, et al., (2019), the authors assert that school wide strategies that do not address instruction in academic, not just behavioral areas, are unlikely to yield learning gains in academic areas. To address this, a MTSS framework was developed. The ASA which represents the Academic and Behavior Response to Intervention School Assessment, was developed to assess the fidelity to which schools implement MTSS supports for reading, math, and behavior (Scott, et al., 2019).

This study utilized the ASA to assess the fidelity of an MTSS framework in twenty-nine schools over a four-year period. An analysis was conducted to determine subgroup domain scores. These subgroups include achievement scores in math, reading, language, and behavior. Schools that had a higher fidelity rate related to behavior had less suspension in comparison to other schools within the study (Scott, et al, 2019).

Scott, et al., 2019) designed a quasi-experimental study to compare treatment schools to propensity score matched (PSM) comparison schools with a business-as-usual approach (Scott, et al, 2019). Two approaches were utilized (1) an intent-to treat model treating all schools
receiving MTSS training and (2) a treatment-on-the-treated model that focuses on fidelity of implementation of the behavioral, mathematics, and reading components of the MTSS model. 

RESULTS AND IMPLICATIONS OF THIS STUDY EXAMINED THE SUCCESS OF MTSS TRAINING AND IMPLEMENTATION OF SUCH A FRAMEWORK WITH FIDELITY AS IT RELATES TO STUDENT ACADEMIC AND BEHAVIORAL OUTCOMES. RESULTS OF THIS STUDY WERE MIXED, BUT THERE IS SUFFICIENT EVIDENCE OF POSITIVE STUDENT OUTCOMES ASSOCIATED WITH BOTH ACADEMIC (RTI) AND BEHAVIORAL (SWPBIS) ASPECTS OF AN MTSS FRAMEWORK. THE LIMITATIONS OF THIS STUDY ARE SUCH THAT THE SCHOOLS WHO PARTICIPATED IN THIS STUDY RECEIVED TRAINING FOR IMPLEMENTATION OF AN MTSS FRAMEWORK SEPARATELY, versus all together (Scott, et al, 2019). The small sample size of this study also limits generalizability (Scott, et al., 2019).

As with other aspects of MTSS frameworks, implementation of an MTSS model with fidelity is difficult. Because of the lack of standardized options combined with limited generalizability of most studies performed, the success of implementation of an MTSS model with fidelity varies from school to school and district to district. More research and collaboration among districts and states is needed to standardize an MTSS model. This would allow for more universal implementation which would allow educators to implement the model with more efficacy and fidelity.
Interpretation of Data Surrounding MTSS

Accurate interpretation of data surrounding MTSS is critical in ensuring that the interventions set forth can be successful. Sanetti & Collier-Meek (2015), posit that research suggests that for Rti and an MTSS framework to be successful, it must be implemented as planned. Research suggests, however, that most educators struggle to deliver an MTSS framework that maintains treatment integrity. Although numerous intervention strategies have been developed, there is little guidance or guidelines that exist that provide a foundation as to how to implement these intervention strategies (Sanetti & Collier-Meek, 2015). The purpose of this study was to conduct an evaluation of the impact that implementation of MTSS intervention strategies and the teachers’ treatment integrity of a classroom management plan (Sanetti & Collier-Meek, 2015). The researchers define treatment integrity as “the extent to which and intervention is delivered as planned” (Sanetti & Collier-Meek, 2015).

The results indicate a CMP was created. The CMP included (a) an increase in classroom structure, (b) use a small number of positively stated expectations, (c) actively engage students, (d) encourage appropriate behavior, and (e) systematically discourage inappropriate behavior (Sanetti & Collier-Meek, 2015). For teachers, and to evaluate treatment integrity, three tiers were developed. Tier 1 represents direct training, tier 2 represents implementation planning, and tier 3 represents participant modeling (Sanetti & Collier-Meek, 2015).

The results and implications indicated that all teachers responded to the implementation supports, but the extent to which all teachers responded differed (Sanetti & Collier-Meek, 2015). Four of six teachers completed implementation planning and had a significant increase in the treatment integrity data. The two teachers who completed participant modeling had a further increase in their treatment integrity (Sanetti & Collier-Meek, 2015). For students to receive high
In another study conducted by Bradshaw, et al., (2020) suggest that although MTSS-B (Multi-Tiered Systems of Support related to Behavior) has been examined and implemented at the elementary school level, there is little research relating to high schools on the same subject using a randomized design, particularly with relation to the classroom setting. The need for this research to be conducted at the high school level is evident when you take into consideration the elevated rates of suspensions, bullying, and the consequences of dropping out of high school (Bradshaw, et al., 2020). There are very few evidence-based intervention/prevention programs that target high-risk students with emotional and behavioral diagnoses. This study addresses the impact that the theory of change associated with MTSS-B has within the classroom setting (Bradshaw, et al, 2020).

This study, titled MDS3 Project, attempts to address the gaps regarding MTSS-B at the high school level by evaluating the extent to which coaching and training in MTSS-B resulted in the continuum of evidence-based social and emotional behavioral programs and practices (EBPs) (Bradshaw, et al., 2020). Data indicated no significant difference (p< .05) across all conditions, indicating a baseline equivalence (Bradshaw, et al., 2020). This study was conducted to reduce a students’ risk for emotional and behavioral disorders. The effects of MTSS-B were reported on the implementation of positive behavior supports across the three tiers within MTSS using a School Wide Evaluation Tool (SET) and Individual Student Systems Evaluation Tool (ISSET) (Bradshaw, et al., 2020). External observation was also utilized to evaluate teachers’ use of classroom management strategies (Bradshaw, et al., 2020). The results and implications of this study indicated significant effects on multiple SET subscales and a significant reduction in a
teachers’ use of reactive behavioral management strategies (Bradshaw, et al., 2020). The theory of change associated with MTSS-B indicates that school-wide programming results in observable improvements in classroom management and, in turn, will limit the need for increased Tier 2 and Tier 3 supports within the MTSS framework (Bradshaw, et al., 2020). Because the level of Tier 2 and Tier 3 supports will be less within the general education classroom, these more intensive supports can be allocated and utilized emotional and behavioral (EBD) classrooms (Bradshaw, et al., 2020).

Not only is accurate interpretation of data important within the implementation of an MTSS framework, but varied data that includes all facets of the whole child including academic, behavioral, and social-emotional competency data is important in developing an intervention plan for a student in need. An MTSS framework provides the backdrop to provide these interventions and is integral to a student’s success and inclusion in an equitable environment where everyone can succeed.
CHAPTER THREE: METHODOLOGY

Introduction

The purpose of this study was to investigate the perception and knowledge that both instructional leaders, which includes principals and assistant principals, and teachers have of the MTSS framework. The data was collected utilizing a survey and open-ended questions. The survey and open-ended questions were analyzed using ANOVA and the constant comparative qualitative analysis measures. This will allow an understanding of the impact of such things as professional development surrounding MTSS, teacher perception of instructional leader’s knowledge and purpose of the MTSS process, and how instructional leaders will utilize MTSS data to drive decisions.

Research Design

The study utilized the mixed-methods approach, both quantitative and qualitative approaches, but the primary focus was the quantitative data (Fraenkel et al., 2015). The qualitative data served as an additional source of information and was conducted after the quantitative analyses (Fraenkel et al., 2015). Additionally, the specific quantitative design was correlational because the independent variables will not be manipulated and most of them will be measured on a continuous scale (Fraenkel et al., 2015).

Population and Sampling

Principals, assistant principals, and teachers represent the target population of this study. Principals and assistant principals will participate with a response to open-ended interview questions. These questions will analyze the knowledge that such instructional leaders have
regarding MTSS as well as investigate how MTSS data will be utilized to drive decisions. Teachers will participate in a survey that will analyze their perception of administrative preparedness to lead professional development revolving around the implementation of MTSS, their perception of administration’s knowledge of the purpose of MTSS, the relevance of professional development provided explaining both MTSS and how to implement MTSS intervention strategies. Principals, assistant principals, and teachers from a Central Florida school district will participate in this study. Study participants will participate voluntarily.

**Instrumentation**

A modified Multi-Tiered System of Supports Implementation Perception Survey was used for the purpose of this study. The MTSS-IPS (Pierce et al., n.d.) is a 50-item instrument and most of the items directly or indirectly relate to each MTSS component identified by CDE (2014). Most of the MTSS-IPS items were constructed to address the MTSS components identified by CDE. Participants were also asked to share basic demographic information, the professional role they held during the 2022-2023 academic year, and their years of education-related experience. The MTSS-IPS used two different Likert scales, which allowed participants to measure the MTSS implementation efforts in their individual settings. For this study, the MTSS-IPS survey was broken down into two different surveys, a fourteen-question survey for instructional personnel and a twenty-six-question survey for school-based leadership personnel. Both the instructional and school-based leadership surveys were evaluated using a five-point Likert scale ranging from strongly disagree to strongly agree, with an option provided for neither agree nor disagree.
**Variables**

The fourteen-question instructional survey and twenty-six question leadership survey utilized in this study aligns with the components of MTSS outlined by the CDE, either directly or indirectly. For example, survey questions may correlate the relationship between shared leadership and data-based problem solving and decision making, while other survey questions may make a connection between interventions used, evidence-based instruction, and assessment practices utilized as it relates to all stakeholders including family, school, and community partnerships.

**Validity, Reliability, and Internal Validity**

The surveys used combined with open-ended questions utilized within the leadership survey, are examples of criterion validity. Reliability was achieved by using the method known as a Pearson Correlation. Some bivariate and partial correlation data will be analyzed using an ANOVA. In addition to analyzing the validity and reliability of instructional and school-based leadership scores related to perceptions and knowledge of an MTSS framework evaluated on a Likert scale, along with open ended survey questions in the MTSS leadership survey, it was also necessary to identify threats to the internal validity of this study. As defined by Fraenkel et al., (2015), internal validity is the relationship between the difference in the dependent variable and their relationship to the independent variable. Meaning the correlation between the dependent and independent variable only and not a relationship of with external factors. External factors can compromise the efficacy of internal validity. Threats to internal validity are maturation, attitude of subjects, and regression. The threats listed could impact the dependent variable as perceptions may vary from person to person who complete the survey.
Threats to internal validity were subject attitude and regression because faculty and staff have different perceptions of what constitutes an MTSS framework. In addition, some instructional staff and school-based leadership personnel have little to no knowledge of and MTSS framework based on their years of experience within the field of education. Environmental factors such as the number of teachers on an instructional team, different lived experiences, and differing perceptions of the definition and purpose of an MTSS framework as an intervention tool can also cause threats to internal validity (www.fldoe.org).

Research Procedures and Data Collection

After receiving Institutional Review Board (IRB) approval from both the researcher’s university and school district, the researcher collected survey data and responses to open-ended interview questions. The fourteen-item instructional survey, along with the twenty-six questions leadership survey with an additional six open-ended questions was distributed digitally to principals and teachers and scored on a Likert scale. The survey questions were evaluated on a five-point Likert Scale and the six interview questions were collected digitally and evaluated using the causal-comparative method.

Data Analysis

The data was analyzed in accordance with the mixed-method design that was utilized in the study. The data collected were analyzed quantitatively and qualitatively with the higher priority given to quantitative analyses (Fraenkel, 2015). The open-ended interview questions, which represent the qualitative data, were analyzed using the constant-comparative method (Glaser & Strauss, 1967). The constant comparative
method is a procedure for evaluating qualitative data in which the information is coded and compared across categories, patterns are identified, and these patterns are refined as new data are obtained. This study’s purpose was to compare the perceptions of the instructional leader’s awareness of the knowledge of MTSS and the implementation and see if new themes or patterns emerge across the leadership responses (Glaser & Strauss, 1967). NVivo the qualitative statistical software was used to analyze the qualitative responses. The quantitative data were analyzed using descriptive statistics utilizing comparison of means and a one-way ANOVA, utilizing SPSS software.
CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

Introduction

For this mixed-method study, instructional staff at one high school were asked to complete a voluntary fourteen-question survey. This survey was evaluated on a five-point Likert scale. This survey served as a guide on instructional staff’s knowledge of an MTSS framework and provided data on the perception that instructional staff had surrounding school-based leadership knowledge of the definition, purpose, and implementation of an MTSS Framework. The MTSS Instructional survey had an eligible 163 participants. Twenty-two participants, just under fourteen percent of eligible participants completed the voluntary Instructional MTSS survey.

In addition to instructional personnel, school-based leaders were asked to complete a voluntary thirty-three question survey, of which, twenty-seven questions were evaluated on a five-point Likert scale, and the remaining six questions were presented in an open-ended response format. Five of an eligible twenty-eight eligible participants completed the voluntary MTSS Leadership Survey, representing approximately eighteen percent of eligible school-based leadership participants. Also, there were six qualitative open-ended questions.

Descriptive Statistics

A one-way ANOVA was used to determine instructional and school-based leadership personnel’s knowledge of an MTSS Framework. The one-way ANOVA was further utilized to determine potential patterns or trends among instructional and school-based leadership personnel relating to perceptions and knowledge of the definition, purpose, and implementation of an
MTSS framework. A comparison of means was also utilized to determine overall trends in responses based on both Instructional and Leadership MTSS surveys to gauge average responses on a five-point Likert scale ranging from strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree.

Demographic Data

All instructional and administrative staff at one high school were asked to complete a voluntary MTSS survey. Instructional staff were required to be eighteen years or older, hold a minimum of a bachelor’s degree, and certified as instructional staff as outlined by the Florida Department of Education. School based leaders were required to be a part of the school-based leadership team, hold a minimum of a master’s degree, and be a certified in School Counseling or Educational Leadership and hold a position of Guidance Counselor, Assistant Principal, or Principal.

Variables

Descriptive statistics were utilized to better understand the variables used and analyzed within the next section of this case study. The descriptive statistics in Table 1 and Table 2 indicate that no question is above or below one standard deviation of the mean. Each question had an average mean between three and four. On the five-point Likert scale, a score of 1 equates to strongly disagree, a score of 2 equates to disagree, a score of 3 equates to neither agree nor disagree, a score of 4 equates to agree, and a score of five equates to strongly agree. No participant results were more than one standard deviation below the mean, indicating no outliers.
Although these results cannot be considered statistically significant due to minimal participation in this voluntary study, the study results are valid and reliable.

The descriptive statistic results in Table 1 indicated that most participants in the survey neither agreed nor disagree with the MTSS Instructional Survey statements in relation to their perception of the knowledge-base that school-based leaders have of an MTSS Framework. With a mean ranging from M=2.9091 to M=3.9091, participants were neutral on school-based leadership’s knowledge of an MTSS framework. An exception to this outcome is question fourteen, which states: The staff and leaders at my school encourage a climate where parents/guardians feel safe discussing their child's needs. This had a mean of 3.9031, in which eighty percent of respondents believed that parent engagement was a strength of the school, indicating that faculty and staff regularly engaged with parents and guardians about the needs and concerns of their child.

In addition to parent engagement being a strong asset of the school-based leadership team, most instructional staff (plurality) agreed or strongly agreed that school-based leadership has knowledge of an MTSS Framework and uses this data to drive decisions surrounding student success. These results align with MTSS Instructional survey question four: The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem-solving. These results also align with MTSS Instructional survey question seven which states: The climate at my school allows the staff and leaders to feel safe discussing school-related problems candidly.

Although there were some areas where instructional staff felt that school based leaders were knowledgeable about the implementation of an MTSS framework and have a strong sense of parent/guardian inclusion and engagement, the largely neutral responses on the majority of
survey data suggest that instructional staff do not have confidence in school-based leaderships to know the definition, purpose, and benefits of implementing an MTSS framework that supports all students achieve success surrounding academic achievement, behavior, and social-emotional learning.
Table 1  
**MTSS Instructional Survey**

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Mean</th>
<th>T-Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher and staff at my school collectively discuss progress and present progress of students and students who are improving or those for whom there are improving concerns for at-risk students</td>
<td>22</td>
<td>1.00</td>
<td>3.086</td>
<td>0.000</td>
</tr>
<tr>
<td>The teacher at my school provides clear expectations for all students who are having trouble and all students who are excelling</td>
<td>22</td>
<td>1.00</td>
<td>5.00</td>
<td>0.008</td>
</tr>
<tr>
<td>The teacher at my school provides clear expectations for all students and all students who are having trouble and all students who are excelling</td>
<td>22</td>
<td>1.00</td>
<td>4.00</td>
<td>0.008</td>
</tr>
<tr>
<td>The teacher at my school provides clear expectations for all students and all students who are having trouble and all students who are excelling</td>
<td>22</td>
<td>1.00</td>
<td>3.00</td>
<td>0.008</td>
</tr>
<tr>
<td>The teacher at my school allows for staff and students who are having trouble to discuss their goals and set clear expectations for all students and all students who are having trouble</td>
<td>22</td>
<td>1.00</td>
<td>8.00</td>
<td>0.008</td>
</tr>
<tr>
<td>My school has a systematic process for helping students to set clear expectations for all students and all students who are having trouble</td>
<td>22</td>
<td>1.00</td>
<td>3.00</td>
<td>0.008</td>
</tr>
<tr>
<td>The teachers in my school need to receive training for staff to help them understand the needs of all students and all students who are having trouble</td>
<td>22</td>
<td>1.00</td>
<td>3.00</td>
<td>0.008</td>
</tr>
<tr>
<td>Staff at my school Johnny knows how to support and work with students who are having trouble</td>
<td>22</td>
<td>1.00</td>
<td>5.00</td>
<td>0.008</td>
</tr>
<tr>
<td>The teacher at my school asks the school principal during our full school meeting to support the progress of all students and all students who are having trouble</td>
<td>22</td>
<td>1.00</td>
<td>3.00</td>
<td>0.008</td>
</tr>
<tr>
<td>The teacher at my school asks the principal during our full school meeting to support the progress of all students and all students who are having trouble</td>
<td>22</td>
<td>1.00</td>
<td>3.00</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Variance: 22
In addition to gathering data on instructional staff’s perception of school-based leader’s knowledge of an MTSS Framework, this study also conducted an analysis of school-based leader’s knowledge of an MTSS Framework. This analysis was conducted by administering a voluntary MTSS Leadership Survey to school-based leaders at one high school. In addition to the MTSS Leadership survey of twenty-eight questions rated on a Likert scale, school-based leaders also provided responses to six open-ended survey questions. The Likert scale survey data was analyzed using descriptive statistics and the open-ended questions were analyzed using the constant comparative method. Descriptive statistics are provided in the table below.
Table 2
MTSS Leadership Survey
Data from Table two indicated that three survey questions had an M=4 or above, seven questions had a M=2.6-2.8, and seventeen questions had a M=3.8. These results indicated that most responses fell within the neutral, neither agree nor disagree range. Questions that had an M>4 are as follows:

a.) The staff at my school increases interactions with parents as student need increases.

b.) The staff at my school engage parents/guardians in conversations about student performance data, at a minimum, during each parent-teacher conference.

c.) My school performs universal screening and benchmarking assessments in Math and ELA (English Language Arts) at regular intervals throughout the school year.

The above results of M>4 indicate that, like instructional personnel, the school-based leadership team rated parent engagement and communicating the progress related to their child as a high level of engagement with an M=4.2. Additionally, school-based leaders indicated that benchmark assessments are being utilized to capture student achievement and potential learning gains or learning losses as indicated by survey statement twenty-eight, with an M=4.0.

Conversely, the seven survey statements had a M<3, which indicated that school-based leaders either disagreed or strongly disagreed. The seven survey items are listed below:

a.) The staff at my school uses school-wide achievement data to decide interventions and/or instructional strategies in planning for the following year.

b.) The staff at my school analyzes the overall impact of student interventions at the targeted and intensive level, annually, to ensure that the interventions are effective.

c.) The staff engages in problem-solving at my school and are collectively able to identify appropriate research-based interventions and instructional strategies for students at all academic levels.
d.) There is a defined decision-making process at my school that enables the staff to efficiently select interventions or instruction based on the level of student need.

e.) My school helps parents/guardians understand student performance data for meaningful conversations about student progress.

f.) The staff at my school uses universal screening measures to identify any students needing additional support to progress from their current academic level (e.g., accelerated, delayed, etc.).

g.) All students at my school are involved in monitoring their own progress for the purpose of setting their own academic goals.

The survey items above indicated that school-based leaders, while having knowledge that an MTSS framework exists, do not know how to utilize the MTSS process and implementation to the benefit of the student. Although students are taking benchmark assessments that indicate learning gains or learning losses, this data is not being utilized to develop a plan for intervention related to the individual student. In addition, school-based leaders are letting parents and guardians know when their child is struggling, but the survey data indicated that a breakdown of their child’s performance is not being provided by school-based leaders. And finally, students are not being taught how to analyze their own data and advocate for themselves, perpetuating the potential for continued struggle moving forward.

The MTSS Leadership Survey indicated that school-based leaders had a lack of knowledge of a management system that was able to track MTSS data. School-based leaders also had less knowledge of the definition, purpose, and implementation of an MTSS Framework. Unfortunately, only approximately twenty five percent of school-based leaders that participated
in the survey neither agreed nor disagreed with school-based leadership knowledge and use of MTSS data to drive decisions.

The open-ended survey questions that were part of the MTSS Leadership Survey indicated that there was little or no professional development or guidance provided by district-level personnel regarding the definition, purpose, and implementation of an MTSS framework. One of the five school-based leadership respondents indicated that they had no knowledge of MTSS or its purpose. The open-ended survey results will be discussed in further detail in relation to research question one below.

Testing Research Questions

Research Question 1

To answer research question #1: To what extent do instructional leaders, which includes principals and assistant principals, consider an MTSS platform when making instructional decisions? A qualitative analysis was performed to supplement and support the data received by principals and teachers completing a twenty-seven-question survey and six open-ended questions.

The open-ended survey questions were analyzed using the constant comparative method (Glaser & Strauss, 1967). The constant comparative method is a procedure for evaluating qualitative data in which the information is coded and compared across categories. Patterns are identified, and these patterns are refined as new data are obtained. This study’s purpose is to compare the implementation of an MTSS framework to see if new themes or patterns emerge across the leadership and instruction.
As Taylor and Bogdan (1984) report: “in the constant comparative method the researcher simultaneously codes and analyses data in order to develop concepts; by continually comparing specific incidents in the data, the researcher refines these concepts, identifies their properties, explores their relationships to one another, and integrates them into a coherent explanatory model” (p126).

Table 3
Open-ended Question 1: How do you define MTSS?

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
<th>Emerging Theme</th>
<th>Correlation to Instructional Survey Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Leader A</td>
<td>MTSS is a framework where the data and analysis are used to promote student achievement. Within the framework there are 3 tiers that students will fall under depending on the amount of support needed.</td>
<td>Student Support</td>
<td>The staff at my school believes that full implementation of a multi-tiered system of support is necessary to improve the progress of all students.</td>
</tr>
<tr>
<td>Instructional Leader B</td>
<td>Help for students</td>
<td>Student Support</td>
<td>The staff at my school believes that full implementation of a multi-tiered system of supports is necessary to improve the progress of all students.</td>
</tr>
<tr>
<td>Instructional Leader C</td>
<td>I am not sure what MTSS means</td>
<td>Lack of knowledge</td>
<td>The staff at my school believes that full implementation of a multi-tiered system of supports is necessary to improve the progress of all students.</td>
</tr>
<tr>
<td>Participant</td>
<td>Response</td>
<td>Emerging Theme</td>
<td>Correlation to Instructional Survey Question</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Instructional Leader D</td>
<td>A manner of determining the individual needs of students, academically, behaviorally or concerns with truancy. It is the first step in creating in classroom strategies and supports</td>
<td>Student Support</td>
<td>The staff at my school believes that full implementation of a multi-tiered system of supports is necessary to improve the progress of all students.</td>
</tr>
<tr>
<td>Instructional Leader E</td>
<td>MTSS is a multi-tiered support system that is beneficial to all students. While some students may only need minimal support to be academically successful, others need a more intensive level of support to be successful students</td>
<td>Student support</td>
<td>The staff at my school believes that full implementation of a multi-tiered system of support is necessary to improve the progress of all students.</td>
</tr>
</tbody>
</table>

Student support was an occurring theme as to how they define MTSS. among the respondents.

Only one respondent indicated a lack of understanding of the definition of MTSS.
Table 4  
*Open ended Question 2: What role does school-based leadership play in the MTSS process?*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
<th>Emerging Theme</th>
<th>Correlation to Instructional Survey Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Leader A</td>
<td>MTSS is not really used in our school. In VCS the concept of MTSS was shifted to PST. Currently the leadership is sharing very little about MTSS. This is due to the lack of training provided from the county level.</td>
<td>Minimum role</td>
<td>The leaders at my school monitor the school’s progress toward full implementation of a multi-tiered system of supports.</td>
</tr>
<tr>
<td>Instructional Leader B</td>
<td>Small involvement</td>
<td>Minimum role</td>
<td>The leaders at my school monitor the school’s progress toward full implementation of a multi-tiered system of supports.</td>
</tr>
<tr>
<td>Instructional Leader C</td>
<td>not sure</td>
<td>Not sure</td>
<td>The leaders at my school monitor the school’s progress toward full implementation of a multi-tiered system of supports.</td>
</tr>
<tr>
<td>Instructional Leader D</td>
<td>Managing and understanding the needs of the students and process, making sure teachers know their roles in assisting the students.</td>
<td>Major role</td>
<td>The leaders at my school monitor the school’s progress toward full implementation of a multi-tiered system of supports.</td>
</tr>
<tr>
<td>Instructional Leader E</td>
<td>At this time, I would say that our school-based leadership is not universally involved in the MTSS process.</td>
<td>Minimum role</td>
<td>The leaders at my school monitor the school’s progress toward full implementation of a multi-tiered system of supports.</td>
</tr>
</tbody>
</table>
The overarching theme was that the school-based leadership team plays a minimal role regarding the implementation of an MTSS framework.

Table 5
*Open Ended Question 3: How does school-based leadership utilize the data provided by MTSS?*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
<th>Emerging Theme</th>
<th>Correlation to Instructional Survey Question</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructional Leader A</strong></td>
<td>At this time, I feel that the leadership team is still learning about MTSS. I can see it used more in the ESE department and in the discipline office. Overall, I don’t feel like the data is being use effectively in the general education setting.</td>
<td>Lack of utilization of data</td>
<td>The leaders at my school provide clear expectations for the use of problem-solving based on student data.</td>
</tr>
<tr>
<td><strong>Instructional Leader B</strong></td>
<td>Minimal</td>
<td>Lack of utilization of data</td>
<td>The leaders at my school provide clear expectations for the use of problem-solving based on student data.</td>
</tr>
<tr>
<td><strong>Instructional Leader C</strong></td>
<td>I am not aware of this training at this time.</td>
<td>Lack of utilization of data</td>
<td>The leaders at my school provide clear expectations for the use of problem-solving based on student data. The leaders at my school provide clear expectations for the use of problem-solving based on student data.</td>
</tr>
<tr>
<td><strong>Instructional Leader D</strong></td>
<td>We look to see if the strategies in place are making a positive</td>
<td>Leadership utilizes data</td>
<td>The leaders at my school provide clear expectations for the</td>
</tr>
<tr>
<td>Participant</td>
<td>Response</td>
<td>Emerging Theme</td>
<td>Correlation to Instructional Survey Question</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>change in students - if more strategies are needed then testing towards an IEP would take place to determine higher levels of support</td>
<td></td>
<td>use of problem-solving based on student data.</td>
</tr>
<tr>
<td>Instructional Leader E</td>
<td>Our school-based leadership utilizes the MTSS data to help determine the next steps for students who have been referred for possible educational testing, specifically if the parent wants to pursue having an IEP put in place for their student</td>
<td>Leadership utilizes data</td>
<td>The leaders at my school provide clear expectations for the use of problem-solving based on student data.</td>
</tr>
</tbody>
</table>

The overarching theme of this question was that school-based leaders do not utilize data regarding an MTSS framework to drive decisions revolving around instruction, discipline, and/or social-emotional well-being.
Table 6

*Open ended question 4: Do district leaders provide professional development surrounding the purpose of MTSS?*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
<th>Emerging Theme</th>
<th>Correlation to Instructional Survey Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Leader A</td>
<td>No</td>
<td>Lack of professional development support</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
<tr>
<td>Instructional Leader B</td>
<td>No</td>
<td>Lack of professional development support</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
<tr>
<td>Instructional Leader C</td>
<td>I am not aware of this training at this time.</td>
<td>Lack of professional development support</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
<tr>
<td>Instructional Leader D</td>
<td>They do not - online learning is not an appropriate platform for PD. Staff need direction and follow-up on the process and</td>
<td>Lack of professional development support</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
</tbody>
</table>
Although one school-based leader indicated that there was comprehensive training surrounding the purpose and implementation of an MTSS framework, an overarching theme from all other school-based leaders was a lack of professional development support surrounding the purpose and implementation of an MTSS framework.

Table 7
Open ended question 5: Do district leaders provide professional development surrounding the implementation of an MTSS framework.
<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
<th>Emerging Theme</th>
<th>Correlation to Instructional Survey Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Leader B</td>
<td>No</td>
<td>No district support for professional development</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
<tr>
<td>Instructional Leader C</td>
<td>Not sure</td>
<td>No district support for professional development</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
<tr>
<td>Instructional Leader D</td>
<td>No</td>
<td>No district support for professional development</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
<tr>
<td>Instructional Leader E</td>
<td>Yes, but I do feel that we could definitely benefit from additional training for our faculty, specifically on classroom interventions that</td>
<td>More district support for professional development</td>
<td>The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.</td>
</tr>
</tbody>
</table>
The overarching theme of question five indicates a lack of district support. School-based leaders indicated a need for more professional development and district-level support surrounding the definition, purpose, and implementation of an MTSS framework.

Table 8
*Open ended question 6: As a school-based and/or district leader, what would you like to know about MTSS?*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
<th>Emerging Theme</th>
<th>Correlation to Instructional Survey Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Leader A</td>
<td>Anything! The county has done little to provide the teachers with clarity on the MTSS process.</td>
<td>More knowledge about MTSS</td>
<td>The climate at my school allows the staff and leaders to feel safe discussing school-related problems candidly</td>
</tr>
<tr>
<td>Instructional Leader B</td>
<td>More about MTSS</td>
<td>More knowledge about MTSS</td>
<td>The climate at my school allows the staff and leaders to feel safe discussing school-related problems candidly</td>
</tr>
<tr>
<td>Instructional Leader C</td>
<td>Districts need to provide more professional development to leaders and teachers</td>
<td>More knowledge about MTSS</td>
<td>The climate at my school allows the staff and leaders to feel safe discussing school-related problems candidly</td>
</tr>
<tr>
<td>Instructional Leader D</td>
<td>How to present the information to the staff and a clarity on how to explain to</td>
<td>More knowledge about MTSS</td>
<td>The climate at my school allows the staff and leaders to feel safe discussing school-related problems candidly</td>
</tr>
<tr>
<td>Participant</td>
<td>Response</td>
<td>Emerging Theme</td>
<td>Correlation to Instructional Survey Question</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Instructional Leader E</td>
<td>I'd like to know more about when the MTSS process should be started, primarily for students who have significant behavioral issues</td>
<td>More knowledge about MTSS</td>
<td>The climate at my school allows the staff and leaders to feel safe discussing school-related problems candidly</td>
</tr>
</tbody>
</table>

School-based leaders would like to gain more knowledge surrounding the definition, purpose, and implementation of an MTSS framework. School-based leaders indicated a desire for district level leadership to provide more guidance and professional development surrounding the implementation of an MTSS framework.

Research Question 2

To answer research question #2: What is teacher perception of the instructional leaders’ knowledge of the MTSS platform, with particular emphasis on integration and implementation of an MTSS Framework as an intervention measure; a one-way ANOVA was conducted. The MTSS Instructional Survey results related to specific survey items are provided below.

Regarding survey question number eight: My school has a systematic process that leaders utilize to ensure that staff has appropriate resources (e.g., personnel, time, materials) to implement a multi-tiered system of supports, the results are included below.
MTSS Instructional Survey, Question 8: My school has a systematic process that leaders utilize to ensure that staff has appropriate resources (e.g., personnel, time, materials) to implement a multi-tiered system of supports.

As shown in Figure 3, question 8 has an M=2.9091. Instructional staff do not have confidence that there is a systematic process that leaders utilize that ensures that staff has appropriate resources. This reality leads to instructional staff not being adequately trained and prepared to offer interventions, when necessary to students needing additional support. These interventions represent Tier II of the MTSS framework. Tier II represents no more than twenty percent of the student population needing support beyond the level needed for all students to succeed. When instructional staff does not feel adequately prepared to serve all students, including students who need additional support, those needing additional support within the classroom from the classroom teacher, will continue to fall further behind leading to greater skill gaps and potential learning loss, versus learning gains.
In contrast to MTSS Instructional Survey question 8, as shown in Figure 4, question 9, which states: The leaders at my school, work to ensure that the staff has a shared commitment for all students’ learning and growth regardless of academic need (i.e. high achiever, special education, ELL, behavior issues [discipline or social-emotional]), indicated that instructional staff believe that school-based leaders do work to ensure that there is a shared commitment that ensures all students succeed.

With an M=3.7273, more than seventy percent of respondents indicated that there is a shared commitment for all students learning and growth regardless of academic need. Despite this shared commitment for student learning and student growth, question eight of the MTSS Instructional Survey suggests that there is a gap between this shared commitment and the reality.
of how to achieve this growth and learning gain through implementation of and MTSS Framework. A full analysis of the MTSS Instructional Survey is provided below. A one-way ANOVA was conducted for the purpose of this analysis.
### Table 9

**MTSS Instructional Survey**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Between Groups Mean</th>
<th>Within Groups Mean</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
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<tr>
<td>The leaders and staff at our school collectively enhance, participate in, and support professional development that is improving outcomes for all students.</td>
<td>34.770</td>
<td>0</td>
<td>1.080</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>34.770</td>
<td>0</td>
<td>1.080</td>
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</tr>
<tr>
<td>The leaders at our school provide clear expectations for all students based on research and evidence.</td>
<td>20.778</td>
<td>0</td>
<td>1.465</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20.778</td>
<td>0</td>
<td>1.465</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school promote the implementation of evidence-based, data-informed, or student-centered instructional practices.</td>
<td>20.778</td>
<td>0</td>
<td>1.154</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20.778</td>
<td>0</td>
<td>1.154</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide clear expectations for the implementation of evidence-based, data-informed, or student-centered instructional practices.</td>
<td>11.778</td>
<td>0</td>
<td>1.469</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.778</td>
<td>0</td>
<td>1.469</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide clear expectations for the implementation of evidence-based, data-informed, or student-centered instructional practices.</td>
<td>20.778</td>
<td>0</td>
<td>1.469</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20.778</td>
<td>0</td>
<td>1.469</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>23.778</td>
<td>0</td>
<td>1.370</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23.778</td>
<td>0</td>
<td>1.370</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>22.991</td>
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<td>1.066</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.991</td>
<td>0</td>
<td>1.066</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>21.981</td>
<td>0</td>
<td>1.515</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21.981</td>
<td>0</td>
<td>1.515</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>20.864</td>
<td>0</td>
<td>1.750</td>
<td></td>
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<tr>
<td>Total</td>
<td>20.864</td>
<td>0</td>
<td>1.750</td>
<td></td>
</tr>
<tr>
<td>Staff share school leadership does not replicate visions of a multi-level system of supports across campus to improve the experiences of all students.</td>
<td>15.445</td>
<td>0</td>
<td>.034</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15.445</td>
<td>0</td>
<td>.034</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>20.009</td>
<td>0</td>
<td>1.363</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20.009</td>
<td>0</td>
<td>1.363</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>19.981</td>
<td>0</td>
<td>.900</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.981</td>
<td>0</td>
<td>.900</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>19.910</td>
<td>0</td>
<td>1.310</td>
<td></td>
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<tr>
<td>Total</td>
<td>19.910</td>
<td>0</td>
<td>1.310</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>19.835</td>
<td>0</td>
<td>1.117</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.835</td>
<td>0</td>
<td>1.117</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>19.835</td>
<td>0</td>
<td>1.117</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.835</td>
<td>0</td>
<td>1.117</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
<td>19.835</td>
<td>0</td>
<td>1.117</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.835</td>
<td>0</td>
<td>1.117</td>
<td></td>
</tr>
<tr>
<td>The leaders at our school provide a vision for student outcomes aligned with the school’s mission and values.</td>
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<td>0</td>
<td>1.117</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.835</td>
<td>0</td>
<td>1.117</td>
<td></td>
</tr>
</tbody>
</table>
The one-way ANOVA conducted for the MTSS Instructional Survey indicated that one hundred percent of survey participants completed the total survey. In addition, the means of all survey questions are within two standard deviations of one another, indicating no outliers. Although the results are valid and reliable, due to a small population size, the results did not indicate statistical significance for any survey question. This data can however be used to establish trends and serve as a springboard for further research regarding the effective implementation of an MTSS Framework.

Research Question 3

To answer research question #3: What role does professional development play in preparing teachers to implement Tier II MTSS interventions and strategies with fidelity, the MTSS Leadership Survey was utilized to analyze this question. A one-way ANOVA was conducted. A full analysis of the MTSS Leadership Survey results is included below.
Table 10

**MTSS Leadership Survey**

<table>
<thead>
<tr>
<th>Item</th>
<th>Range</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
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<tr>
<td>Item 2</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 3</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 4</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 5</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 6</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 7</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 8</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 9</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Item 10</td>
<td>Range</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
</tbody>
</table>
The one-way ANOVA conducted for the MTSS Leadership Survey indicated that one hundred percent of survey participants completed the total survey. In addition, the means of all survey questions are within two standard deviations of one another, indicating no outliers. Although the results are valid and reliable, due to a small population sample, the results did not indicate statistical significance for any survey question. This data, can however, be used to establish trends and serve as a springboard for further research regarding the effective implementation of an MTSS Framework.

While overall data indicated an average Mean within the range of 3 to 3.8, a breakdown of individual survey questions provide greater insight into instructional leaders’ perception and knowledge of MTSS. Figure 5 breaks down Question 12: The staff at my school collects and analyzes information to determine whether differentiation of instruction occurs based on student need, for example elicited four of five respondents neither agreeing nor disagreeing.

Figure 5
MTSS Leadership Survey Question 12: The staff at my school collects and analyzes information to determine whether differentiation of instruction occurs based on student need.
The results of Figure 5 show the neutrality of knowledge of implementation surrounding the definition and purpose of an MTSS Framework, which results in ineffective or non-existent implementation of an MTSS framework.

In contrast, as shown in Figure 6, four out of five Leadership Survey participants agreed on survey item fourteen: Members of my school’s problem-solving team have clear roles and responsibilities. Although members of the school’s problem-solving team have clear roles and responsibilities, communication amongst members of the problem-solving team is not well established.

![MTSS Leadership Survey Question 14: Members of my school’s problem-solving team have clear roles and responsibilities.](image)

Figure 6
MTSS Leadership Survey Question 14: Members of my school’s problem-solving team have clear roles and responsibilities.

The dichotomous results of these two survey items suggests the need for more professional development to be conducted at the district level for school-based leaders. School-
based leaders cannot successfully implement an MTSS Framework at the site level, when they themselves have a lack of understanding of the meaning, purpose, and implementation of an MTSS Framework as it relates to student achievement, positive behavior intervention supports (PBIS), and enhanced social-emotional growth. It is important for school-based leaders to have foundational knowledge of the three tiers that make-up the MTSS Framework so they are able to provide professional development and support at the site level for instructional staff, so they can better understand their role in implementing MTSS Tier II classroom interventions as way to remediate and lessen learning loss and promote and enhance learning gains for all students, including students who struggle.

Summary

In summary, instructional leaders, although willing to help students who struggle, have little training surrounding the implementation of MTSS Tier II intervention strategies. This is primarily due to the school-based leadership team’s lack of knowledge surrounding the definition, purpose, and implementation of an MTSS Framework. This is supported by survey response questions within the MTSS Leadership Survey, the six open-ended survey questions which are as follows:

1. How do you define MTSS?
2. What role does school-based leadership play in the MTSS Process?
3. How does school-based leadership utilize the data provided by MTSS?
4. Do District Leaders provide professional development surrounding the purpose of MTSS?
5. Do District Leaders provide professional development surrounding the implementation of MTSS?
6. As a school-based leader, what would you like to know about MTSS?

The district has done little to provide school-based leaders with professional development surrounding the implementation of an MTSS Framework. Several school-based leaders indicated having little to no knowledge of the MTSS Framework and its purpose. However, all school-based leadership survey participants indicated that they wanted to learn more about how to implement an MTSS Framework and want the district to provide professional development surrounding the purpose and role that an MTSS Framework has as an intervention tool, that enables all students the ability to succeed and achieve gains, academically, behaviorally, socially-emotionally.

In addition to an lack of professional development surrounding the implementation of an MTSS framework, little training and professional development has been devoted towards aspects within the MTSS framework, in particular aspects surrounding behavior and a move away from zero-tolerance discipline policies. Although teachers have knowledge of the PBIS model, there is a lack of understanding of the impact that things such as culturally responsive teaching, trauma-informed practices, and a focus of social-emotional well-being has on a proactive approach towards discipline. With a proactive approach towards discipline, there is less of a need for zero-tolerance disciplinary policies (Henry, Catagnus, Griffith, & Garcia, 2022).

When a proactive PBIS approach is utilized with regard towards behavior and the MTSS framework, a model of inclusion, as it relates to students who identify as BIPOC, is understood. By including all students within the classroom setting by utilizing culturally responsive and trauma-informed pedagogy, all students can be included. By utilizing these strategies, instructional staff and instructional leaders can be part of the solution that assists in eliminating
barriers that have created our current reality of the school-to-prison pipeline (Neumann-Boone, Kardambikis, & Donne, 2023).
CHAPTER FIVE: SUMMARY, DISCUSSION, AND CONCLUSIONS

Introduction

MTSS refers to a Multi-Tiered System of Supports Framework. MTSS is defined as: “a framework to ensure successful education outcomes for all students using data-based problem-solving to provide and evaluate the effectiveness of multiple tiers of integrated academic, behavior, and social-emotional instruction/intervention supports matched to student need in alignment with educational standards” (www.collierschools).

Within the MTSS Framework you:

1.) Define the problem.
2.) Analyze the problem.
3.) Implement strategies and interventions to support the problem.
4.) Evaluate the success of the interventions (www.collierschools).

For this mixed-method study a causal-comparative analysis was conducted. Both quantitative and qualitative data were analyzed. Quantitative data was analyzed utilizing descriptive statistics and a one-way ANOVA. Qualitative data was analyzed utilizing the constant-comparative method.

Summary of the Study

This study evaluated the Multi-Tiered System of Support (MTSS) Framework and the role instructional leaders and teachers (instructional staff) have on the implementation of an MTSS Framework as an intervention tool. The purpose of this study was to determine faculty
and staff knowledge of a Multi-Tiered System of Support Framework as an intervention tool. This study analyzed instructional staff knowledge of the definition, purpose, and implementation of an MTSS Framework. In addition, this study also evaluated the extent to which school-based leaders utilize MTSS data to drive decisions related to intervention surrounding academics, behavior, and social-emotional learning (www.collierschools).

**Discussion of the Findings**

Instructional staff were asked to complete a voluntary fourteen question survey. Twenty-two participants completed one hundred percent of the survey. Approximately fourteen percent of instructional staff completed the MTSS Instructional Survey. Although a small percentage of staff strongly disagreed and indicated that they do not think school-based leaders use MTSS data to drive decisions, the majority (plurality) agreed or strongly agreed that school-based leaders utilize MTSS to inform decisions. Approximately twenty five percent of instructional personnel neither agreed nor disagreed with school-based leadership knowledge and use of MTSS data to drive decisions.

School-based leaders were asked to complete a voluntary thirty-four question survey. This survey consisted of twenty-eight survey questions rated on a Likert scale and six open-ended interview questions, which represented the qualitative portion of this case study. Five school-based leaders completed one hundred percent of the MTSS Leadership Survey. The assumption is that all survey participants responded to survey items in an honest and ethical manner.

The MTSS Leadership Survey results indicated that approximately eighteen percent of the school-based leadership team completed the MTSS Leadership Survey. Leadership Survey
participants rated parent engagement high at a rate of eighty percent agreeing that faculty and staff regularly engage with parents and guardians. School-based leaders indicated that they had a lack of knowledge regarding a management system that tracked MTSS data. School-based leaders also had little to no knowledge of the definition, purpose, and implementation of an MTSS Framework as an intervention tool.

Findings of Quantitative Portion of Data Analysis

Findings surrounding the quantitative portion of data analysis utilizing descriptive statistics and a one-way ANOVA indicated that both school-based leaders and instructional staff have limited knowledge of the definition and purpose of an MTSS Framework. This can be partially because the school district studied previously called MTSS, the Problem-Solving Team (PST). This caused confusion among survey participants and led to the lack of knowledge indicated of an MTSS Framework.

Discussion of Quantitative Findings

The quantitative findings indicated that professional development related to the implementation of an MTSS Framework needs to be evaluated. School-based leaders indicated that they have received little to no professional development or training related to MTSS and how to use an MTSS Framework as an intervention tool. Quantitative findings also indicated that although benchmark assessments are given to determine student achievement, data related to these assessments are not effectively utilized to drive decisions related to academic achievement, positive behavior supports and social-emotional learning.

Findings of Qualitative Portion of Data Analysis

The constant comparative method was utilized to analyze the findings of the qualitative portion of data analysis. School-based leaders completed six open-ended questions related to
their knowledge and prepared to implement an MTSS Framework. Several school-based leadership survey participants indicated that they had little to no knowledge of MTSSS. All school-based leadership survey participants indicated the need for more professional development and guidance provided by the district in relation to the definition, purpose, and implementation of an MTSS Framework.

**Implications for Practice**

The results of this study indicated that school-based leaders had limited knowledge of the definition, purpose, and implementation of an MTSS Framework as an intervention tool. In addition to school-based leaders having limited knowledge of an MTSS Framework, instructional leaders also had limited knowledge of an MTSS Framework as a tool to be utilized for Tier II classroom interventions. This lack of knowledge indicated that school-based leaders do not utilize the data gathered from a MTSS Framework, to inform school-based decisions related to growth in the areas of academic achievement and learning gains, increased positive behavior support, and social-emotional learning. Ineffective utilization of an MTSS Framework as an intervention tool can have an adverse impact on students that may limit the ability of instructional staff and school-based leaders to achieve learning gains, achieve positive behavior gains, and support the social-emotional well-being of students.

**Recommendations for Further Research**

Recommendations for further research in relation to the implementation of an MTSS Framework include the following: First, further research should be conducted that focuses on the
significance of implementation of professional development provided to school-based leaders provided by the district. Second, a further analysis of the impact that the implementation of an MTSS framework at district and school-based level has on learning gains, positive behavior, and social-emotional learning is needed. In addition to the impact that the implementation has on gains, an analysis of what teachers are doing related to the support and implementation of Tier I classroom interventions is needed to determine the success of intervention strategies being utilized within the classroom setting.

Also, an analysis of factors that a successfully implemented MTSS Framework has on the mitigation of the need for Exceptional Student Education (ESE) services, needs to be included in further research. And lastly, an investigation into how district-level and school-based leaders utilize MTSS data to drive decisions related to learning gains (student achievement), the impact an MTSS Frameworks has on PBIS, as well as the impact that the implementation of an MTSS Framework has on social-emotional learning and well-being.

Conclusions

In conclusion, further research needs to be conducted related to the value that the implementation of an MTSS Framework as an intervention tool can have on student achievement. Furthermore, a breakdown of a universally accepted definition of what the Multi-Tiered System of Support Framework is and what it includes, for example, academic interventions, PBIS, social-emotional learning goals, and factors related to truancy, is critical in enabling district level leadership and school-based leadership the ability to define and implements a successful MTSS Framework at the site level. When school districts across the nation implement a universally accepted MTSS Framework, this will enable district and school-
based leaders the ability to use data to inform decisions related to academic achievement, positive behavior support, and social-emotional learning expectations. Further research of a universally accepted MTSS Framework platform will also allow for a greater level of generalizability when evaluating data.
EXEMPTION DETERMINATION

February 28, 2023

Dear Stephanie Crim:

On 2/28/2023, the IRB determined the following submission to be human subjects research that is exempt from regulation:

<table>
<thead>
<tr>
<th>Type of Review:</th>
<th>Initial Study</th>
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<tr>
<td>Title:</td>
<td>The Impact of the Multi-Tiered System of Supports (MTSS) and the role Instructional Leaders and Teachers Have on the Implementation of an MTSS Framework.</td>
</tr>
<tr>
<td>Investigator:</td>
<td>Stephanie Crim</td>
</tr>
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<td>IRB ID:</td>
<td>STUDY00004989</td>
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<tr>
<td>Funding:</td>
<td>None</td>
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<td>Grant ID:</td>
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</tr>
<tr>
<td>Documents Reviewed:</td>
<td>faculty adv HRP 251.pdf, Category: Faculty Research Approval; Explanation of Research, Category: Consent Form; Recruitment Email, Category: Recruitment Materials; Request for Exemption, Category: IRB Protocol; Survey &amp; Open Ended Questions, Category: Survey / Questionnaire;</td>
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</tbody>
</table>

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please submit a modification request to the IRB. Guidance on submitting Modifications and Administrative Check-in are detailed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.
Sincerely,

Kristin Badillo
Designated Reviewer
APPENDIX B: VOLUSIA COUNTY SCHOOLS IRB APPROVAL
March 6, 2023

Stephanie Crim
313 Dirksen Drive
DeBary, Florida 32713

This letter serves as approval to conduct your research, The Impact of the Multi-Tiered System of Supports (MTSS) and the Role Instructional Leaders and Teachers have on the Implementation of an MTSS Framework. The study is part of a doctoral dissertation at the University of Central Florida under the advisement of Dr. Sheila Moore. The purpose of this mixed-methods approach study is to analyze instructional leader preparedness, knowledge, and interpretation of an MTSS framework.

Per information in your request, please note and adhere to the following:

- All procedures set forth in the approved research request must be followed as approved by Volusia County Schools.
- Any variations to the approved protocol must be cleared through the Department of Research, Evaluation and Accountability.
- The study includes one school: DeLand High School, specifically teachers and administrators.
- Participation in this study is strictly voluntary on the part of the district, school administrators, and staff. This study will cause no disruption to the educational process.
- Confidentiality of the district, school, administrators, teachers, staff, students, and parents will be maintained at all times.
- All Florida statutes, district policies and district procedures must be followed at all times. In particular, all requirements of the Jessica Lunsford Act must be met when visiting school campuses.
- A copy of the results must be provided to the Department of Research, Evaluation and Accountability, 200 North Clara Avenue, DeLand, Florida 32721-2118 or arteron@volusia.k12.fl.us upon completion.

Should you have any questions, please do not hesitate to contact the Department of Research, Evaluation and Accountability at 386-734-7190 x20677. We wish you much success with this study.

Educationally,

Dr. Teron

Angel R. Teron, Ed.D.

Coordinator of Research, Evaluation and Accountability
C: Dr. Carmen J. Balgobin, Superintendent of Schools; Rachel B. Hazel, Deputy Superintendent of Schools; Dr. Julio Nazarrio-Valle, Chief Academic Officer; Dr. Gabriel Berrio, Assist. Supt. High School Curriculum & Instruction; Michael J. Degirolmo, Principal DeLand H.S.
APPENDIX C: MTSS INSTRUCTIONAL SURVEY
MTSS Instructional Survey

1. The leaders and staff at my school collectively examine practices and processes of a multi-tiered system of supports frequently enough to ensure that they are improving outcomes for all students.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

2. The leaders at my school provide clear expectations for the use of problem-solving based on student data.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

3. The leaders at my school provide clear expectations for the implementation of a multi-tiered system of supports that is necessary to improve the progress of all students.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

4. The leaders at my school provide coaching and/or professional development opportunities to ensure that all staff members have the skills necessary to use data for problem solving.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

5. The leaders at my school promote collaboration and trust among educators and families to meet the needs of students.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

6. The leaders at my school request and welcome input from staff to revise school policies and procedures.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

7. The climate at my school allows the staff and leaders to feel safe discussing school-related problems candidly.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

8. My school has systematic processes that leaders utilize to ensure that staff has appropriate resources (e.g., personnel, time, materials) to implement a multi-tiered system of supports.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

9. The leaders at my schoolwork to ensure that the staff has a shared commitment for all students’ learning and growth.
   1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

10. The staff at my school believes that full implementation of a multi-tiered system of supports is necessary to improve the progress of all students.
    1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

11. The leaders at my school model how to interpret and use student data for decision making.
    1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree
12 The leaders at my school monitor the school’s progress toward full implementation of a multi-tiered system of supports.

1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

13 The leaders at my school actively participate in problem solving team meetings.

1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

14 The staff and leaders at my school encourage a climate where families feel safe discussing their child's needs.

1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree
MTSS Leadership Survey

Item 1 The staff at my school uses school-wide achievement trends to decide about interventions and/or instructional strategies for the following year.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

2 The staff at my school analyzes the overall impact of student interventions at the targeted and intensive level at least annually to ensure that the interventions are effective.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

3 My school follows a decision-making process that increases the frequency of progress monitoring as the intensity of instruction and intervention increases.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

4 The staff engaged in problem solving processes at my school works to address the instructional needs of all children in the school, regardless of their academic level.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

5 The staff engaged in problem solving at my school are collectively able to identify appropriate research-based interventions and instructional strategies for students at all academic levels.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

6 The problem-solving process at my school allows the staff to adjust instructional supports based on student data/results.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

6 The staff engaged in problem solving at my school uses data to identify individual student need for targeted and intensive intervention.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

7 The staff engaged in problem solving at my school uses data sources in addition to summative data from the state to analyze achievement trends collectively for all students.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

8 The staff at my school use data to evaluate the effectiveness of our math curriculum.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

9 The staff at my school use data to evaluate and improve their own instructional practices.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

10 The staff at my school, works collaboratively to use data to assess and support their peers for continuous improvement of instructional practices.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

11 The staff at my school collects and analyzes information to determine whether differentiation of instruction occurs based on student need.
12 Defined decision-making processes at my school enable the staff to efficiently select interventions or instruction based on the level of student need.

13 Members of my school’s problem-solving team have clear roles and responsibilities.

14 The staff at my school increases interactions with parents as a student’s needs increase.

15 The staff at my school engages families in conversations about student performance data, at least during each parent-teacher conference.

16 My school helps families understand student performance data for meaningful conversations about student progress.

17 My school has a data management system for tracking academic progress of all students that is functional, useful, and accessible by all staff.

18 My school has a data management system to track school-wide behavior data (e.g., discipline referrals, truancy, attendance) that is functional, useful, and accessible by all staff.

19 The staff at my school is proficient in accessing achievement data for our students.

20 The staff at my school knows how to interpret data to inform instructional practices.

21 The staff at my school uses standardized formative assessments (e.g., FSA) to monitor student progress.

22 The staff at my school uses informal classroom formative assessments (e.g., observations, classroom quizzes, exit tickets, walk-arounds) to identify the immediate instructional needs of our students.

23 The staff at my school uses universal screening measures to identify any students needing additional supports to progress from their current academic level (e.g., accelerated, delayed, etc.).
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

24 My school administers universal screening and benchmarking assessments in math at regular intervals.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

25 My school’s assessment system provides guidelines on types of data needed to establish a body of evidence for eligibility for gifted services.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

26 My school’s assessment system provides guidelines on types of data needed to establish a body of evidence for eligibility for all categories of special education.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

27 All students at my school are involved in monitoring their own progress for the purpose of setting their own academic goals.
1-Strongly Disagree  2-Disagree  3-Neither Agree nor Disagree  4-Agree  5-Strongly Agree

MTSS Leadership Survey: Open Ended Interview Questions:

7. How do you define MTSS?

8. What role does school-based leadership play in the MTSS Process?

9. How does school-based leadership utilize the data provided by MTSS?

10. Do District Leaders provide professional development surrounding the purpose of MTSS?

11. Do District Leaders provide professional development surrounding the implementation of MTSS?

12. As a school-based leader, what would you like to know about MTSS?
REFERENCES


Bowden, Jr., F.D. (2019). Implementing a multi-tiered system of supports (MTSS) at the high school level. East Carolina University.


Jackson, D. (2021). Leveraging MTSS to ensure equitable outcomes. *Center on Multi-Tiered*


intervention and support to disrupt the school-to-prison pipeline: Decriminalizing childhood adversity. *Practical Strategies to Reduce Childhood Trauma and Mitigate Exposure to the School-to-Prison Pipeline*, 261-288.


association between MTSS implementation fidelity measures and student outcomes.

*Preventing School Failure: Alternative Education for Children and Youth, 63*(4), 308-316.