

MULTI-TIERED SYSTEM OF SUPPORTS: A COLLABORATIVE APPROACH TO
ACADEMIC INTERVENTIONS AND POST-SECONDARY READINESS WITHIN A
LARGE SUBURBAN HIGH SCHOOL

by

JAMARIO ANTOINE SHADE

(Under the Direction of Jami Royal Berry)

ABSTRACT

The four-year graduation rate is critical for high school and district leaders. The Multi-Tiered System of Supports (MTSS) framework is an effective school improvement model to promote on-time graduation and post-secondary readiness. This action research study examined leadership strategies and collaborative practices to strengthen the MTSS infrastructure at a large suburban high school. The study identified eight key findings and six themes: fostering student and teacher efficacy, resource management, whole-child learning, stakeholder collaboration, data-driven decision-making, and leveraging professional development. While components of MTSS are mandated by state and federal law, its implementation in high schools remains limited. This research underscores MTSS as a vital framework for meeting students' needs and empowering them to achieve their post-secondary goals and aspirations.

INDEX WORDS: Academic Press, Improvement Science, Multi-Tiered System of Supports (MTSS), Organizational Learning, Post-Secondary Readiness, and Response to Interventions (RTI)

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DEDICATION

To my grandmother, Cora Bell Shade, who spoke into existence that I would one day become both an educator and a doctor. My love for life sciences and my faith in God were born from the cherished moments I spent with her on our family land. In her garden, we shared laughter, stories from the past, and lessons on living off the land. Her daily prayers were my compass, guiding me through life. She fervently prayed that I would become her first male child to “make it all the way” in academia. Whenever I reached a milestone, she would remind me, “We are not done, my boy.”

After every accomplishment, she beamed with pride, eager to share the news with any one she knew, even random strangers. Though I was often humbled by her praise, she would say, *“It is my job to brag about my grandson. I am that owl on the branch, watching over you and ‘wooting’ about your accomplishments.”* Even now, I feel her spirit watching over me, proudly announcing each milestone from the heavens above.

My grandmother’s deepest wish was for my happiness, and becoming Dr. Shade was a dream we shared. Before she passed, I had the privilege of showing her my acceptance letter to the doctoral program at the University of Georgia. Her unwavering love, spirit, and memory have guided me through every step of this journey. Grandma, I made it! I am finally a doctor! To my family and loved ones, I hope I have made you all proud.

My strength and guidance come from Jesus Christ, my Lord and Savior. Through my trials and detours, God’s plan for me has remained steadfast. As 2 Corinthians 12:9 reminds us: *“My grace is sufficient for you, for my power is made perfect in weakness.”*

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CHAPTER 1

INTRODUCTION

The skills and knowledge students acquire in the K-12 setting prepare students to be productive citizens. The K-12 public education experience provides academic and non-academic tools for students to reach their hopes, dreams, and aspirations. In the United States, high school, which includes grades 9-12, is the last stop in the public education journey. Educators guiding and instructing high school students must promptly address student deficits and reduce obstacles hindering timely graduation. Research surrounding factors influencing high school dropout rates and ecological models of human development have been explored for decades (Uretsky, 2019). “The *status dropout rate* represents the percentage of 16- to 24-year-olds who are not enrolled in school and have not earned a high school credential (either a diploma or an equivalency credential such as a General Educational Development certificate)” (U.S. Department of Education, 2021).

The formation of public education is to prepare students to contribute to society. However, school dropouts are ill-prepared as their restricted knowledge and skills hinder their ability to navigate new emerging situations. Consequently, their confidence dwindles, impeding their capacity to adapt or effectively manage uncertainty (Ressa & Andrews, 2022).

The ability of a high school student to connect with their school and engage in instruction is one of the most important factors influencing their academic and behavioral outcomes (Stevenson et al., 2021). A robust Multi-Tiered System of Supports (MTSS) with elements of

Response to Interventions (RTI) can improve the educational inequities that Ressa and Andrews (2022) attributed to the school dropout rate.

Over the preceding two decades, there was a growing emphasis on public education law, heightening the imperative for equity and inclusion for every student. Examples of these laws include The Individuals with Disabilities Education Act of 2004 (IDEA 2004), No Child Left Behind, the Every Student Succeeds Act of 2015 (ESSA), and the 2023 State of Georgia Legislation Bill that addressed universal screening and interventions for all K-3 students. The previously mentioned legislation required educators and leaders to provide equitable learning experiences to drive student achievement (Choi et al., 2019).

When the learning needs of students become more diversified, it becomes necessary to study how leaders and educators can systematically address the needs of each student within their schools. Choi et al. (2019) emphasized the need for equity-based inclusion that provides each child with what they need to succeed. The current challenges within the education system provide leaders with opportunities for MTSS, universal design for learning (UDL), and differentiated instruction to equitably support students and their needs.

Local school administration teams are responsible for laying out the instructional vision with input from various stakeholders in the school community. Many leaders needed firsthand experience with the components of MTSS in their educator roles, primarily due to the relatively recent mandate of this initiative at the state level. Consequently, they encountered difficulties leading MTSS as a school improvement initiative. The knowledge to practice deficit with MTSS can be attributed to the need for more leader experience with MTSS (Briggs et al., 2013). Most leaders need to gain knowledge and understanding of the intricacies of MTSS components to improve the outcomes or implement a strong program with fidelity (Drury et al., 2021).

Many leadership prep programs did not include MTSS learning opportunities (Briggs et al., 2013). Essentially, the adapted legislation tasked leaders to implement programs such as MTSS with little support for the professional learning needed to build, sustain, and monitor program implementation. Bryk et al. (2015) insinuated that education organizations scurry to implement changes with little understanding of how to accomplish the transformation. Additionally, leaders need help learning how to build the capacity to execute and make decisions without objective evidence to predict program outcomes. This problem of poor implementation trickles down to school districts and schools; even high-performing school districts are not immune to meeting the challenge of learning the implementation plan while building an infrastructure to sustain the work. Consequently, creating a plane mid-air with passengers on board analogy is the daily reality of some schools.

MTSS serves as a school improvement model. In high school, MTSS helps all students master Tier 1 rigorous standards and achieve post-secondary goals.

Background of Research Site

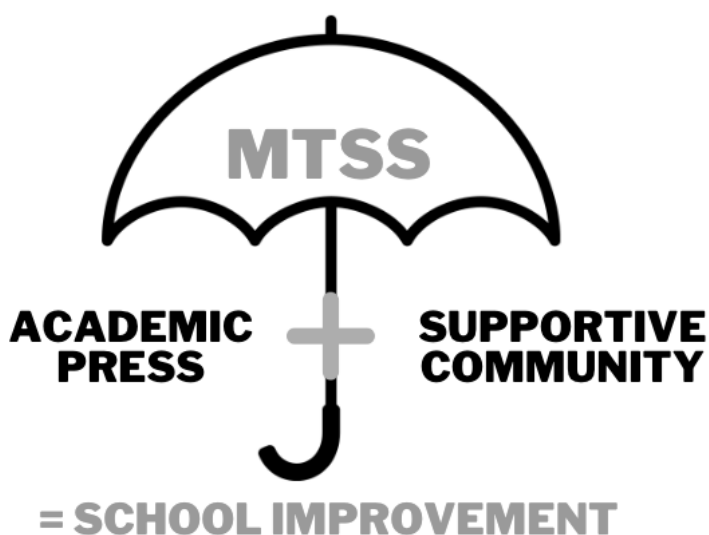
Sharkey County Public Schools (SCPS) was used as a pseudonym for this action research study. At the time of this study, SCPS had gone through a significant senior leadership shift in the last few years. The change of leadership rejuvenated an increased focus on supporting each and every child by achieving excellence in academic, behavioral, and social-emotional wellness. During the July 2022 Regular Business Board Meeting, the SCPS school board unanimously adopted the strategic plan of its newly hired superintendent. The five-year strategic plan was a collaborative effort from a diverse group of stakeholders that called for all staff to build a bridge from empathy to excellence for supporting each and every SCPS student, which was a change in semantics for all students. The strategic plan consists of four strategic priorities, and within the

strategic priorities are three goals. The strategic priority categories were empathy, equity, effectiveness, and excellence. Specifically, under the strategic priority equity lies MTSS.

The SCPS MTSS strategic plan for school improvement comprised principles from the School Improvement Equation (Murphy, 2016) and the umbrella of support structures from the MTSS model, as shown in Figure 1.1. Murphy (2016) described the equation as simple and eloquent, with *Academic Press* and *Supportive Community* being the main components of school improvement efforts. Academic Press is defined as the structure and policies that promote behaviors of educational achievement. A supportive community is a structure that provides students with a sense of care, belonging, safety, and support (Murphy, 2016).

Figure 1.1

Sharkey County Public Schools Model for School Improvement



The Academic Press component of MTSS was the primary lens within this action research study. Throughout the decades of SCPS, there continued to be a strong focus on the core business: teaching and learning. Students and staff must feel safe and welcomed for impactful teaching and learning to happen daily. Principles of empathy, servant leadership, instructional

leadership, and transformational leadership theoretical models encompass Murphy's (2016) framework—further explanations of Murphy's Equation for School Improvement are discussed in Chapter 2. A standard school improvement theory is vital for a large school district such as SCPS to reduce school variability. SCPS had over twenty large high schools within the large school district.

Magnolia High School (MHS) was used as a pseudonym for this action research study and served as the research site. The rationale for including the district background before the school was that the district prioritizes its vision to become a system of world-class schools and not a world-class school system. The difference is that SCPS believes each school plays a critical role in the success of the district. MHS had 3,300 students and was in a suburban area. Given the student population size of MHS, the school staff continued to strive to minimize variability by prioritizing disparity reduction within classrooms and across processes. The MHS staff closely aligned operational and instructional direction with the school district, including adopting the initiative to include MTSS as a framework for school improvement. Chapters 3 and 4 provide contextual characteristics of MHS.

Statement of the Problem

MTSS is a school improvement structure that balances Supportive Community and Academic Press in how educators provide academic and non-academic services to students. The problem of practice was that there was a need to enhance the sustainable Multi-Tiered System of Supports (MTSS) infrastructure to increase academic interventions to close the credit deficiency gaps within a large suburban high school, MHS. The four-year graduation cohort rate is defined as a group of students that all entered 9th grade within a particular academic year and the rate at which those students completed their graduation requirements in four years.

During the October 2023 School Board meeting, board members were troubled by a decline in graduation rates. They emphasized the necessity of thoroughly evaluating the factors hindering timely student graduation. The call to action from district leaders inspired this action research study, which focused on examining the infrastructure supporting timely student graduation.

For this study, the researcher studied the MTSS structures that supported off-track students in the 2025 cohort receiving academic interventions to earn additional graduation-required courses to move toward graduating on time with their four-year graduating cohort. The Action Research Design Team (ARDT) and Action Research Implementation Team (ARIT) also developed probable solutions to strengthen the existing MTSS infrastructure to support student learning. The graduation rate for Sharkey County had decreased from 83.1% in 2022 to 81.6% in 2023 and increased to 83.6% in 2024. Student course performance was correlated with the mastery of the standards.

Although MHS and the district reported an increase in graduation rates during the 2023-2024 school year, schools needed to adopt a Multi-Tiered System of Supports (MTSS) framework to establish a proactive structure that promotes genuine student achievement. This approach helps to mitigate the risk of misleading data, such as inflated graduation rates. At the same time, other indicators suggested that students may not be adequately prepared for post-secondary education opportunities.

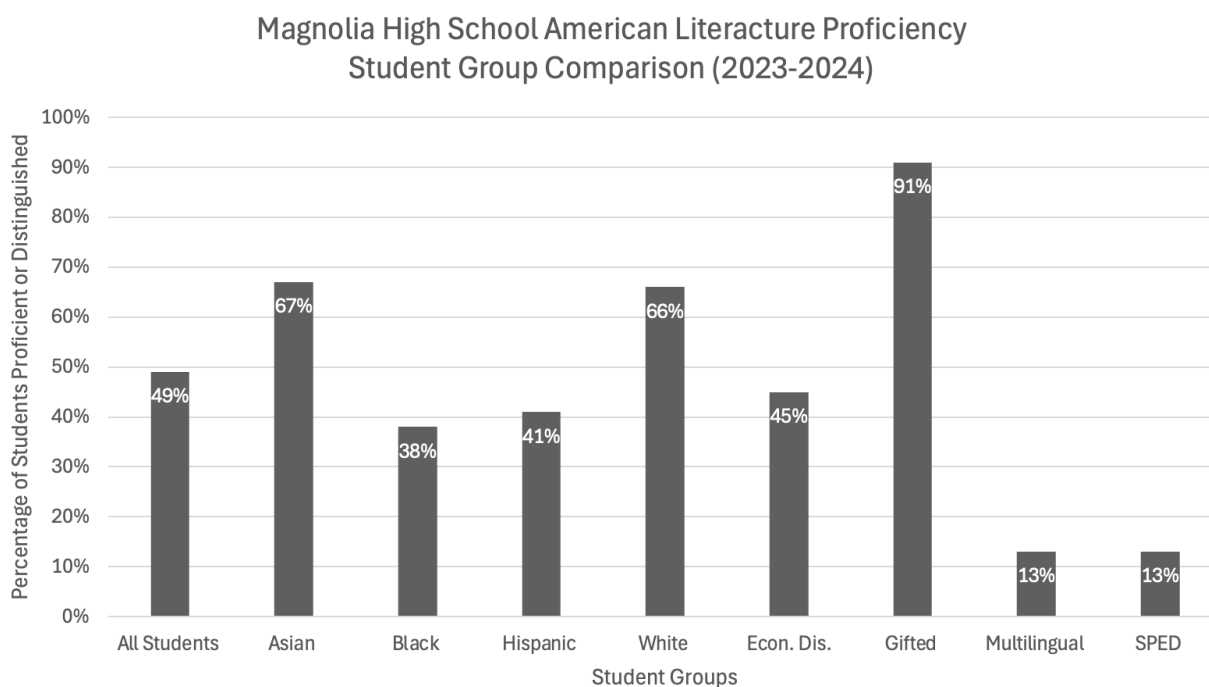
According to the Governor's Office of Student Achievement (GOSA), SCPS student academic performance on the state summative end-of-year assessment had been higher year-to-year than the state average collectively as a district. At the start of the action research study, the school leadership team evaluated the Consolidated Student Performance Comparison Summary-

by-Student Group on the 11th-grade American Literature assessment. American Literature is a graduation required course. As shown in Figure 1.2, the disparity between student groups challenged MHS to provide additional support to students and eliminate the achievement gap. The responsibility of all schools is to guarantee that each student receives the support they need to move towards academic proficiency.

Figure 1.2

Magnolia High School Fall Semester 2022-2023 American Literature and Composition

Comparison Summary by Student Group



Note. From Magnolia High School End of Term Summative Exam Proficiency Report

Students engaged in a normed assessment to assess their learning of state standards throughout their K-12 experience. For the state assessment, beginning and developing rankings indicated that the learner was below grade-level learning expectations. In contrast, proficiency indicated meeting grade-level or above grade-level expectations. Although the state fall semester

2022-2023 comprehensive end-of-the-year data had over 54% of MHS achievement data that suggests that students were meeting or exceeding expectations, academic proficiency was only the case for some student groups at MHS. Often, education leaders have phrases such as, ‘As a district or school, we are proud of the overall results.’ That type of celebration can mask the performance of each and every student. In the spring semester of 2022, the student achievement data was shared with the public and school board. The data stressed the need for all schools to enhance their MTSS infrastructure to provide robust academic support and acceleration. MTSS promotes the academic growth of every student (Howley et al., 2023)

Overview of the Research Site Context

Sharkey County Public Schools (SCPS) is a suburban school district that served over 185,000 students. SCPS was one of the most diverse school districts in the United States. The student demographics of the school district at the time of this study consisted of 35% Hispanic, 32% Black, 17% White, 12% Asian/Pacific Islander, and 4% Multiracial/Other. The student services breakdown included 66% economically disadvantaged, 25% English learners, 16% gifted, and 14% special education. The school district operated 146 schools with a three-billion-dollar annual budget, making the operations complex. The school district experienced high transiency and sought to reduce variability between schools. If a family moved residency just a short distance from their current school, the new residency address could change the school zone for the family.

The state department considered MHS one of the most diverse high schools in the state. Within the school zone, MHS had some of the wealthiest homes in the southeastern part of the United States and low-income temporary housing, such as extended stay units and trailers. The student demographics of MHS at the time of this study consisted of 30% Black, 27% Asian, 27%

Hispanic, 11% White, and 4% Multiracial/Other. The student services breakdown included 58% economically disadvantaged, 17% English learners, 28% gifted, and 10% special education. MHS had 3,300 students, 160 teachers, 20 support staff, and 10 administrators. With such a diverse student population, the need to operationalize the support structures became significant.

Purpose of the Study

The purpose of this action research study was to investigate leadership strategies and collaborative practices that improve the MTSS infrastructure of a large suburban high school. The goal was to address student credit deficiencies and increase the number of off-track students graduating within their four-year cohort while supporting post-secondary planning. This qualitative action research study included an Action Research Design Team (ARDT) and an Action Research Implementation Team (ARIT).

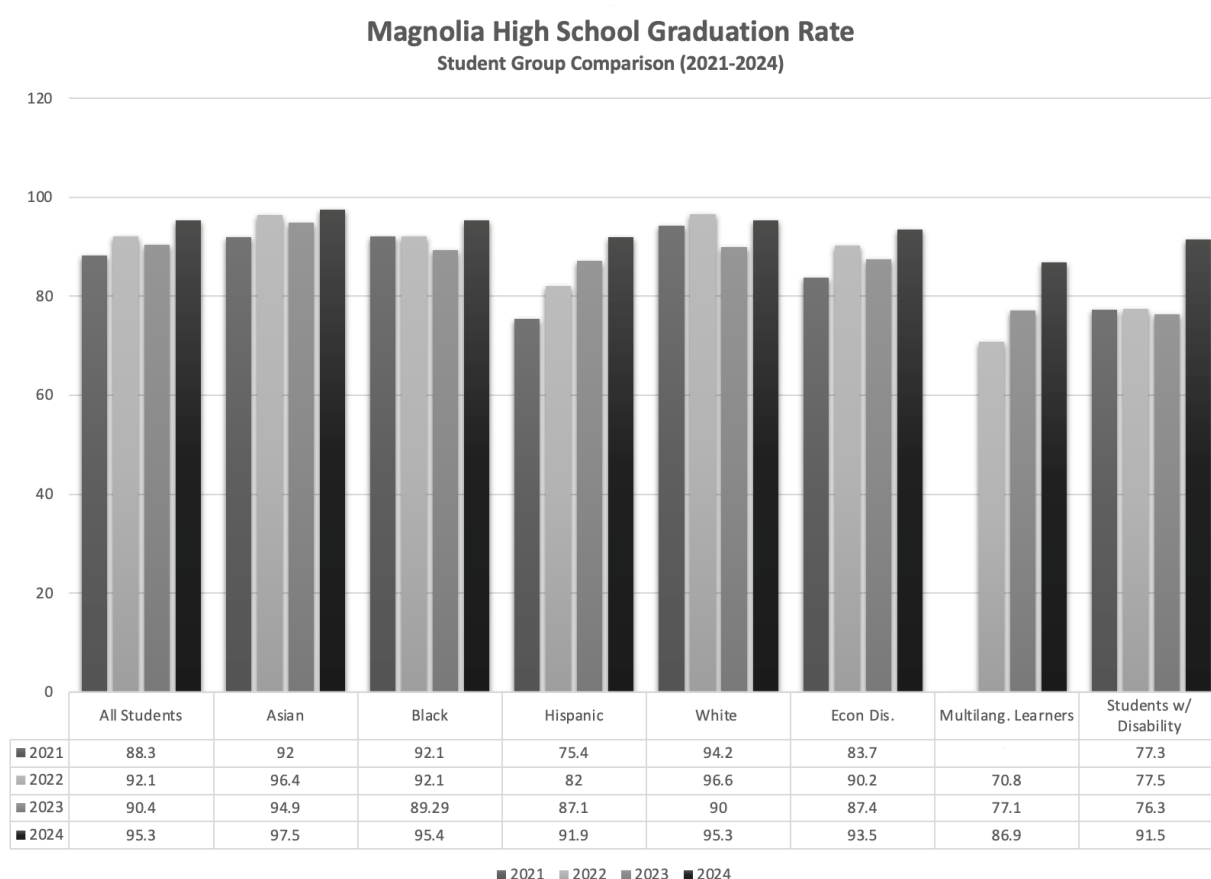
Specifically, the action research study examined the MHS MTSS team structures, collaborative efforts, data-based decision-making practices, and the mid-course corrections that enhanced student achievement in return for increasing the four-year graduation rate. Furthermore, the study analyzed the role of the design team and the improvement model that supported the MHS implementation plan. The complexity of MTSS in schools is a challenge for many leaders, especially those new to the concepts of a multi-level prevention system.

The researcher referenced the Academic Press component of Murphy's Equation (Murphy, 2016) throughout the action research to differentiate the academic structures that support a multi-tiered intervention system. Although student behavior and non-academic wellness, such as socio-emotional wellness and wrap-around services, are essential, those components of MTSS appeared as secondary components in this action-reach study.

The four-year graduation rate fluctuated up and down over the 2020-2024 school years. The 2024 cohort graduation rate trended up from the 2023 cohort. If this historical data trend continued, the 2025 cohort would be lower than the 2024 cohort. The significance of this study was to maintain a two-year increase in the number of students who graduated on time. The data shown in Figure 1.3 shows the graduation rate within the last four cohorts.

Figure 1.3

Magnolia High School Four Year Graduation Rate, Four Previous Cohorts 2021-2024



This qualitative study explored three critical areas in supporting the Magnolia High School MTSS infrastructure:

1. Defining and evaluating the academic intervention needs of students.
2. Enhancing an MTSS infrastructure based on data-based decision-making protocols.

3. Supporting the capacity of leaders and teachers in monitoring the fidelity of interventions within the MTSS infrastructure.

Research Questions

To address the purpose of this action research study within a large suburban high school setting, the following research questions guided this inquiry:

1. How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?
2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?
3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?

Definition of Terms

For this action research study, the following terms are defined in the context of Sharkey County Public Schools and Magnolia High School (MHS):

- “MTSS” is a Multi-Tiered System of Supports, which encompasses three tiers:
 - Tier 1 (All Students Receive), in which approximately 80% of the students should be successful with the strategies used.
 - Tier 2 (Group Based Interventions): When Tier I instruction is unsuccessful, students with similar deficits (15% of the student population) will benefit from strategic interventions.
 - Tier 3 (Individualized Intensive Interventions) are individualized interventions to support specific deficits and include progress monitoring probes. The

effectiveness of interventions can be described as a Response to Interventions (RTI).

- MTSS includes academic, behavioral, and social-emotional wellness
- “RTI,” also known as Response to Intervention, is a systematic process of evaluating student data, appropriately assigning a prescribed intervention to support a specific deficit, and monitoring academic progress with appropriate probes. RTI is a component within the MTSS Framework. RTI and MTSS are interchangeable when providing students with interventions and measuring the effectiveness of said interventions.
- “Instructional Coordinator” is interchangeable with Department Chair. An Instructional Coordinator is a teacher leadership position in which the coordinator leads the instructional framework of the department, performs non-evaluative leadership duties, and assists with resource allocation.
- “High School Administrators” refers to the principal and assistant principals
- “Academic Press” refers to the academic forces pressing for achievement. Academic Press includes school policies, practices, expectations, norms, and rewards.
- “Supportive Community” includes non-academic services such as behavior support, social-emotional wellness, and wrap-around services.
- “Multi-level Prevention System” is a framework designed to provide support matched to student needs to maximize student achievement.
- “Equity” is defined as providing students with resources based on the individual student's need instead of the student's residency status, race, sex, or other demographical factors.

- “Four-Year Graduation Rate” is the percentage of students that graduate within four years of their 9th grade entry date. The equation includes the number of students graduating in four years divided by the number of students within the cohort. The four-year graduation rate is expressed as a percentage.
- “Graduation Cohort” is a group of students that entered 9th grade during the same academic school year.
- “Cohort mentor” is defined as a teacher who serves on the Graduation Cohort subgroup of the local school MTSS Committee and volunteers to mentor students off-track for graduation within the current cohort year.
- “Multilingual Learner (ML)” is defined as students identified by an assessment as having limited English proficiency and English as their second language.
- “Economically Disadvantaged” is defined by students who qualify for free and reduced lunch as identified by federal and state Title I qualifications.

Action Research Team Introduction

The action research study consisted of a design team and an implementation team. Chapter 3 provides a deeper analysis of team member contributions to this study. The introduction of the design and implementation team serves as a context element in Chapter 1.

As shown in Table 1.1, the local school leaders on the Action Research Design Team (ARDT) included Principal 1, Assistant Principal 1, Assistant Principal 2, Teacher/Mentor 1, and Researcher/Assistant Principal 3. Principal 1 contributions to leadership, staffing allocation, and resources helped move the work of MTSS implementation at MHS forward. Additionally, Assistant Principal 1 contributed to the team with her knowledge of action research, literacy, and school operations. Assistant Principal 2 understood how to support students receiving special

education services and schoolwide positive behavior interventions and support (PBIS).

Teacher/Mentor 1 was a retired assistant principal and served as the MTSS Coordinator at the time of the study. Teacher/Mentor 1 opened MHS as a chemistry teacher and brings institutional knowledge to the design team with her previous assessment and data administrator role. She served on the design and implementation teams.

Table 1.1

Action Research Design Team

Pseudonym	Title
Principal 1	Principal, MHS
Assistant Principal 1	Assistant Principal (Language Arts and MLL), MHS
Assistant Principal 2	Assistant Principal (Special Education), MHS
Teacher/Mentor 1	MTSS Coordinator, MHS
Researcher/Assistant Principal 3	Researcher (Author of Dissertation) and Assistant Principal (Mathematics), MHS

Table 1.2 highlights the local school counselor and teacher leaders on the Action Research Implementation Team (ARDT). Teacher/Mentor 1, the MTSS coordinator at MHS, served on the design and implementation teams. The decision to involve Teacher/Mentor 1 in both the design and implementation teams enabled the researcher to transition into an observer-as-participant role within the study and reduce involvement in the implementation process. The decision allowed the researcher to primarily observe theory translation into practice. Teacher leaders brought a wealth of knowledge in providing academic interventions, data analysis, and relationship building to move the work of supporting the educational needs of students at MHS.

Table 1.2*Action Research Implementation Team*

Pseudonym	Title
Teacher/Mentor 1	MTSS Coordinator, MHS
Teacher/Mentor 2	Teacher Leader (Senior Coaches, Social Studies), MHS
Teacher/Mentor 3	Teacher Leader (Mathematics), MHS
Teacher/Mentor 4	Teacher Leader (Language Arts), MHS
Teacher/Mentor 5	Teacher Leader (Social Studies), MHS
Teacher/Mentor 6	Teacher Leader
Counselor 1	Counselor, MHS

Chapter 3 further explains the Action Research Design and Action Research Implementation Teams.

Theoretical Framework

This action research study combined the Five Learning Disciplines for Building Learning Organizations theoretical model (Senge, 1990) and the Organizational Inquiry Theory, which was contributed by Chris Argyris and Donald Schön (1996). Senge (1990) focused on learning within the organization and assessed why some organizations learn better than others. Argyris and Schön (1996) focused on how individuals and groups engage in inquiry to solve a problem of practice according to theory-in-use and not espoused theory. The espoused theory refers to the formalized component of an organization that limits groups to a narrow path. An example of espoused theory is if an event happens within the organization, such as an upset client, there is a procedure or script to support the event. The theory-in-action relates to the freedom flowing and the social way members of the organization can solve problems and learn.

Senge (1990) emphasized that the disciplines of a learning organization consist of five major components: systems of thinking, mental models, shared vision, personal mastery, and

team learning. Systems of thinking are understanding and addressing the interrelationships between the parts of the organization and its people within a cultural context. Mental Models evaluate the cultural influences within the organization, such as deeply ingrained assumptions, generalizations, and biases. Shared Vision considers that people are motivated to learn when there is a collective purpose and a shared vision. Personal Master is the individual perspective within the organization in which the individual continues to refine their unique skillset and vision. Finally, Team Learning evaluates processes and structures that develop the ability of a team to create desired organizational outcomes (Senge, 1990).

The team learning aspect of the theoretical framework bolsters teacher self-efficacy regarding personal mastery or individual learning. Bandura (1997) positioned self-efficacy as the “belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). One must have the knowledge to carry out the job functions, in the case of this action research, interventions. The theoretical framework component of team learning supports collective efficacy. A group progressing toward a task demonstrates collective efficacy (Zepeda et al., 2023). Chapter 3 offers a deeper evaluation of the relationship between effectiveness and theoretical framework.

Argyris and Schön (1996) identified three levels of learning that an organization goes through. The three levels are single-loop learning, double-loop learning, and deuterolearning. Single-loop learning consists of one feedback loop when the strategy is modified in response to undesirable results, like a mid-course correction. Double loop learning addresses when desired outcomes are not visible, and a reevaluation of the system or plan design is analyzed at the core of the change. Deuterolearning is the organization learning how to improve the learning itself

and considering the structural and behavioral components that allow learning to occur within the organization.

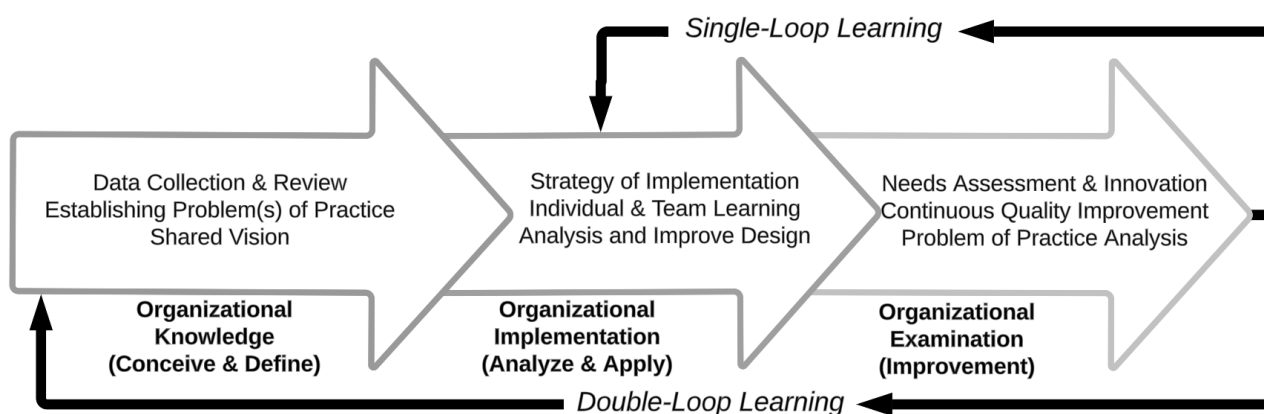
The researcher and ARDT intentionally designed the theoretical framework for this action research study, which was critical to the design and implementation teams documenting the success and challenges of supporting the MTSS structures at MHS. At the time of this study, MTSS had been a public education component for over a decade; however, the field could benefit from more research on successful implementation at the high school level. The process of Response to Intervention (RTI), a significant component of MTSS, existed; however, more research needs to be done in the last twenty years on RTI in the secondary setting (Bouck & Cosby, 2019). The Organizational Learning Theory addressed the concern of poor implementation by providing a framework for learning, creativity, and problem-solving in a collaborative arena. The framework surrounded by the Learning Organization principles (Senge, 1990) and the Organizational Inquiry (Argyris & Schön, 1996) allowed the team to become reflective, collaborative practitioners and increase their capacity to serve diverse learners (Argyris & Schön, 1996).

When the design team edited the theoretical framework, the team decided to eliminate the mental model component of the Senge (1990) model and the deuterolearning component of the Argyris and Schön (1996) model. The idea of mental models, the learner's prior experience and learning experiences (Senge, 1990), was instead embedded within the shared vision and data analysis portion of the study. Like deuterolearning, the team omitted structures and learning practices (Argyris & Schön, 1996) from the model as elements of continuous quality improvement, an engrained learning practice included in the model and the daily culture of the school district. In addition, the single-loop and double-loop learning cycles addressed the need to

reflect on the core values of supporting every MHS student and evaluate the actions of individuals and teams that support the mission and vision of the school. Figure 1.4 provides a visual of the hybrid theoretical framework.

Figure 1.4

Hybrid Theoretical Framework: Organizational Learning



Note. Adapted from Senge (1990) and Argyris & Schön (1996).

Logic Model

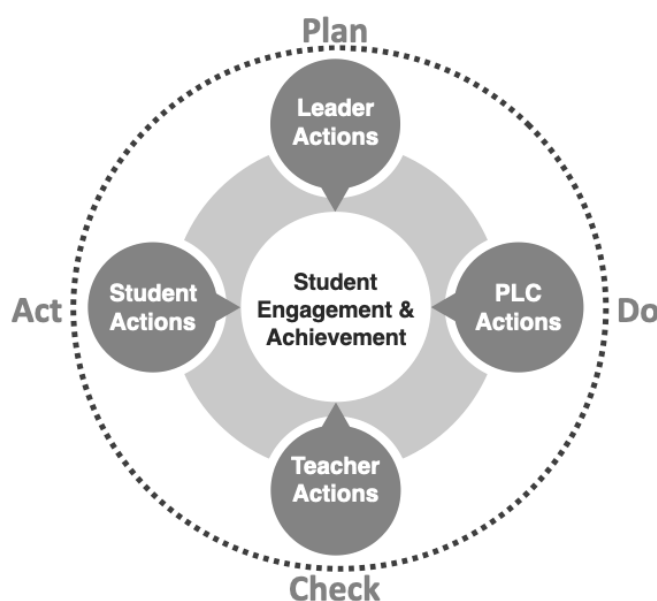
The action research team engaged in several continuous quality improvement (CQI) cycles during the research study. The team used the Sharkey County Public Schools (SCPS) Model of Action for Improved Student Engagement and Achievement. The continuum started with leader actions, followed by collaborative learning team actions, teacher actions, and student actions, which lead to student engagement and achievement.

Specifically, the research team evaluated the specific group actions that led to successful student outcomes. The original Model of Actions for Improved Student Engagement and Achievement was linear. Figure 1.5 is an edited version of the model for this action research study. The conceptual edit indicates that all collaborative actions from leaders, teachers, and students influence student engagement and achievement. The semipermeable circle symbolizes

the plan-do-check-act cycle, a cornerstone of continuous improvement within the logic model framework. Its integration underscores the crucial need for ongoing learning and enhancement in individual and team efforts to drive organizational progress.

Figure 1.5

Sharkey County Public Schools Model of Actions for Improved Student Engagement and Achievement Conceptual Edit



Note. Adapted from Sharkey County Public Schools Division of Teaching and Learning Theory of Change

Overview of the Methodology

Qualitative action research is a systematic inquiry to understand practices that empower participants toward collaboration, acquire new knowledge, and make a change within the organization (Masters, 1995). The purpose of action research is to form a collective self-reflective inquiry of educational practices, develop a deeper understanding of those practices, and analyze the conditions under which these practices are carried out (Kemmis & McTaggart, 1990). In the context of this qualitative action research study, the design team used literature

surrounding improvement science, leadership theory, and MTSS to develop an infrastructure that supported school improvement and students graduating on time.

The ARIT participated in implementing the MTSS Academic Press and the infrastructure to support the academic deficits of students. The design and implementation teams explored how existing MTSS infrastructure supported academic deficits through a multi-level prevention and intervention framework. Throughout the process, the team used multiple student data points to evaluate the effectiveness of the structures and interventions. Additionally, a deeper analysis of the intervention programs happened to assess whether or not the intervention supported student academic performance in graduation-required courses. The comprehensive evaluation of student support programs drove the team to reflect on how the staff served students with their academic needs. Masters (1995) suggested that inquiry drives change.

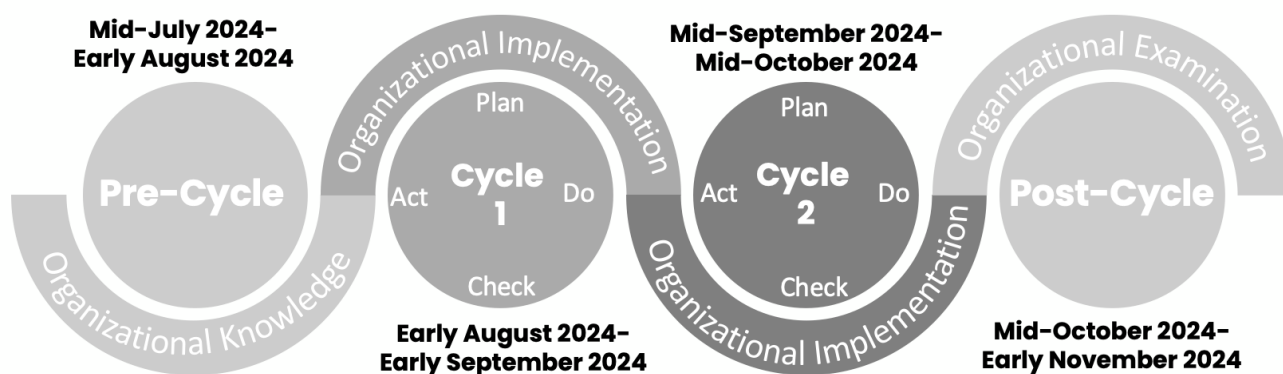
As different cohorts of students matriculate through high school, their academic and behavioral needs can differ from past cohorts. Glanz (2014) highlighted that many leaders must learn to utilize research. Action research was an appropriate methodology for this study as it provided practitioners with a model to effectively collaborate in response to achievement data and then address the needs of students responsively. Grundy and Kemmis (1981) demonstrated that action research proceeds in a spiraling cycle of planning, acting responsively, and reflecting.

Glanz (2014) asserted that "action research is an attempt to provide technical knowledge and prerequisite skills so that you feel more knowledgeable and comfortable in employing research strategies in your daily practice" (p. 33). The need for action research is critical for educators to evaluate the effectiveness of interventions in cycles. Cycles within the action research model throughout the study allowed the team to be reflective and conduct mid-course corrections to meet the academic needs of students.

For this action research study, the researcher implemented two cycles of four-and-a-half-week periods, which aligned with the MHS 4x4 block schedule and 9-week grading period. The first cycle started in August 2024, followed by the second cycle in mid-September 2024, and ended in mid-October 2024, the Fall Semester of the 2024-2025 school year. The rationale for the timeline was to fully evaluate the current MTSS infrastructure from the previous 2023-2024 school year. In addition, implementing the first action research cycle in August was a preventative measure to support students and allow ample time for the continued adjustment of the MTSS infrastructure throughout Fall 2024. The researcher designed the timelines, shown in Figure 1.6, to be more responsive to student needs. Additionally, components of the theoretical framework are integrated within the timeline.

Figure 1.6

Action Research Cycle-Study Timeline



Note. Adapted from Glanz (2014) and Argyris & Schön (1996).

When schools use MTSS as a framework for school improvement, the actions of leaders are genuinely responsive to multiple data sources. Action research allows local school leaders to be researchers, addressing the challenges of creating a sustainable infrastructure to support research-based interventions and practices (Coghlan, 2019). The premise of this study was to

identify problems of practice at MHS strategically and put possible solutions into action, with student achievement being the center of the work. Reflective practitioners reflect on current events and carefully design steps to improve tomorrow (Glanz, 2014).

Continuous quality improvement (CQI) cycles correlate directly to Glanz's (2014) account about being a reflective practitioner in action research. The mindset that '*the work is never done*' is critical for a successful MTSS infrastructure at the high school level. Are 100% of students proficient on district and state assessments? Are 100% of students graduating within four years? If leaders cannot say yes to these questions, then there is room for improvement within the MTSS implementation plan. Bryk et al. (2015) proclaimed that "effective problem-solving shifts the focus from what needs to be fixed to knowing why a system of supports works as they do. Leaders need to learn how the system can be improved to yield better outcomes" (p. 31). Focusing on the MTSS infrastructure highlights the value of improvement science and action research in evaluating the design of MTSS initiatives within a school setting. MHS had structures in place that supported most students. The need for a deeper analysis of MTSS addressed supporting the needs of each and every student through a system of action.

Throughout the qualitative action research study, the design and implementation team collaborated to evaluate if the current MTSS infrastructure supported academic successes and improved school structures to help each student. The implementation team collected data throughout the cycles to best align interventions with the academic deficit(s) that students demonstrated. The design team then analyzed data to provide more structures and processes for the MTSS infrastructure. Academic universal screener data with normed references, progress monitoring probes, and interviews from diverse stakeholders were used to establish growth areas within the MTSS infrastructure. The interviews played a critical role in developing a solid MTSS

infrastructure. Practitioner input is vital to the success of school improvement. Bryk et al. (2015) explained that “developing standard work processes reduces cognitive demands and stress of complex tasks” (p. 48). Standard work processes emphasized the importance of creating an infrastructure to support student interventions at the high school level. Leaders should reduce the cognitive demands of teachers with logistics and allow teachers the space to help students.

Data Collection

Data collection for this qualitative action research study incorporated numerous qualitative methods. These methods included:

1. Semi-structured individual interviews with the select MTSS committee members (ARIT) and the researcher at the beginning, middle, and end of the research processes;
2. Focus Group conducted with the action research team;
3. Observations of meetings, the interactions select MTSS committee members (ARIT) had with students in need of academic interventions and their delivery of professional development on MTSS topics to staff members;
4. Research fieldwork journal highlighting the plan-do-check-act throughout the process, observation notes of the interactions select MTSS committee members (ARIT) had with staff, students, and parents, personal leadership reflections;
5. Artifacts, including meeting notes, the intervention logs maintained by the MTSS committee members (ARIT), pre-and post-study program evaluation rubrics, and additional artifacts that support the MTSS infrastructure and leadership findings to support the research questions and purpose of the study.

Further explanation of the data collection methods can be found in Chapter 3 of this study.

Interventions

The action research study included several interventions to support student achievement. The interventions also informed the decision-making process of the design and implementation teams. Many of the interventions involved data collection of student performance for evaluation purposes. The study required participants to participate in professional learning in progress monitoring and data-based decision-making in a multi-level prevention system. Teachers who provided interventions participated in reflection activities about their experience and the students they supported to capture their reflections on student engagement and achievement.

This action research study sought to establish systematic interventions to support students on track for graduation. Due to the time constraints on a 4x4 block schedule, students had nine weeks to complete half a credit and eighteen weeks to complete a full credit. 4x4 block schools teach half the calendar days of traditional year-long high school courses. School leaders placed students in four to five-week intervention cycles to support them in being successful in their current classes and credit recovery programs at MHS.

Students were identified by current and previous course performance, credit earned versus credit attempted ratio, and other at-risk factors, including discipline and attendance. After the cycle had been completed, the ARDT evaluated student performance in their class or improvement on the skill deficit to determine if a change in the intervention plan was necessary to support the student. The speed at which the team had to implement the intervention structure on the block schedule influenced the professional learning design for teachers who provided interventions to students. Intervention activities for this qualitative action research included the following:

1. The Process of Developing an Intervention Implementation Guide

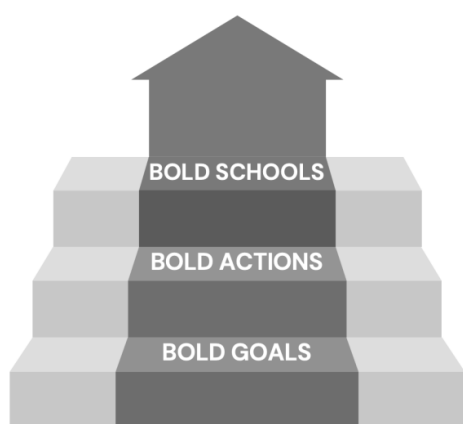
2. The Process of Developing and Implementing a Cohort Data Protocol
3. The Process of Developing and Implementing a Cohort Monitoring Tool
4. Cohort Mentor Professional Development
5. Mentor/Mentee Reflection Activities

Further explanation of the interventions used can be found in Chapter 3 of this study.

Dr. Gene Bottoms' impact on secondary education and his book *Tomorrow's High School* inspired the study to expand to post-secondary readiness. The connection between MTSS and Gene Bottoms' Connected Learning Framework (Figure 1.7), rooted in research on preparing students for post-secondary careers, holds particular importance to this study. Bottoms (2022) emphasizes the need for schools to establish bold, ambitious goals while maintaining consistent monitoring of said goals. The study brought a bold goal of maintaining high graduation rates while student needs increased. With bold goals, the study catalyzes the need for bold actions displayed in the study design, hoping to be a model school for MTSS implementation.

Figure 1.7

Connected Learning Framework



Note. Adapted from Bottoms (2022) Connected Learning Framework

The interventions and strategies implemented in this study were guided by these principles, with a dual focus: helping students achieve on-time graduation and preparing them with the critical skills needed to thrive beyond high school. Dr. Bottoms' emphasis on post-secondary readiness adds an equity dimension to this work by addressing systemic disparities in preparation and access that often disadvantage students from historically underserved groups. By prioritizing readiness for college, careers, and other post-secondary pathways, these efforts aim to close equity gaps, ensuring that all students, regardless of their background, have access to meaningful opportunities and the tools needed to succeed in their future endeavors.

Significance of the Study

MTSS is the gateway for educational equity for all students. The challenge is for leaders to develop an infrastructure at the local school level that addresses the academic needs of every student. As school staff addressed the academic needs of students, school improvement initiatives supported all student group achievement by identifying the Academic Press structures and Supportive Community supports to move student academic performance forward (Murphy, 2016). The significance of the study is that high school staff should avoid reactionary support structures such as credit recovery when a student fails to take more preventative measures that ask why students are not successful and what they can do to close the achievement gap. MTSS interventions positively impact high school students learning outcomes; however, additional research is needed to connect MTSS in secondary schools to improvement efforts (Bohanon et al., 2016).

This study benefits all high schools considering MTSS implementation. The study addressed the infrastructure components necessary to have a solid infrastructure to support the Academic Press component of MTSS. The researcher embedded cultural elements of MHS

throughout the study to highlight the context of improvement science and organizational learning. The staff should be guided by the belief that all students can be successful if the correct support systems are in place (Bohanon et al., 2021). The need to improve the system is critical to eliminating student achievement gaps. The ultimate goal at MHS was for all students to graduate and be prepared to attain their post-secondary hopes, dreams, and aspirations.

One challenge at the high school level is the departmentalized structure of many schools, where instructional coordinators and assistant principals oversee specific departments and initiatives. This departmentalization unintentionally led to siloed work, creating communication gaps among leaders at the research site. For instance, one assistant principal at MHS supports the attendance office, while others are responsible for academic interventions, behavioral interventions, athletics, community school, and counseling office, to name a few. Additionally, the role of school leaders evolved throughout the twenty-first century. Leaders have shifted from primarily managing operational aspects of schools to focusing on instructional leadership, driven by increased accountability at the state and national levels (Hallinger, 2011). After the COVID-19 pandemic, their focus expanded to include more intentional support for the social-emotional wellness of both teachers and students.

This study examined the MTSS infrastructure to support students off track for graduation to redeem the credits needed to graduate with their four-year cohort. The study adds to the need for more research surrounding course failure prevention and active plans to support students when they fail a course at the high school level. The loss of learning opportunities increased due to digital learning options during the COVID-19 pandemic and increased focus on equitable learning opportunities. At the time of this study, more cultural and academic variables on the

COVID-19 impact had yet to be thoroughly analyzed. However, the need for academic equity was called into action, and the need for interventions was prevalent.

Organization of the Dissertation

Chapter 1 gives an overview of the qualitative study and lays out an overview of the research questions, the problem of practice, and the methods for the study. Chapter 2 reviews and analyzes the related research literature and discusses MTSS within a secondary setting, school infrastructure elements to support the MTSS program design, and leadership characteristics for school improvement. Chapter 3 described the methodology involved in action research, the qualitative methods related to this study, and the context in which it was conducted. Chapter 4 examines the findings from the action research case.

Chapter 5 details the analysis of the research case findings based on the action research cycles related to the research questions that steered this study. This chapter also described and analyzed the interventions the design research and action research team implemented. Chapter 6 summarizes the qualitative action research study, discusses the research question outcomes, and offers implications for school leaders and further research.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

Chapter 2 provides a detailed literature review on MTSS, post-secondary readiness, leadership, professional learning, and organization learning. Academic Press is a framework for school improvement (Murphy et al., 1982). Freeman et al. (2015) deconstructed MTSS into three main infrastructural components: data, practices, and systems. MTSS requires knowledge of data-based decision-making, suitable professional development, impactful leadership, and a team that works collaboratively to improve all students (Safari et al., 2020). The role of MTSS in schools is to provide students with the correct resources and tools to meet their needs and who are prepared with the appropriate skills to be successful (Savitz et al., 2022).

The purpose of this action research study was to investigate leadership strategies and collaborative practices that improve the MTSS infrastructure of a large suburban high school. The goal was to address student credit deficiencies and increase the number of off-track students graduating within their four-year cohort while supporting post-secondary planning. This qualitative action research study included an Action Research Design Team (ARDT) and an Action Research Implementation Team (ARIT).

1. How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?
2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?

3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?

Definition of the Problem

This action research study aimed to analyze how effective leadership strategies and reflective practices enhanced a Multi-Tiered System of Supports (MTSS) infrastructure in a large suburban high school. The leadership strategies and practices focused on closing the credit deficiencies gap of students while increasing the number of students on track for graduation within their four-year cohort.

The challenge is that many leaders have yet to experience MTSS as classroom teachers (Drury et al., 2021). Therefore, leaders need help leading MTSS as a school improvement initiative (Drury et al., 2021). Most leaders need to gain knowledge and understanding of the intricacies of MTSS to improve the program design outcomes and implement MTSS with fidelity (Drury et al., 2021). Secondary teachers must have the skills to provide academic interventions (Thomas et al., 2020). Essentially, policymakers and district leaders task local school leaders to implement programs such as MTSS with little support, which is needed to build, sustain, and monitor the implementation of MTSS structures within a school (Thomas et al., 2020).

Building upon MTSS structures is critical to maintaining the fidelity of intervention programs. Bahr et al. (2023) stated that “sustaining MTSS is important for several reasons associated with legal imperatives, fiscal responsibility, and school improvement” (p. 90). MTSS implementation looks vastly different across the country, and the research in the secondary setting is sparse (Savitz et al., 2022).

Bryk et al. (2015) suggested that education organizations scurry to implement changes without understanding how to accomplish them, can execute the idea best, and have no objective

evidence to predict what might happen. The problem of quickly implementing educational initiatives trickles down to school districts nationwide—even high-performing school districts are not immune to meeting the challenge of learning while implementing change. The research suggests that there is a research-to-practice gap when it comes to RTI and MTSS (Berkely et al., 2020).

The researcher aligned the objectives of this action research study with a review of the literature on a Multi-Tiered System of Supports (MTSS) within a high school setting. The literature review includes four sections, with the first section providing a historical and legal context for the foundation of MTSS and Response to Intervention (RTI) models. The second section explores the complexities of developing an MTSS infrastructure in a high school setting. The third section addresses the leadership strategies to support MTSS at the secondary level. The final section explores how organizations get better, connecting theory to practice.

The Shift from RTI to MTSS (Same but Different)

The term Multi-Tiered System of Supports (MTSS) encompasses Response to Interventions (RTI), as well as other elements such as a multi-level prevention system within academics, behavior, and social-emotional supports (American Institute of Research, 2021). Baily (2019), advisor for the Center on Multi-Tiered System of Supports and the National Center on Intensive Intervention (NCII), found that the shift from RTI to MTSS became unintentionally synonymous with special education, and MTSS was for all students. While numerous RTI frameworks include these supplementary elements of student achievement for all, several state education departments are starting to embrace MTSS (Sailor et al., 2020). Additionally, MTSS is more comprehensive than RTI and has become the priority in federal guidance and messaging (Bailey, 2019). The spirit of the original purpose of RTI became lost. Therefore, a rebranding

was necessary. For the research portion of this dissertation, RTI and MTSS are synonymous; however, in practice, MTSS will be used exclusively in Chapters 3, 4, and 6 in this action research dissertation.

Response to Interventions

History and Structure of Response to Interventions

Response to Interventions (RTI) elements have been long-lived in public education since the 2001 Individuals with Disabilities Education Act (IDEA), with aspects of RTI being mentioned in research as early as the 1980s (Braun et al., 2020). RTI intends to evaluate student needs by reviewing data and providing interventions for students, with progress monitoring to support students at the skill deficit level (e.g., reading comprehension, mathematical reasoning) (Bahr et al., 2023). RTI was designed for schools to find interventions that support learning and not quickly identify students with misdiagnosed cognitive disabilities (Oslund et al., 2021). High school educators heavily relied on middle and elementary school educators to provide RTI services and structures to students before they reached high school (Kressler & Cavendish, 2020). Hence, the disconnect of implementing MTSS/RTI in the high school setting (Savitz et al., 2022).

The processes within RTI have been a part of many educational reform initiatives (Bouck & Cosby, 2019). However, more research needs to be done on RTI in the secondary setting (Bouck & Cosby, 2019). Thomas et al. (2020) found that the MTSS annual program evaluation and RTI implementation at elementary schools were rated higher than in secondary schools. Thomas et al. (2020) concluded that differences within the study evaluation process were likely due to the unique infrastructural challenges faced by secondary schools. Many secondary

teachers need to gain professional knowledge to support students with various academic challenges and are at risk (Kressler & Cavendish, 2020).

In 1999, regulations to the Individuals with Disabilities Education Act (IDEA) required states to use a discrepancy formula when determining if a student had a learning disability, followed by interventions and data-based documentation (Yell & Walker, 2010). In 2001, when the United States Congress was preparing for the 2004 reauthorization of the IDEA or Individuals with Disabilities Education Improvement Act (IDEIA), the focus was identifying and intervening student learning deficits early, simplifying the process of progress monitoring, and incorporating Response to Interventions (Yell & Walker, 2010). Schools nationwide have increasingly implemented RTI, and many states legally require RTI, especially in treating at-risk students (Oslund et al., 2021). Schools were to allocate some of their IDEA funds to school-wide early intervention and prevention services (Yell & Walker, 2010).

Robinson (2022) focused on the federal response to equity during the COVID-19 pandemic. He defined equity as “focusing on distributing resources and educational opportunities to address students’ needs rather than distributing them based on race, class, national origin, and zip code” (Robinson, 2022, p. 41). Through the equity lens, momentum toward RTI was built upon growing concerns about the overrepresentation of students of color receiving special education services (Sabnis et al., 2020). The RTI equity perspective minimizes biases by tying instructional or placement-related decisions to objective data instead of potentially biased subjective judgments made by educators (Sabnis et al., 2020). Even though RTI and MTSS are equity-focused, school leaders must consistently evaluate the needs of each student (Eagle et al., 2015). Thorius et al., (2014) acknowledged the complex social dynamics implicated in translating policy into practice, specifically RTI.

Response to Interventions (RTI) is widely known and a core school improvement practice at the elementary level, grades K-5. However, there is still a need for RTI to support students in the middle and higher grades struggling with literacy (Arden et al., 2017). Only 34% of eighth graders nationally are proficient at reading (Savitz et al., 2022). There is consistent data that shows performance gaps across student groups, including 15% of Black students, 22% of Hispanic/Latino students, 20% of students eligible for free/reduced lunch, 9% of students with disabilities, and 4% of English learners reading at grade level (Savitz et al., 2022). In the past three decades, there has been a considerable increase in eligible students for special education services (Safari et al., 2020). Although RTI/MTSS has existed in policy for decades, implementing the practices of RTI has not slowed down the referrals to special education—many of those referrals are of minority students (Safari et al., 2020).

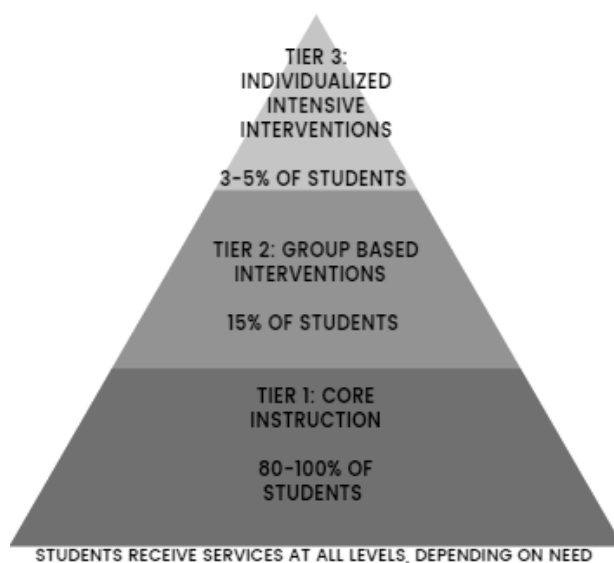
RTI incorporates three standard components: (a) multiple tiers of instruction, (b) evidence-based instruction, which includes data-based decision-making, and (c) systemic collaboration and coordination of schoolwide resources (Dougherty Stahl et al., 2013). Data-based decision-making is critical to successfully implementing the RTI model (Oslund et al., 2021). Leaders and educators must understand data and make mid-course corrections to intervene when students need academic support. Espin et al. (2017) included graph literacy and data analysis as critical professional skills for moving students through a multi-tiered intervention system, such as MTSS. Problematically, secondary teachers have difficulty understanding the components of MTSS and RTI for students with academic skill gaps (Savitz et al., 2022)

RTI encompasses three tiers: Tier 1, Tier 2, and Tier 3. Tier 1 includes all students, and approximately 80% of them should be successful with high-quality Tier 1 strategies. Tier 2

focuses on Group Based Interventions. These interventions follow when Tier I instruction is unsuccessful; students with similar deficits are grouped and receive supplementary support to Tier 1 instruction. Tier 2 should be roughly 15% of the student population benefiting from strategic interventions. Tier 3 is individualized intensive interventions to support specific deficits and include progress monitoring probes, with 3%-5% of the students benefiting from intensive interventions (Sabnis et al., 2020). Figure 2.1 visualizes the RTI-tiered support structures. The RTI triangle model conceptualizes the weight of tiered supports needed for a school population. Percentages of students within each tier may vary by school.

Figure 2.1

RTI Tiered Supports Triangle Model



Note. Adapted from Georgia Department of Education Tiered Systems of Support (2024)

Data-Based Decision-Making within Response to Interventions.

All students must receive quality Tier 1 instruction (Berkeley et al., 2020). An adverse effect of poor RTI implementation is that school staff remove students from Tier 1 instruction for interventions, resulting in adverse effects on the academic growth of students (Berkeley et al.,

2020). Bouck and Cosby (2019) employed a mix-methods research study that concluded an inconsistent growth rate of students receiving Tier 2 support and a statistically insignificant relationship between students in Tier 2 and Tier 3 in a high school math setting due to poor progress monitoring implementation and the removal of students in Tier 1 instruction. All students require high-quality Tier 1 instruction within the MTSS framework (Bouck & Cosby, 2019). Interventions are additions to Tier 1 instruction instead of exclusively being a replacement for effective daily Tier 1 instruction (Berkeley et al., 2020).

The MTSS framework relies on data-based decision-making and continuous improvement to enhance teaching and learning (Burns et al., 2016). “A well-developed MTSS allows schools to solve less severe problems through general education while more complex problems are addressed via intensive or targeted interventions, thereby avoiding costly investment in competing initiatives” (Bahr et al., 2023, p. 91). MTSS places value on the importance of equity and resource allocation and correctly placing students with the correct intensive intervention (Bahr et al., 2023).

When reviewing local school data and national trends, there is a strong call from many stakeholders to eliminate the achievement gap (Benner et al., 2013). Savitz et al. (2022) stated, “There is currently no systematic research into how RTI is structurally implemented at the middle and high school level with a national sample. States often provide inconsistent or vague guidelines for RTI implementation, preferring to leave details to individual districts and schools” (p. 20). The researcher partly designed this action research study to provide other large suburban schools with ideas for implementing RTI components through MTSS. Schools must be able to review student data promptly and make effective data-based decisions to drive student

achievement (Oslund et al., 2021). Flannery et al. (2020) studied the implications of practice and called for targeted data teams at the high school level.

The use of student data to drive instruction predates the RTI model. Public Law 94–142, the Education for All Handicapped Children Act, was passed in 1975 and had specific language for reviewing student data to make decisions on services. The Education for All Handicapped Children Act identified the need to evaluate educational achievement among at-risk children (Wesson et al., 1984). Research showed that professional development is needed to equip teachers with the appropriate tools and strategies to use data effectively to assess student needs regardless of the content area or grade level (Oslund et al., 2021). Schiller et al. (2020) analyzed RTI implementation in 21 states. They found that 61% of those states monitored whether schools or districts used progress monitoring data to determine whether a student responded to interventions (Schiller et al., 2020). Although time, resources, and student achievement are on the line, the ability to measure the effectiveness of RTI still needs to be improved (Schiller et al., 2020).

RTI, a component of MTSS, is a collaborative effort between all stakeholders and does not operate efficiently in isolation between initiatives and school personnel (American Institutes for Research, 2021). Data sets are critical for determining academic needs, such as universal screeners, diagnostic assessments, formative and summative assessments, teacher expertise, and classroom observations (Savitz et al., 2022). Progress monitoring is vital for schools to evaluate if the interventions implemented by teachers are effective for students (Fuchs & Fuchs, 2017).

If the intervention needs to address an academic deficiency, changes should be made instead of continuously providing an intervention that could be more effective (Fuchs & Fuchs, 2017). Many school districts nationwide have policies, mission, and vision statements that call

for equity; however, it seems disingenuous to stake a claim to supporting all students without making data-based decisions that provide equitable learning experiences for all students (Buffum et al., 2011). RTI, if done correctly within the MTSS framework, answers the call for equity (Sabnis et al., 2020). RTI safeguards that students are given what they need and that it works.

Legal Components of Response to Interventions

The lower Federal District Courts heard cases conducted by the lower Federal District Courts addressing RTI components. However, the Supreme Court had yet to oversee cases related to RTI (Yell & Walker, 2010). IDEIA shifted toward preventative measures and away from reactionary measures of waiting when a student fails to become eligible for special education (Yell & Walker, 2010). Under IDEIA, RTI provides students with an appropriate intervention to meet student needs instead of providing students with accommodations and modifications before research-based interventions.

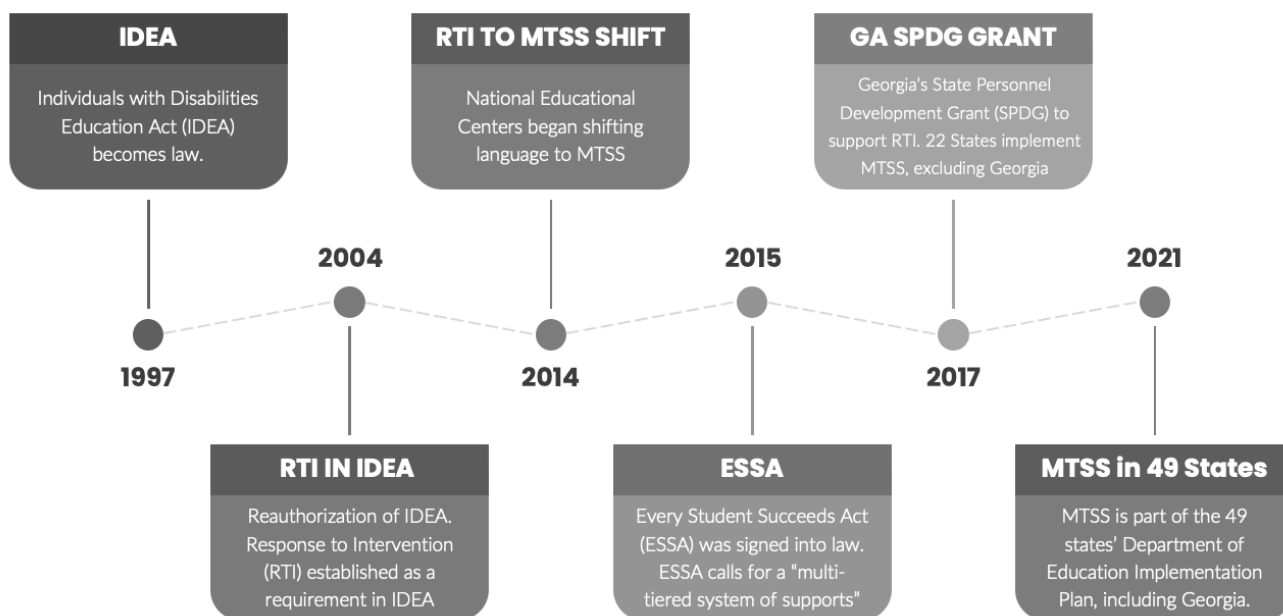
The need for interventions is supported by the *Marshall Joint School District No. 2 v. C.D. case* (2009). The United States District Court for the Western District of Wisconsin ruled that even though a student performed on the same level as his peers after receiving modifications in the general education classroom, this did not release the school from its responsibility to provide interventions and conduct an evaluation for appropriate services. In IDEIA and the 2006 regulations, the United States of America Congress and the United States Department of Education emphasized the importance of identifying students with academic and behavioral problems early on so that educators can intervene using research-based strategies and procedures (Yell & Walker, 2010). Early interventions do not entirely mean younger grade levels. Early interventions imply that when a teacher notices a skill deficit, the school or agency should

intervene quickly. Hence, RTI is strongest at the elementary level and lacking at the secondary level (Savitz et al., 2022).

Policymakers, state-level, and district-level administrators need to be creative in funding the appropriate resources and training educators to effectively provide instruction within RTI, particularly in areas of Tier 2 and Tier 3 interventions (Thomas et al., 2020). The 2015 reauthorization of the Elementary and Secondary Education Act (ESSA) and IDEIA call for local school districts to implement tiered supports. However, the resource allocation to address student needs could be more extensive within the public school setting (Savitz et al., 2022).

While ESSA does not use the acronyms RTI or MTSS, it references the *multitier system of support* five times in the bill (Berkeley et al., 2020). Federal legislation and state initiatives have also provided definitions of MTSS. ESSA defined a multitier support system as “a comprehensive continuum of evidence-based, systemic practices to support a rapid response to student's needs, with regular observation to facilitate data-based instructional decision making” (Howley et al., 2023, p. 7). The local school context to RTI differs vastly across the county (Savitz et al., 2022). Some state policymakers reluctantly provided specific RTI program guidance for local school implementation; thus, schools are conceptualizing and executing principals of RTI differently across the nation (Berkeley et al., 2020).

Figure 2.2 summarizes the RTI section of the literature review as a timeline of research-based tiered intervention implementations in the state this study occurred, including the 1997 federal law Individuals with Disabilities Act (IDEA) to the 2021 launch of MTSS in the state.

Figure 2.2*Research-based Tiered Interventions Timeline*

Note. Adapted from the State Department of Education Tiered Systems of Support (2024).

The next section of the literature review will address research surrounding post-secondary readiness and the multi-level prevention system within the high school setting.

High School Post-Secondary Readiness

Post-secondary Readiness

A Multi-Tiered System of Support for the high school setting meets the needs whole child needs of students by providing timely interventions for students to graduate (Pate et al., 2022) while supporting the students' post-secondary goals. The job market shifted from 72 percent of the jobs filled by candidates with a high school diploma or less in 1972 to only 34% in 2016 (Bottoms, 2022). The need for students to be prepared for post-secondary readiness is critical; however, students must complete high school for many post-secondary opportunities.

The role of MTSS in schools is to provide students with the correct resources and tools to meet their needs and who are prepared with the appropriate skills to be successful (Savitz et al., 2022). Bottoms (2022) stated, “From a high school perspective, our failure to reduce the flow of poorly prepared graduates will hamper many young people for the rest of their lives and hurt their chances of attaining good jobs” (p. 11). Royster et al. (2015) proposed that schools should expose all students to rigor and design curriculum in a backward manner, in which the curriculum is assessed in the upper grades that prepare students for post-secondary readiness, then the prerequisites in the lower grades to prepare students for rigors course work. Royster et al. (2015) highlight the importance of access and opportunity to high-quality Tier I instruction. The need for schools and course team leaders to provide appropriate interventions when students have not mastered the standards is the work of all (DuFour & Reeves, 2016).

All students should be exposed to a highly viable curriculum (Murphy et al., 1982). Supporting the need for high rigor for all students, Bottoms (2022) stated the following,

“Low standards send the message that the school does not see a compelling need to change, does not believe most students can meet high higher standards, and has not seriously thought about—or been willing to embrace—the breakthrough changes in school and classroom practices needed to help more students meet standards” (p. 15).

The structure of MTSS in high school is critical in ensuring all students have access to and the support needed to support academic deficits (Safari et al., 2020). MTSS can be a tool to bridge the equity gaps of post-secondary readiness for many underrepresented populations (Hines et al., 2021). Furthermore, Hines et al., 2021, found that black students historically have had adverse schooling outcomes that narrow their chance to access a variety of postsecondary opportunities.

Equity and Dropout Prevention

When school staff do not meet student academic needs, students struggle to keep up with the curriculum, and in return, the likelihood of a student dropping out of high school increases (Savitz et al., 2022). A student who graduates from high school with a mastery of essential skills and core content knowledge has a good chance of successfully competing in the global marketplace and increased income compared to students who have dropped out of high school (Rose & Bowen, 2021). Conversely, students who drop out of school are at greater risk of poverty, welfare dependency, incarceration, and early death (Buffum et al., 2010). Bottoms (2022) suggested that a failure to reduce the flow of poorly prepared graduates will harm their lives by lowering their chances of good jobs.

Early identification and exposure to interventions in high school support students in graduating on time with their cohort (Pate et al., 2022). The 9th-grade year is the most significant indicator of student success in high school (Lowder et al., 2022). Unfortunately, there is no single model for dropout prevention; however, the RTI process can serve as a framework for dropout prevention (Durrance, 2023). Empirical research suggests that early identification, structural reorganization to meet the needs of students, and innovative instructional practices are critical for intervention reform efforts (Balfanz et al., 2004; Christenson & Thurlow, 2004 and Ecker-Lyster & Niileksela, 2016).

The transition from middle to high school can be challenging for many students, and how well a student adjusts academically is a vital indicator of their academic success (Lowder et al., 2022). Students experienced grade-level promotion before high school. Once in high school, students must retake graduation-required courses and continuously take them until they have earned the credit or drop out of school. Vinano (2021) stated, "Failing courses in high school is,

by design, a key barrier preventing many students from graduating because state-level policies typically require a certain number of credits to graduate” (p. 31). MTSS structures allow educators and leaders to evaluate their system of supports to eliminate the barriers surrounding course failures (Durrance, 2023).

Academic deficits or low levels of perceived academic control are psychosocial determinants of dropout intentions (Samuel & Burger, 2020). The decision to drop out of high school is a gradual process, and the final decision is a combination of events that lead to diminishing school engagement (Samuel & Burger, 2020). The findings from Flannery et al. (2020) supported that MTSS implementation prevents high school students from dropping out by fostering student engagement and academic achievement for all students.

High School Multi-Level Prevention System

Multi-Tiered System of Supports

Elements of MTSS have been throughout the public school framework since the 2001 Individuals with Disabilities Education Act (IDEA), with components of progress monitoring being mentioned in research as early as the 1980s (Braun et al., 2020). The framework for MTSS changed from monitoring students with disabilities to supporting all students with evidence-based interventions and guiding schools in making data-based decisions (Cusumano & Preston, 2022). Additionally, the ESSA calls for expanding a Multi-Tier System of Supports (MTSS), including successfully implementing a Multi-Tiered System of Support in schools with effective interventions and progress monitoring (Braun et al., 2020). The literature suggested that MTSS was a critical component of federal law for nearly two decades (Braun et al., 2020). The components of MTSS and the implementation of meaningful, sustainable systems are complex.

MTSS calls for an evidence-based program, effective implementation of practices, and an interdisciplinary approach (Eagle et al., 2015).

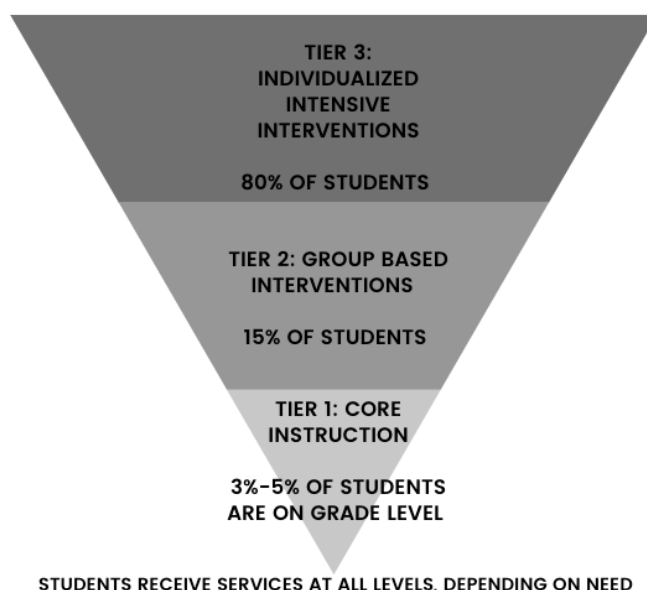
The literature visually represented MTSS as a triangle with tiered levels of support, similar to the RTI triangle in Figure 2.1. MTSS adds multiple-tiered models, e.g., triangle models and braided rope visual representations connecting to whole-child learning. Tier 1 represents strategies that adequately support 80% of the students within a school. Students who need additional supplemental support make up 10%-15% of the student population in the Tier 2 support category. The remaining 5% of students requiring intensive individualized support need Tier III interventions at the skill deficit level (Charlton et al., 2018). MTSS places multiple tiers of support for students. For example, a student may have a Tier 2 need for social-emotional wellness, needs acceleration for mathematics at the Tier 1 level, yet may require an individualized structured literacy intervention at the Tier III level.

MTSS programs look very different at each school due to logistical challenges and staffing availability (Durrance, 2023). When educators observe the characteristics of Tier I instruction, the instructional strategies are implemented to meet the needs of most students within the school settings (Berkeley et al., 2020). When schools evaluate the data, which suggests that many students are not successful at the Tier 1 level, there is an opportunity for strategic school-wide Tier I support as the foundation of MTSS infrastructure (Sutherland et al., 2023). Findings from the research suggested that successful implementation of MTSS requires the knowledge of data-based decision-making, suitable professional development, impactful leadership, and a team that works collaboratively to improve academic deficiencies for all students (Safari et al., 2020). Data tell a descriptive story of the needs within a school building (Zepeda, 2019).

An upside-down triangle suggests that most students need interventions, and the smallest population of students in need are on or above grade level (Jimenez, 2023). The upside-down phenomenon illustrated in Figure 2.3 is not an intervention opportunity for most students at a school. The literature overlooks teacher involvement in Tier I support as students spend most of their time in the classroom. Sutherland et al. (2023) supported this oversight by indicating that only a few studies have examined the effectiveness of Tier 1 mathematics programs. Charlton et al. (2018) acknowledged that teachers are not solely the prescriber of instruction and interventions but should have a critical voice in RTI, the Academic Press component of MTSS.

Figure 2.3

Upside Down Triangle-A Vast Majority of Students Need Tier 2 and 3 Supports.



Note. Adapted from Georgia Department of Education Tiered Systems of Support (2024)

Cultural Context of Multi-Tiered System of Supports

School climate and culture are critical for school improvement. The culture in a school creates the day-to-day climate (Buckman et al., 2021). MTSS is a model for school improvement; therefore, cultural factors influence the implementation of MTSS within a school.

Climate and culture become considerations for determining factors in school improvement initiatives (Buckman et al., 2021). MacNeil et al. (2009) conducted a study and found that school climate had statistical significance in improving the school and academic success.

Although MTSS and its components have been in schools for a few decades, the learning loss or learning inequities within the COVID-19 pandemic, as well as the rise of organized social and racial justice advocacy groups such as Black Lives Matter (BLM), exacerbated the need for a multi-tiered system (Tillery et al., 2022). Cultural factors outside of school walls enhanced and became another element of the K-12 cultural context. Every student group was affected by the COVID-19 pandemic and the cultural challenges that arose during the early 2020s (Tillery et al., 2022). The most vulnerable student groups, which include individuals of color, individuals who live below the poverty line, and individuals with disabilities, have faced more significant challenges, which the pandemic exacerbated (Schleicher, 2020). Children who were already behind post-pandemic became further behind. The need for MTSS became a focal point in many high schools nationwide (Tillery et al., 2022).

There must be a cultural shift within schools to prevent MTSS from becoming another mandated initiative but instead the daily work of using data to support students (Durrance, 2023). Durrance (2023) continued, “Before focusing on academic intervention, consider that a school can’t provide Tier 2 or 3 intervention to most students” (p. 7). Instead, MTSS should be integrated into all school improvement initiatives and educational best practices to improve student learning outcomes (Arden & Benz, 2018). Problematically, tiered supports have been considered something that school staff should address in the earlier grades and not needed within the high school setting (Savitz et al., 2022). MTSS at the secondary level requires teachers who are by default skilled in their specific content area to differentiate their content and provide

interventions, often without the appropriate training (Savitz et al., 2022). Educators understand that the need and the urgency to give interventions are apparent; however, MTSS research within the secondary setting is in its early stages (Savitz et al., 2022).

The components of a Multi-Tiered System of Supports (MTSS), such as RTI, have been a part of the instructional culture in elementary and middle school settings; however, RTI is an unfamiliar instructional structure in high schools. Bohanon et al. (2021) believed that everyone involved in MTSS should see the connection between their work and school improvement and mentioned the need for more research to focus on MTSS and school improvement. Bouck and Cosby (2019) and Bohanon et al. (2021) implied the need for job-embedded professional learning to implement RTI at the high school level (Bohanon et al., 2021).

More guidance and research are needed to identify how to design and implement MTSS in a high school setting (Bohanon et al., 2021). A common theme among studies is the barrier of scheduling conflicts on required graduation credits (Venghaus et al., 2023). Educators in the high school setting have a complex dilemma: educate to remediate graduation required courses or intervene at the skill deficit level (Savitz et al., 2022).

Leadership to Support Multi-Tiered System of Supports

Multi-Tiered System of Supports in Secondary Schools

MTSS Academic Press is a framework for school improvement (Murphy et al., 1982). Freeman et al. (2015) deconstructed MTSS into three main infrastructural components: data, practices, and systems. As an organization, it is essential to use multiple data points. Freeman et al. (2015) determined that schools rely on data management systems to collect and summarize data for decision-making. Additionally, educators must use evidence-based practices to guide the prescription of student remediation, interventions, or acceleration opportunities (Durrance,

2023). Finally, leaders should emphasize the infrastructure and processes that lead to data-based decision-making within a school (American Institute for Research, 2021). School officials should view MTSS as something other than an education reform initiative that will go away or another duty that a counselor should be over (Goodman-Scott & Ziomek-Daigle, 2022). Patrikakou et al. (2020) considered MTSS the largest educational reform initiative in recent history. MTSS provides a framework for the support needed to ensure students succeed and maximize their learning potential (Howely et al., 2023).

A leadership belief supported by literature is that leaders must have all the skills to operate a school effectively (Marzano, 2005). The principal or assistant principal should engage in instructional conversations and manage how they use staff members to support student learning (Grissom et al., 2021). Marzano (2005) supports these leadership characteristics in his work with leveraged leadership. Eagle et al. (2015) highlighted that the ultimate decision-making authority in a school building is the principal. Precisely, allocating resources, space, time, and personnel impacts the potential buy-in of staff toward MTSS initiatives (Eagle et al., 2015).

School climate, which school leaders highly influence, can positively correlate to student academic success (Buckman et al., 2021). The literature suggests that the principal is responsible for an adequate MTSS infrastructure within their local schools (Grissom et al., 2021). Through leveraged leadership, the principal can strategically design an MTSS Infrastructure Team with appropriate professional development support and processes to implement MTSS with fidelity (Bohanon et al., 2021). Eagle et al. (2015) continued, “District- and building-level administrators are in positions that can enhance MTSS implementation and provide structures within school schedules and personnel that can assist the sustainability of systems-level change” (p. 166).

All school improvement initiatives take time and detailed monitoring strategies to evaluate the design process (Bohanon et al., 2021). One study that looked at using implementation science to develop an MTSS program at Secondary Schools established six stages to this work: (1) Exploration and Adoption, (2) Program Installation, (3) Initial Implementation, (4) Full Operation, (5) Innovation, and finally (6) Sustainability (Bohanon et al., 2021). Bohanon et al. (2021) concluded in a case study that the catalyst for school improvement came from the implementation science used to develop MTSS at their local school.

A constant theme in the research of Bohanon et al. (2021), Thomas et al. (2020), and Zepeda (2019) all showed a sense of urgency for the professional development of staff to improve student outcomes. Braun et al. (2020) conducted a case study with a school in the initial implementation phase of another study with similar findings on professional development. The emerging theme of the study by Braun et al. (2020) was the need for more professional development to support struggling learners. Additionally, teachers need more clarity and consistency from district and school leaders. Bohanon et al. (2021) and Braun et al. (2020) studies have a clear theme: MTSS and school improvement happen when leaders make the right moves.

Whenever district or school leaders decide to adopt MTSS as a framework for school improvement, leaders must take cultural controls that ensure the vision of school improvement guides their efforts (Bohanon et al., 2021). The three essential components of a successful MTSS infrastructure are competency, organization, and leadership (Freeman et al., 2015). In educational leadership, implementation science, improvement science, and action research are standard methodologies for addressing the challenges leaders encounter (Bryk et al., 2015). As

leaders try to support school staff, a self-reflective element must be constant and consistent within the organization.

School districts implemented components of MTSS because of the 2015 Every Student Succeeds Act (ESSA), which encouraged schools to use school-wide supports to improve student outcomes for academics and behaviors (Bohanon et al., 2021). MTSS interventions positively impact the learning outcomes for high school students; however, the literature may benefit from additional research to connect MTSS in secondary schools to the efforts the organization makes toward improvement (Bohanon et al., 2016). Bohanon et al. (2016) focused on the model of school improvement by design by addressing the contextual factors during the implementation of school improvement. The three contextual factors are cultural, procedural, and professional workflow controls connected to the Activity Theory (Bohanon et al., 2016).

Cultural controls are strategies that guide the mission and vision of the school in implementing improvement plans (Bohanon et al., 2016). Bohanon et al. (2021) provided the example that the belief that all students have the correct system of supports should guide the work of the staff. Procedural controls involve the managerial and operational procedures of the organization. For example, suppose a school focuses on social-emotional learning (SEL), emphasizing academic achievement. In that case, the school will have a team developing the SEL lessons and creating an implementation schedule. Professional controls support the improvement plan workflow (Bohanon et al., 2021). Related to the SEL example, professional controls allow schools to monitor the effectiveness of the implementation plan.

Academic Press

Murphy's (2016) School Improvement Equation described the equation as simple and eloquent, with *Academic Press* and *Supportive Community* being the main components of school

improvement efforts. Academic Press is defined as the structure and policies that promote behaviors of educational achievement. A supportive community is a structure that provides students with a sense of care, belonging, safety, and support (Murphy, 2016). The Academic Press component is the focus of this action research study. Murphy et al. (1982) described Academic Press as “the degree to which environmental forces press for student achievement on a school-wide basis pulls together various forces-school policy, practices, norms, and rewards generated by both staff and students” (p. 22).

To support the Murphy et al. (1982) description of Academic Press, Lee et al. (1999) observed that “Academic Press focuses on the extent to which school members, including teachers and students, experience a normative emphasis on academic success and conformity to specific standards of achievement” (p. 10). Earlier findings of concepts of Academic Press that have influenced recent research include McDill et al. (1986) and Natriello and Dornbusch (1984), whose research was driven by academic pressure and classroom environments that prevent high school graduation rates. The relevance of mentioning McDill et al. (1986) and Natriello and Dornbusch (1984) in 2025 is that the quest to support students academically and prevent high school students from dropping out is still the premier work of high schools nationwide.

Bouck and Cosby (2019) found that two essential components must be met to implement RTI successfully in the high school setting. First, school leaders must provide teachers with clear guidance on implementing research-based interventions. Second, the infrastructure must provide guidance, fidelity checks, and continuous quality improvement. The forces that Murphy et al. (1982) identified as influences on the Academic Press supported these tenets. Flannery et al. (2020) also endorsed Bouck and Cosby (2019), stating:

“MTSS provides a framework for schools to implement evidence-based interventions as they supply (1) systems needed for initial and sustained implementation, (2) guidance in the selection and implementation of practices that match the needs of the school, and (3) systems for using data to identify areas of concern and guide decision-making regarding interventions” (p. 88).

Specifically, Bouck and Cosby (2019) highlighted the need for guidelines and research on MTSS at the secondary level. Schools should be able to evaluate MTSS using different research models that contradict their own; however, there needs to be more research on other MTSS implementation models at the high school level (Bouck & Cosby, 2019).

Murphy et al. (1982) indicated that five broad teacher behaviors contributed to Academic Press within the classroom: (1) creating an academically demanding climate, (2) having a well-managed classroom. (3) making student success non-negotiable, (4) implementing instructional practices that ensure student academic success, (5) providing opportunities for students to get involved with leadership opportunities and responsibility. Murphy et al. (1982) believed teacher behaviors are critical for successful student achievement within all MTSS tiers. It is the responsibility of school leaders to cultivate these behaviors in teachers.

Leadership Models and Theories to Support Multi-Tiered System of Supports

“Schools wanting to provide tiered interventions need a clear vision, time to build capacity, and an investment in ongoing training and resources” (Savitz et al., 2022, p. 38). Grissom (2021) acknowledged that school leadership matters and the following four characteristics support student outcomes. These behaviors include engaging in instructional focused interactions with teachers, building a productive school climate, facilitating collaboration and professional learning communities, and managing personnel resources

strategically (Grissom et al., 2021). These components can also be found in the American Institutes for Research (AIR) (2021) Multi-Tiered System of Supports Fidelity of Implementation Rubric.

The American Institutes for Research (2021) Multi-Tiered System of Supports Fidelity of Implementation Rubric called for leaders to have the “knowledge, resources, and organizational structures necessary to operationalize all components of MTSS in a unified system to meet the established goals” (p. 11). Transformational leadership stresses the need to understand and adapt to the needs and motives of people within the organization (Brazill & Ruff, 2022). The MTSS model serves as the structural component to ensure that students have what they need to thrive, school leaders support teachers in promoting acceleration, remediation can occur, and the community can offer support by providing students with wrap-around services for non-instructional needs.

MTSS is a model for schoolwide improvement and a mechanism for continuous improvement cycles for all stakeholders involved (Bohanon et al., 2021). There is a growing body of research to understand the interconnections of school improvement and MTSS (Choi et al., 2019). However, a research gap exists on school-wide MTSS initiatives supporting improved student outcomes, especially at the secondary level (Bohanon et al., 2021). Jimerson et al. (2016) stated, “The biggest single barrier to secondary MTSS implementation is a confused or unclear purpose” (p. 564).

It is up to the school administration to facilitate its vision and the factors that influence the school in meeting its goals (Grissom et al., 2021). Durrance (2023) indicated that case studies and exemplars that offer specific guidance for school leadership need to capture the challenges of MTSS. Bahr et al. (2023) stated, “MTSS is necessary because schools need to promote

accountability, engage in continuous improvement, and foster improved student outcomes” (p. 96). Due to the complexity of MTSS and the lack of research on MTSS in the secondary setting (Bohanon et al., 2021), this action research study addresses the need to add qualitative data to the literature via a case study conducted within the secondary education context.

Continuous Quality Improvement

Schools operate at a very complex level, and all have similar interconnections to everyday work challenges (Bryk et al., 2015). Bryk et al. (2015) recognized that educators learn so much in their day-to-day work; however, there must be more opportunities to organize, refine, and communicate the lessons learned. Leaders are figuring out how to navigate the challenges of creating an infrastructure to support inclusive learning through MTSS and learn from other schools with similar areas of concern. If a strong network improvement community (NIC) existed, best practices and lessons learned would be shared more effectively (Bryk et al., 2015). Bryk et al. (2015) observed that network opportunities allow its members to examine comparative experiences to inform continuous improvement. Supporting this research, Tichnor-Wagner et al. (2017) focused on constant improvement using an improvement model that works to scale. The research of Bryk et al. (2015) and Tichnor-Wagner et al. (2017) focused on who makes it work, what is working, and what conditions make it work, which can support the MTSS infrastructure of a school.

Establishing a solid MTSS infrastructure takes time. MTSS implementation is about getting the right people to address exemplary work under proper conditions (Bohanon et al., 2021). A vital leader move is to include families and other stakeholders in problem-solving. Parents can come up with observations and perceptions that can help schools make informed decisions that school data may not capture (Weingarten et al., 2020). MTSS involves finding

multiple avenues to support students. Therefore, involving all adults who impact students in the decision-making process is critical. Although parents may not be a part of school-wide decision-making, all stakeholders can make valuable contributions to the MTSS implementation (Bohanon et al., 2021).

Significant changes within large organizations such as school systems require small steps. Tichnor-Wagner et al. (2017) highlighted the importance of having an improvement team that plans change on a *prototype* and studies lessons learned through the Plan-Do-Study-Act (PDSA) cycles. The cycles must be continual to ensure that change can be implemented on a broader scale (Tichnor-Wagner et al., 2017). PDSA improvement cycles can align with MTSS implementation within large school districts. Working in an NIC strengthens the likelihood of ideas surfacing and being systematically examined (Byrk et al., 2015). Instead of putting too much energy into a problem another school previously solved, a proactive effort should be on collaboration and professional development (Byrk et al., 2015).

Continuous improvement research (CRI) models support transformational leadership theory and action research principles. The continuous plan-do-study-act process allows the partitioner to reflect on their practice (Park et al., 2013; Masters, 1995). For example, traditional research primarily focuses on outcomes, and CIR focuses on the process and how to improve (Tichnor-Wagner et al., 2017). The continuous improvement model suggests more effective or efficient ways to improve within the organization (Park et al., 2013). The plan-do-study-act (PDSA) cycle supports creating an MTSS infrastructure. Leaders must *plan* the course of action in response to student data. Next, leaders must *do* the implementation plan and subsequently *study* the data collected from the implementation plan. Finally, leaders must *act* on lessons learned by revising the plan (Tichnor-Wagner et al., 2017). Two critical leadership

characteristics to support an MTSS infrastructure are looking at the interconnectedness of a system and making data-based decisions (Howley et al., 2023).

To lead effectively, leaders must inspire engagement from the people they support by making the work problem of practice specific and user-centered (Bryk et al., 2015). In MTSS, school staff can only accomplish tasks in collaboration, and no single individual possesses the solutions to address the daily challenges children encounter. Zepeda et al. (2023) conveyed, “Leaders go a long way to support empowerment by sharing authority over decisions at the classroom level and promoting teacher input in larger issues such as policy and procedure formulation” (p.15). After reviewing the literature on supporting leadership in the context of MTSS, the next section will delve into teacher agency and self-efficacy.

Teacher Agency and Self-Efficacy

Tier 1 instruction is the foundation of a multi-level prevention system. Students interact with their classroom teachers more frequently than any other adult within the building. Promoting change in culture and continual improvement is only possible by actively involving and empowering the voices and agency of teachers (Zepeda et al., 2023). Teachers must have a voice before having teacher agency (Zepeda et al., 2023). The Quaglia Institute (2020) provides context to self-worth regarding voice within an organization; it entails expressing thoughts and ideas within a framework of trust and respect, giving practical suggestions for the benefit of the collective, and taking accountability not only for words spoken but also for necessary actions.

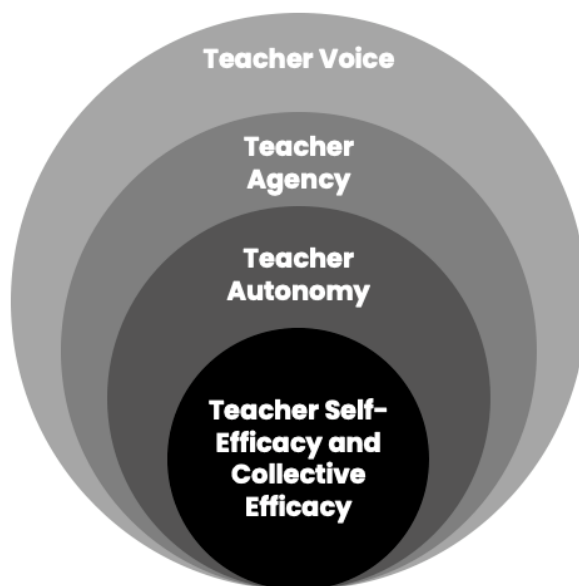
Moving beyond the voices of teachers, promotes schools progressing towards teacher agency. Biesta et al. (2017) perceived agency as teachers “exerting control over and giving direction to their everyday practices, bearing in mind that such practices are not just the outcome of teachers’ judgments and actions, but are also shaped by the structured cultures within which

teachers work” (p. 39). When teachers have agency, autonomy invites empowerment to influence and control their work (Zepeda et al., 2023).

From teacher agency and autonomy, organizations graduate to deeper levels of teacher engagement by creating conditions of teacher self-efficacy. Bandura (1997) positioned self-efficacy as the “belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). Professional development supports the learning ability and the tools necessary to produce results. The individual demonstrated self-efficacy through learning. When a group achieves learning and movement toward a task together, it exemplifies collective efficacy (Zepeda et al., 2023). Zepeda et al. (2023) asserted, “Teacher collective efficacy is essential to building a culture where all students can succeed regardless of factors” (p.17). Figure 2.4 visualizes the sequential factors supporting the idea that the voice of a teacher moves through processes that lead to teacher self-efficacy.

Figure 2.4

Teacher Voice to Collective Efficacy Model



Note. Adapted from Zepeda et al. (2023)

Organizational Learning to Support a Multi-Tiered System of Supports Structure

Organizational Learning and Senge Model

Learning is a lifelong activity (Zepeda, 2019). Bryk et al. stated that organizations must “Engage in systematic tests of change to learn fast, fail fast, and improve fast. Remember that failure is not a problem; not learning from failure is” (p.173). Argyris & Schön (1996) Organizational Learning Theory looked at organizational learning patterns and did not define learning as only a problem-solving phenomenon. Argyris & Schön (1996) recommended that organizations reflect critically on their behavior, identify ways they often unintentionally contribute to problems, and change the behaviors within the organization to improve. The Organizational Learning Theory is critical for school improvement, particularly in creating a viable MTSS infrastructure. Often, leaders look outside for solutions to problems when the answer is within the organization and the people it serves (Bryk, 2015). To support the idea that learning from the inside of the organization is impactful, Musaji et al. (2020) insinuated that when an organization faces failure, the fault must lie with the learners (i.e., leaders or teachers) or the learning process itself (i.e., professional development model or collaboration).

The Fifth Discipline: The Art and Practice of the Learning Organization stressed the significance of organizations only existing within the minds of people who believe and identify with the organization's values, in the case of this action research study, the mission and vision of Magnolia High School (Senge, 1990). Senge (1990) visualized core organizational learning components as a three-legged stool for learning teams, including personal mastery, shared mental models, and system thinking. Robinson (2020) summarized Senge (1990) in describing *personal mastery* as the ability of individuals to learn skills that support the shared vision. *Shared mental*

models are reflective dialogue between members of the team. Systems thinking is understanding complex interconnections and building the capacity to think systematically.

The theories of learning organizations from Argyris (1973) and Senge (1990) are critical for MTSS to thrive. Although their work was done primarily in the corporation setting, the complexity of public education lends itself to operation as a corporation, as innovation must be the core of producing the right product for the consumer (Robinson, 2020). In the case of education, the product is a high-quality, guaranteed educational experience, and the consumers are the students and families whom schools serve (Bryk et al., 2015). Hansen et al. (2020) stated, "Senge's learning organization can be expected to facilitate responsible innovation and, more generally, to identify conceptual or causal links between responsible innovation and the learning organization" (p. 67).

Professional Learning Teams and RTI

Rick DuFour, a pioneer in professional learning communities (PLCs), called for teams to develop their instructional planning and development based on how the team would respond if students had not learned the curriculum (DuFour & Reeves, 2016). DuFour and Reeves (2016) also emphasized the importance of PLCs providing enrichment opportunities when students have mastered the content. The findings from DuFour and Reeves (2016) supported the conclusions Durrance (2023) made about MTSS being for all students, and interventions must be mandatory. It is disingenuous for a school to claim that its mission is to ensure that all students learn at their highest potential yet allow them to choose failure by making interventions optional (Buffum et al., 2011). DuFour and Reeves (2016) emphasized that interventions are not a repeat of unsuccessful teaching but are systematic, intensive individual or small group instruction. In

addition to this acknowledgment, a leader must monitor what happens when students receive an intervention.

Leaders must continually evaluate how effectively PLCs operate at their schools to ensure inclusive practices within MTSS (Cusumano & Preston, 2022). Also, leaders should monitor whether the action items in PLC meetings are being done in the classroom while reducing variability (Zepeda, 2019). Zepeda (2019) called this *the transfer* from PLC to classroom practice. A robust MTSS infrastructure stands on the foundation of the triangle, Tier I instruction, and behavioral supports (Berkeley et al., 2020). Staff needs an instructional framework, professional development, and opportunities to contribute to school improvement (Grissom et al., 2021). The principal is the facilitator of instructional leadership in the building (Zepeda, 2019), which signifies the importance of leader moves and actions for a sustainable MTSS infrastructure.

Zepeda (2019) stated, “Learning to teach is a lifelong pursuit” (p. 14). Teams must learn together. Argyris (1976) crafted the Organizational Learning Theory, including factors that inhibit learning, stating:

“At least two important sets of variables can be altered to increase the effectiveness of learning, no matter at what point the learning is to occur. One is the degree to which interpersonal, group, intergroup, and bureaucratic factors produce valid information for the decision-makers to use to monitor the effectiveness of their decisions. The other is the receptivity to corrective feedback of the decision-making unit—that is, individual, group, or organization” (p. 365).

MTSS does not effectively happen when schools operate in silos (Howley et al., 2023). Effective leadership provides distributed leadership where all team members add voice to the decision-

making process. The American Institutes for Research (2021) suggested that structures, transparent decision-making processes, and sharing the data-based decision-making process with the staff lead to a strong MTSS implementation plan. To make informed decisions, the team must know how to do the required work of MTSS (Bohanon et al., 2021).

Professional Development to Support Interventions

Research tells us that all teachers need ongoing, job-embedded, high-quality professional development (Zepeda, 2019) and a schoolwide commitment to tiered instruction with a consistent structure (Thomas et al., 2020) for MTSS to work at the secondary level. All students come to school with different needs, and student needs are as unique as their fingerprints. Research showed that most teachers receive minimal support in implementing an academic tiered system of supports, and the one-and-done professional development model could be more effective (Thomas et al., 2020).

Data also drives the professional development needs a school should take (Zepeda, 2019). It is up to the leaders to provide the space for data-based decision-making connected to student learning (Grissom et al., 2021). Leadership matters in supporting professional development within a school (Zepeda, 2019). Influential school leaders create the conditions to support a learning culture within a school that promotes solid professional learning and inclusivity (Brennan & King, 2022). Data provides a descriptive story about the success and challenges a school faces within their day-to-day operations (Savitz et al., 2022).

Professional learning, the core of MTSS, should happen organically throughout the school day. Dufour and Reeves (2016) created professional learning communities (PLCs) structures that have been a cornerstone for PLCs. They address the essence of identifying student

needs, providing students with what they need, and ensuring it works for them. Dufour and Reeves (2016) critical questions for PLCs are the following:

- (1) What do we want students to learn and be able to do?
- (2) How will we know they learned it?
- (3) How will we respond when some students do not learn the skill?
- (4) How will we extend the learning for students who are already proficient?

Dufour et al. (2016) proposed that four PLC questions lead to effective learning and planning to support students. One intent of this action research study is to utilize the Dufour PLC questions at the schoolwide level and build interconnections to eliminate departmental silos.

The quest to provide students with interventions through highly effective professional learning is a lifelong learning process (Zepeda, 2019). Research shows the benefits of ongoing professional development and job-embedded coaching to improve problem-solving within an RTI/MTSS model (Sabnis et al., 2020). Bouck and Cosby (2019) and Bohanon et al. (2021) implied the need for job-embedded professional learning to implement RTI at the high school level. Instructional leaders need to lay a firm foundation through the lens of cultural context to improve the implementation of interventions in high school (Bohanon et al., 2021).

Chapter Summary

Multi-Tiered System of Supports (MTSS), through the lens of *Academic Press*, is a framework for school improvement that provides an infrastructure to support each and every student (Murphy, 2016). School and district leaders ensure students grow academically, behaviorally, and socially throughout their K-12 experience (Sabnis et al., 2020). Elements of MTSS may seem new to some leaders in response to the COVID-19 pandemic (Schleicher, 2020); however, the components of MTSS have been in education policy for decades (Braun et

al., 2020). Laws and policies such as the Individuals with Disabilities Education Act of 2004 (IDEA 2004), the No Child Left Behind Act of 2001, and the Every Student Succeeds Act of 2015 (ESSA) required educators and leaders to provide equitable learning to meet the needs of all students (Choi et al., 2019). MTSS within the high school setting had a different context than earlier grades, as post-secondary planning is more prevalent. Bottoms (2022) indicated the need for high-quality access to Tier 1 instruction for post-secondary readiness.

Buffum et al. (2011) implied that it is dishonest for a school to claim that its mission is to ensure that all students learn at their highest potential yet allow them to choose failure by making interventions optional. MTSS is a complex process that evaluates the well-being of students and what interventions or enrichment opportunities students need to thrive (Dufour & Reeves, 2016; Venghaus et al., 2023; Weingarten et al., 2020). Leaders must be strategic in their leadership moves to ensure solid MTSS infrastructure. Freeman et al. (2015) highlighted the intentionality of effective coaching for leaders to facilitate team sustainability, monitor implementation fidelity, and reinforce action plan items. Bryk et al. (2015) suggested that school staff must learn fast and implement well instead of implementing quickly and knowing very little.

In conclusion, all students need the opportunity to succeed (Buffum et al., 2011). The leaders within the school building are responsible for conditions that allow students to succeed (Grissom et al., 2021). Choi et al. (2019) emphasized that educational systems must provide equitable learning experiences for all students. Although implementing MTSS may seem complicated post-pandemic (Tillery et al., 2022), with assistance from principles of improvement science, organizational learning theory, and leadership theories, leaders can make a thoughtful implementation plan to support the academic needs of their students through a solid MTSS infrastructure.

Chapter 3 explains the action research methodology and investigates the basis for further research development, data collection methods, and data analysis techniques to support the study. The next chapter also describes in detail the interventions of this study and a more detailed description of the context and the research methods. Additionally, action research methods and characteristics of qualitative research are discussed in Chapter 3.

CHAPTER 3

ACTION RESEARCH METHODOLOGY

Chapter 3 outlines the action research methodology and the methods employed in this study. The context of the study was described in detail, highlighting its influence on the approaches used for data collection and analysis to align with the study's purpose. This chapter thoroughly examines the contextual setting and articulates the research plan, grounding it in established qualitative research methodologies. Key components of the methodology were addressed, including data sources, data collection methods, interventions, and data analysis approaches. Additionally, measures to ensure trustworthiness, a subjectivity statement, and an acknowledgment of study limitations were presented. Chapter 3 offered a comprehensive framework for understanding the methodological choices and processes that shaped this action research study.

The purpose of this action research study was to investigate leadership strategies and collaborative practices that improve the MTSS infrastructure of a large suburban high school. The goal was to address student credit deficiencies and increase the number of off-track students graduating within their four-year cohort while supporting post-secondary planning. This qualitative action research study included an Action Research Design Team (ARDT) and an Action Research Implementation Team (ARIT).

1. How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?

2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?
3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?

This action research study aimed to analyze effective leadership strategies that supported enhancing a tiered support system infrastructure at a large urban high school. The action research study examined the Magnolia High School MTSS team structures, data-based decision-making practices, and the mid-course corrections that enhanced student achievement. Specifically, the study analyzed the role of the design team and the improvement model that supported the MHS implementation plan, which focused on decreasing the learning deficits of students in the 2025 cohort who were off track for graduation.

The multiplexity of MTSS in schools is a challenge for many leaders, especially those new to the concepts of a multi-level prevention system. The researcher references the Academic Press component of Murphy's (2016) Equation for School Improvement throughout the action research to differentiate the academic structures that support a multi-tiered intervention system. Although elements such as behavior, socio-emotional wellness, and wrap-around services all support the MTSS structure for helping students, those components appeared as secondary components in this action research study.

This study highlighted the importance of having an unbreakable infrastructure to support the work of the MTSS Academic Press. Due to the operational complexity of MHS, servicing over 3,300 students, the study was designed for most urban high schools to learn from the journey MHS took in this action research study. This study explored three critical areas in

supporting the Magnolia High School MTSS infrastructure: 1) Defining and evaluating the academic intervention needs of students, 2) Enhancing an MTSS infrastructure based on data-based decision-making protocols, and 3) Supporting the capacity of leaders and teachers in monitoring the fidelity of interventions and the MTSS infrastructure.

Rationale for Qualitative Research Design

There are two broad categories of research: basic and applied. Primary research involves experiments to gain knowledge in a field of study, while applied research focuses on solving a problem (Glanz, 2014). Additionally, action research can be individual or collaborative, as well as qualitative or quantitative. In short, quantitative research relies on numerical data representing areas such as observational and quasi-experimental (Glanz, 2014). Qualitative data measures socio-cultural phenomena centered on understanding social practices (Kelly, 2023). This action research study focuses on using a qualitative research method. Kelly (2023) stated that qualitative research is needed in the field as “qualitative research is grounded in a set of assumptions about epistemological foundations of sociocultural phenomena that requires approaches open to learning about the relevant phenomena as it is studied” (p. 61).

The very nature of qualitative research explores how people interpret their experiences and develop meaning to their attributions within a specific context of their setting (Merriam & Tisdell, 2016). The constructivist perspective supports the rationale for conducting a qualitative action research study focusing on MTSS as a school improvement model to enhance student learning outcomes and four-year cohort graduation rates. Interpretive research suggests that within the social construct, there is no single reality; however, it is up to the researcher to construct knowledge (Merriam & Tisdell, 2016). Additionally, the qualitative research design

with a constructivist perspective recognizes that each school has an individual cultural construct that drives the unique realities that individuals face within their problem of practice.

A recent qualitative study that included a national sample of nearly 600 school personnel suggested that MTSS is necessary because schools must promote accountability, continuously improve, and foster improved student outcomes (Bahr et al., 2023). Venghaus et al. (2023) also concluded that leaders significantly influence change within their schools. Finally, another qualitative study by Thomas et al. (2020) compared elementary and secondary teachers and found that Response to Interventions (RTI) and MTSS are challenging regardless of the setting or resources available to implement interventions. The study found that RTI can be challenging in the setting due to its unique infrastructure (Thomas et al., 2020). For example, Thomas et al. (2020) found that balancing interventions for skill deficits and graduation required course support, a significant barrier for secondary school leaders. Hence, this qualitative action research study intentionally focuses on improving the infrastructure within the high school setting. Schiller et al. (2020) advised that time, resources, and student achievement are on the line; however, the ability to measure the effectiveness of RTI/MTSS still needs to be improved.

The epistemic perspective of constructivist theory drives this qualitative action research study. The constructivist perspective suggests that reality is socially, culturally, and historically constructed, not universal (Bloomberg, 2023). Regarding student academic supports and interventions, the individualism aspect of students with specific academic support eliminates the potential universal findings of this action research. Within this action research study, the researcher focused on exploring the MTSS infrastructure, which included the actions of individuals, systems, and processes that hindered or supported students graduating with their four-year cohort. The voices and lived experiences of those educators providing support to

students were critical in moving the vital work forward. Therefore, the researcher determined that the qualitative action research methodology method was most appropriate to address the research questions that guided this study.

Overview of Action Research Methods

Action research is a type of applied research within qualitative research. Glanz (2014) stated, "Although action research utilizes less rigorous designs and methodologies than other forms of applied research, its benefits are enormous for the development of educational leaders who use action research and for the school as a whole" (p. 8). Action research allows the practitioner to ask what can be improved to make the organization better and what knowledge is needed to improve as an individual (Glanz, 2014). Action research is a collaborative partnership that allows the researcher, as the primary participant in the study, and other participants to work together to lead change within the organization (Stringer & Aragón, 2021).

Action Research consists of six main steps: reflecting, selecting a focus, collecting data, analyzing the data, interpreting data, and taking action (Glanz, 2014). Figure 3.1 illustrates the action research process and the implementation foundation for this qualitative study. These steps are non-linear and continuous throughout acquiring knowledge. Action research is invaluable for school leaders. Glanz (2014) stated, "Educational leaders who are truly concerned about improving their schools or programs will prioritize their responsibilities and expend appropriate energies toward undertaking some form of action research" (p. 25). The nature of action research is iterative and cyclical, providing a reflective understanding of the practice problem and informing future action (Bloomberg, 2023).

Figure 3.1*Action Research Process*

Note. Adapted by Glanz (2014).

Action research is a collaborative process. The purpose of this study was to reflect on how the actions of teams and individuals contribute to the academic success of students in the 2025 cohort at Magnolia High School and examine the MTSS infrastructure to enhance the theory-to-practice gap and create sustainable programs for years to come. The following section expands on action research and the parameters that impact this qualitative study.

Action Research Design

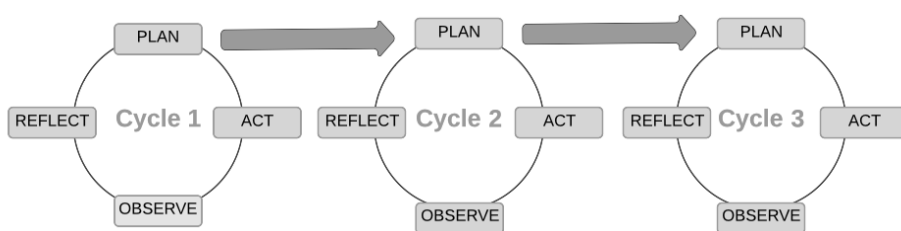
The Spiraling and Iterative Nature of Action Research

Action research was an appropriate methodology for this study as it provided practitioners with a model to effectively collaborate in response to achievement data to address the needs of students responsively. Grundy and Kemmis (1981) demonstrated that action research proceeds in a spiraling cycle of planning, acting responsively, and reflecting. Merriam and Tisdell (2016) indicated that action research is not solely about the participants making meaning of a phenomenon in their practice but to engage in the problem-solving practice.

Glanz (2014) asserted, "Action research is an attempt to provide technical knowledge and prerequisite skills so that you feel more knowledgeable and comfortable in employing research strategies in your daily practice" (p. 33). Action research is critical for educators to evaluate the effectiveness of interventions in cycles to meet the needs of students. Figure 3.2 shows the cycles within the action research model throughout the study, promoted team reflection, and encouraged mid-course corrections to best serve the academic needs of students.

Figure 3.2

Action Research Cycle



Note. Adapted from Glanz (2014).

Logic Model

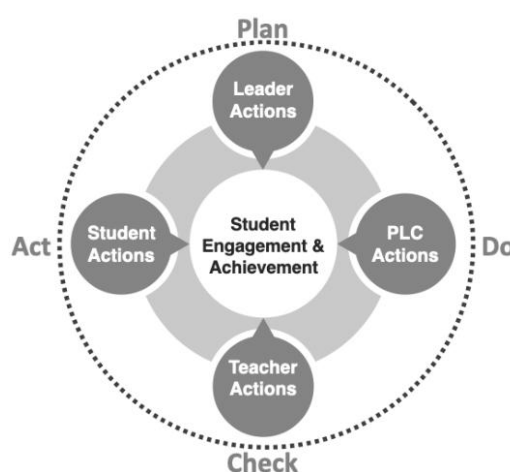
The action research team engaged in several continuous quality improvement (CQI) cycles during the research study, as reflected in Figure 3.2. The team used the Sharkey County Public Schools (SCPS) Model of Action for Improved Student Engagement and Achievement. The continuum starts with leader actions, followed by collaborative learning team actions, teacher actions, and student actions, which lead to student engagement and achievement. Research indicated that high levels of engagement within the high school-aged student populations led to higher levels of academic performance and reduced instances of dropout (Stevenson et al., 2021). The logic model focuses on student engagement and achievement, while the plan-do-check-act principles from Tichnor-Wagner et al. (2017) provide a model for improvement teams.

Specifically, the research team evaluated the specific group actions that led to successful student outcomes. SCPS's original Model of Actions for Improved Student Engagement and Achievement was linear. Figure 3.3 is an edited version of the SCPS model for this action research study. The conceptual edit indicates that all collaborative actions from leaders, teachers, and students influence student engagement and achievement.

The semipermeable circle is representative of the plan-do-check-act; the continuous improvement cycle is an atmospheric feature within the logic model. The inclusion of this feature stems from the understanding that within the actions of individuals and teams, there must be learning and improvement to ensure that the organization gets better. Argyris & Schön (1996) contended that organizations must reflect on behaviors, recognize ways they often unintentionally contribute to problems, and change the behaviors of individuals and within the organization to improve.

Figure 3.3

Sharkey County Public Schools Model of Actions for Improved Student Engagement and Achievement Conceptual Edit



Note. Adapted from Sharkey County Public Schools Division of Teaching and Learning Theory of Change and Tichnor-Wagner et al. (2017).

Qualitative action research is a systematic inquiry to understand practices that empower participants toward collaboration, acquiring new knowledge, and making a change within the organization (Masters, 1995). The purpose of action research is to form a collective self-reflective inquiry of educational practices, develop a deeper understanding of those practices, and analyze the conditions under which these practices are carried out (Kemmis & McTaggart, 1990). In the context of this qualitative action research study, the design team used literature surrounding improvement science, leadership theory, and a Multi-Tiered System of Supports (MTSS) to develop an MTSS infrastructure that supported school improvement.

The Magnolia High School MTSS team participated in implementing Academic Press and the infrastructure to support the academic deficits of students. The design and implementation teams explored how existing MTSS infrastructure supported academic deficits through a comprehensive RTI framework. Throughout the process, the MTSS team used multiple student data points to evaluate the effectiveness of the structures and interventions. Additionally, a deeper analysis of the intervention programs happened to assess whether the intervention supported student academic performance in graduation-required math and literacy courses. The comprehensive evaluation of student support programs drove the team to reflect on how staff served students with their individual academic needs. Masters (1995) suggested that inquiry drives change.

Action research was an appropriate methodology for this study as it provided practitioners with a model to effectively collaborate in response to achievement data to address the needs of students responsively. Grundy and Kemmis (1981) demonstrated that action research proceeds in a spiraling cycle of planning, acting responsively, and reflecting. MTSS is a

framework for school improvement. As different cohorts of students matriculate through high school, their academic and behavioral needs can differ from past cohorts.

The Case

Merriam and Tisdell (2016) defined a case study as an in-depth description and analysis of a bounded system. A bounded system focuses on a *unit*, for example, one particular setting, one particular group of people, and one particular program; this would be the unit of analysis that characterizes a case study, not the specific topic of investigation (Merriam & Tisdell, 2016). The intentionality of the unit of analysis is critical for this action research study, as the quantitative findings highlight the journey MHS embarked on in its quest to use continuous quality improvement methods to better serve the academic needs of students within the MTSS framework.

The context of unit analysis is that the Sharkey County Public Schools (SCPS) strategic plan pushed each school within the district to measure the success of each and every student by evaluating the academic needs and learning what works for the individual student. The MHS motto is '*The Standard of Excellence.*' The building culture of being the standard of excellence is essential as teachers and school leaders strive to continue to improve; however, the graduation rate was consistent, within four percentage points over the last twenty years. This action research provides a case study of implementation that is intrinsically bounded by the actions of the Action Research Design Team (ARDT) consisting of local school and district level leaders and the Action Research Implementation Team (ARIT), which consists of educators from the MTSS Committee.

The specific problem of practice that the ARDT and ARIT identified at Magnolia High School was their interactions, as they understood that the culture of Magnolia High School was

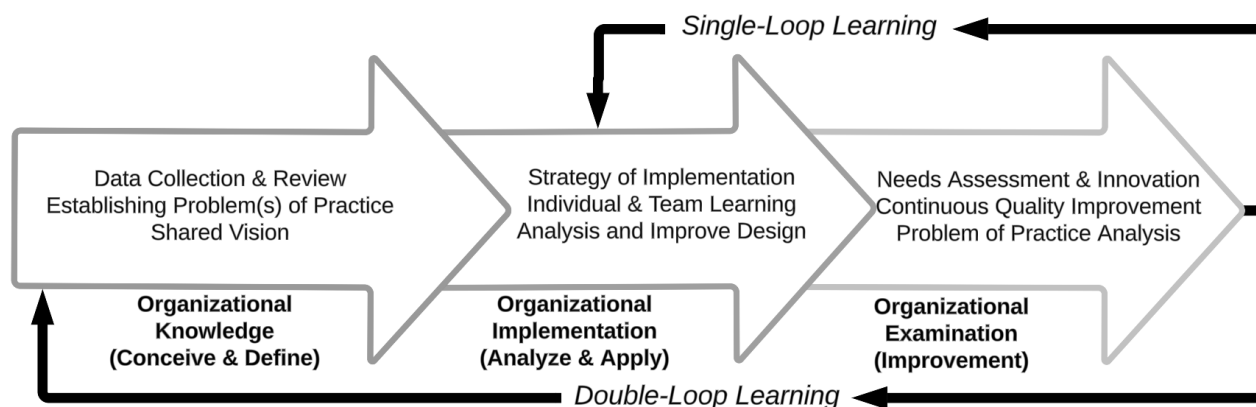
critical for this action research study. Merriam and Tisdell (2016) suggested that context influences social phenomena. The continuous quality improvement (CQI) cycle guided this study as the MTSS team collaborated with various stakeholders to allow students to earn enough credits with academic interventions.

Organizational Learning Theory as the theoretical framework was profoundly relevant to the cultural context of MHS. Over time, the graduation rate remained consistent, which enhanced the need for the organization to learn and evaluate the needs of the students through continuous improvement and innovation. Ertsås and Irgens (2023) determined that for transformation to happen within the organizational learning theory, there was a need for awareness of context-specific theories and transforming those theories into the practice of each educator. When specifically reviewing the theoretical framework of this action research, there was an initial emphasis on how the individual and team conceived and defined the problem of practice before they began implementation.

Loewenberg (2020) found that 90 percent of high schools offer some version of online credit recovery, and online delivery of credit recovery leads to more learning gaps due to the quality of instruction. Throughout the study, the participants recognized that struggling students needed more help (Loewenberg, 2020). The case for further research in this dissertation is that although the graduation rate was essential, the authenticity of students requiring the knowledge and skills to be successful post-secondary was valued. Figure 3.4 shows the value of needs assessment and continuous quality improvement within the theoretical framework, which was critical to this study. Public education leaders must understand that tax-paying communities, families, and students deserve to see students graduate and trust in a system that provides diplomas to students ready to contribute and lead within their community.

Figure 3.4

Theoretical Hybrid Framework: Organizational Learning (Senge and Argyris & Schön)



Note. Adapted from Senge (1990) and Argyris & Schön (1996).

The Action Research Design Team

Action research is grounded on solving problems within a social system and is collaborative with people within the social system to solve complex problems (Bloomberg, 2023). The purpose of the Action Research Design Team (ARDT) in this study was to apply scientific practices and tools of action research to the problem of practice at Magnolia High School (MHS). The significance of the ARDT to action research is that the collaborative nature of acting within a social system generates new knowledge and can bridge the theory-practice gap (Mertler, 2019).

The ARDT members were selected primarily due to their expertise supporting diverse learners as classroom teachers and leaders and their transformative leadership values within MHS and Sharkey County Public Schools (SCPD). The rationale for including district leaders on the ARDT was to advocate for more resources and replicate the process in other schools. During the first monthly meeting, the ARDT participated in an initial orientation regarding the historical

data that led to the purpose of the study, a summary of related literature, principles of action research, research questions, the structure of the ARDT, and their specific roles.

Table 3.1

Action Research Design Team

Team Member	Primary Role at Magnolia High School (MHS)	Action Research Role
Primary Researcher	Assistant Principal, MHS <u>Roles:</u> MTSS Administrator Mathematics Department Schoolwide Data Academic Supports	Led and conducted research with the Action Research Team for data analysis and procedures. The primary researcher brings 6 years of classroom experience supporting English language learners and 5 years of local school and district-wide administrative expertise.
Principal 1	Principal, MHS	Provided context and school-wide instructional leadership. Contributed 15 years of classroom, 10 years of local school and district-wide administrative experience, and 6 years as principal at MHS.
Assistant Principal 1	Assistant Principal, MHS <u>Roles:</u> Language Arts Dept Multilingual Learners Social Emotional Learning	Provided several years of experience as a high school administrator, 16 years as a school leader, and 8 years as a classroom teacher. Conducted action research and added context through the research lens.
Assistant Principal 2	Assistant Principal, MHS <u>Roles:</u> Special Education Dept PBIS	Provided 11 years of experience in teaching students with academic and behavioral disabilities and 6 years of leadership supporting Special Education
Teacher/Mentor 1	MTSS Coordinators, MHS	Provided 15 years of teacher leadership and 17 years of administrative leadership. Retired assistant principal at MHS and returned to support the MTSS initiative.

The ARDT collaborated to analyze the problem of practice and create interventions to enhance the MTSS infrastructure in hopes of closing the credit deficiency gaps of students while increasing the number of students on track for graduation within their four-year cohort. The primary researcher and the ARDT collaborated with the Action Research Implementation Team (ARIT), the primary research participants in this study.

Action Research Implementation Team

The people closest to the problem of practice have significant contributions to solutions to move the organization forward (Bryk, 2015). Within collaborative organizational learning, there are several strands of action research. With the need for an ARIT, this qualitative action research study used participatory action research principles. Participatory action research is the understanding that people want to study themselves and their practices to improve (Bloomberg, 2023). Additionally, participatory action research cooperates with the action research theurgical framework, organizational learning, as it has elements of individual learning and reflection as components of how an organization improves.

During the May 2024 MTSS Committee Meeting, teachers, counselors, and other staff members engaged in a reflective protocol to summarize the key performance indicators (KPIs) for the 2023-2024 school year. At this meeting, the researcher invited each member to continue their contributions to the MTSS Committee with an option to participate in the study for the 2024-2025 school year. The researcher notified participants that continued involvement with the MTSS Committee was independent of participation in the study. As shown in Table 3.2, the ARIT comprised seven members, including the MTSS Coordinator. The MTSS Coordinator consulted with the ARDT and the primary researcher throughout the study to bridge theory to practice.

The 2024-2025 academic school year was the third school year the MTSS Committee formally met. The purpose of the MTSS Committee was to have multiple individuals with various skill sets, instructional backgrounds, and diverse ideologies gather monthly to problem-solve within the framework of MTSS. Magnolia High School had sub-committees for Positive Behavioral Intervention Supports (PBIS) and Social Emotional Learning (SEL). The MTSS Committee primarily focused on academic interventions. The MTSS Committee for the 2024-2025 school year comprised 38 members. Due to the large committee size, participants were selectively random to represent multiple departments within Magnolia High School to capture different perspectives.

Table 3.2

Action Research Implementation Team

Team Member	Primary Role at Magnolia High School (MHS)	Action Research Role
Teacher 1/MTSS Coordinator	Curriculum Instructional Coach	MTSS Cohort Mentor, ARIT, ARDT
Teacher 2	Mathematics Teacher	MTSS Cohort Mentor, ARIT
Teacher 3	Language Arts Teacher	MTSS Cohort Mentor, ARIT
Teacher 4	Social Studies Teacher	MTSS Cohort Mentor, ARIT
Teacher 5	Academic Elective Teacher	MTSS Cohort Mentor, ARIT
Teacher 6	Science Teacher	MTSS Cohort Mentor, ARIT
Counselor	Counselor (10 th -12 th Grades)	MTSS Cohort Mentor, ARIT

Research Plan and Timeline

Glanz (2014) inspired the timeline for the research, which was an example of the spiral reflective nature of action research. Tichnor-Wagner et al. (2017) inspired the plan-do-study-act

cycles for continuous quality improvement. The urgency of providing timely interventions and being reflective of the actions that impact student achievement is critical. Students received a semester grade every 9 weeks on the 4x4 block schedule. Therefore, the study consisted of 4.5-week cycles, which aligned to the mid-point point of a course. For a sustainable MTSS infrastructure, leaders must examine the interconnectedness of their systems and make data-based decisions (Howley et al., 2023). Glanz (2014) supported the idea of being continuously reflective and taking action. The timeline in Table 3.3 outlines the two cycles of implementation and reflection used in this qualitative research.

Table 3.3

Research Plan and Timeline

Date	Timeline
July 2024	Action Research Design Team and Action Research Implementation Meeting (Review Study and Consent to Participate with the Researcher)
August 2024	Action Research Implementation Team Initiation Phase (Organizational Knowledge-Conceive and Define from the Theoretical Framework)
August 2024-September 2024	First 4.5 Weeks intervention(s) and monitoring with the MTSS Committee. Study participants and student progression monitored (Organizational Implementation-Analyze and Improve from the Theoretical Framework)
September 2024-Early October 2024	Second 4.5 Weeks intervention(s) and monitoring with the MTSS Committee. Study participants and student progression monitored (Organizational Implementation-Analyze and Improve from the Theoretical Framework)
Mid-October 2024-Early November 2024	Study Conclusion and Reflection (Organizational Examination-Improvement from the Theoretical Framework)

Contextual Setting

School District General Characteristics

Sharkey County Public Schools (SCPS) is located within the northeast corner of a large southern metropolitan area and serves over 175,000 students within its 145 schools. There are 82 elementary schools, 33 middle schools, 30 high schools, and five specialty schools. Due to the large size of SCPS, the district was organized into 21 clusters. Most clusters in the district have seven elementary schools, two middle schools, and one high school, which names the cluster. For example, Magnolia High School (MHS) served the Magnolia cluster, which had six elementary schools, two middle schools, and MHS.

The student demographics of the school district at the time of this study consisted of 35% Hispanic, 32% Black, 17% White, 12% Asian/Pacific Islander, and 4% Multiracial/Other. The student services breakdown included 66% economically disadvantaged, 25% English learners, 16% gifted, and 14% special education. District-wide student characteristics included forty-seven percent economically disadvantaged, twenty-five percent English learners, sixteen percent gifted education, and fourteen percent special education.

The context of including the district demographics and structure in the contextual setting of this action research study is that MTSS implementation in every school is one of the SCPS strategic priorities. Each school within SCPS had different characteristics and cultural contexts that drove the implementation of MTSS within the building.

Research Site Characteristics

The student academic and non-academic needs are increasing at MHS due to the increased number of students with reading and numeracy skills three grade levels behind based on nationally normed assessments, multi-lingual learners from all around the world, increased

poverty and homelessness, and mental health diagnoses over the five years before the study. The administrative team observed these data trends one year before the COVID-19 pandemic. Due to the academic performance within student groups, there was a need to evaluate closely the infrastructure to support students graduating in four years with core skills to succeed. It is common for students to have Carnegie credit deficiencies when graduating with their four-year cohort when they enroll at MHS from other schools around the metropolitan area or even countries around the world. In the 2023-2024 school year, MHS enrolled students identified as 2024 graduates from 17 countries. Many of those students needed to catch up in course credits and thus were at risk of graduating on time.

The sub-sections include student body characteristics, academic performance, staff and leadership characteristics, and cultural teaching characteristics. This information provided schools and leaders with specific characteristics that may influence the implementation of MTSS in high school.

Student Body Characteristics

The student demographics of MHS at the time of this study consisted of 30% Black, 27% Asian, 27% Hispanic, 11% White, and 4% Multiracial/Other. The student services breakdown included 58% economically disadvantaged, 17% English learners, 28% gifted, and 10% special education.

Academic Achievement

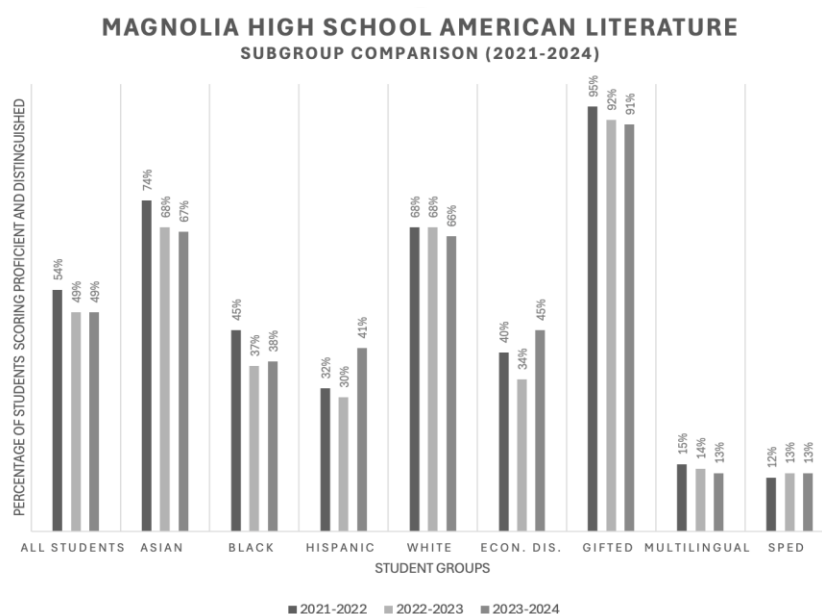
The student population at MHS performed well on state and national exams compared to other SCPS and state high schools. However, when school leadership dissected student groups within achievement data, there was a disparity between Black and Hispanic students, students

receiving special education services, and students acquiring English as a second language support.

Figure 3.5 summarizes performance across the American Literature & Composition course. Each bar represents the percentage of students (typically 11th graders) who scored proficient or higher on the exam from 2021-2024. Performance levels of proficient or distinguished indicate being on track for college and a career in that academic area. Student groups comprising 15 or fewer tested students are reported in any school-wide data reporting in this study. The rationale to include the American Literature data in this qualitative study was that the assessment is one of two last state assessments, the other American History, that students are required to take. Additionally, this is the last universal literacy assessment that students take. Literacy levels are a strong predictor of post-secondary readiness.

Figure 3.5

Magnolia High School End of Term Summative Exam Proficiency by Student Groups (2021-2024)

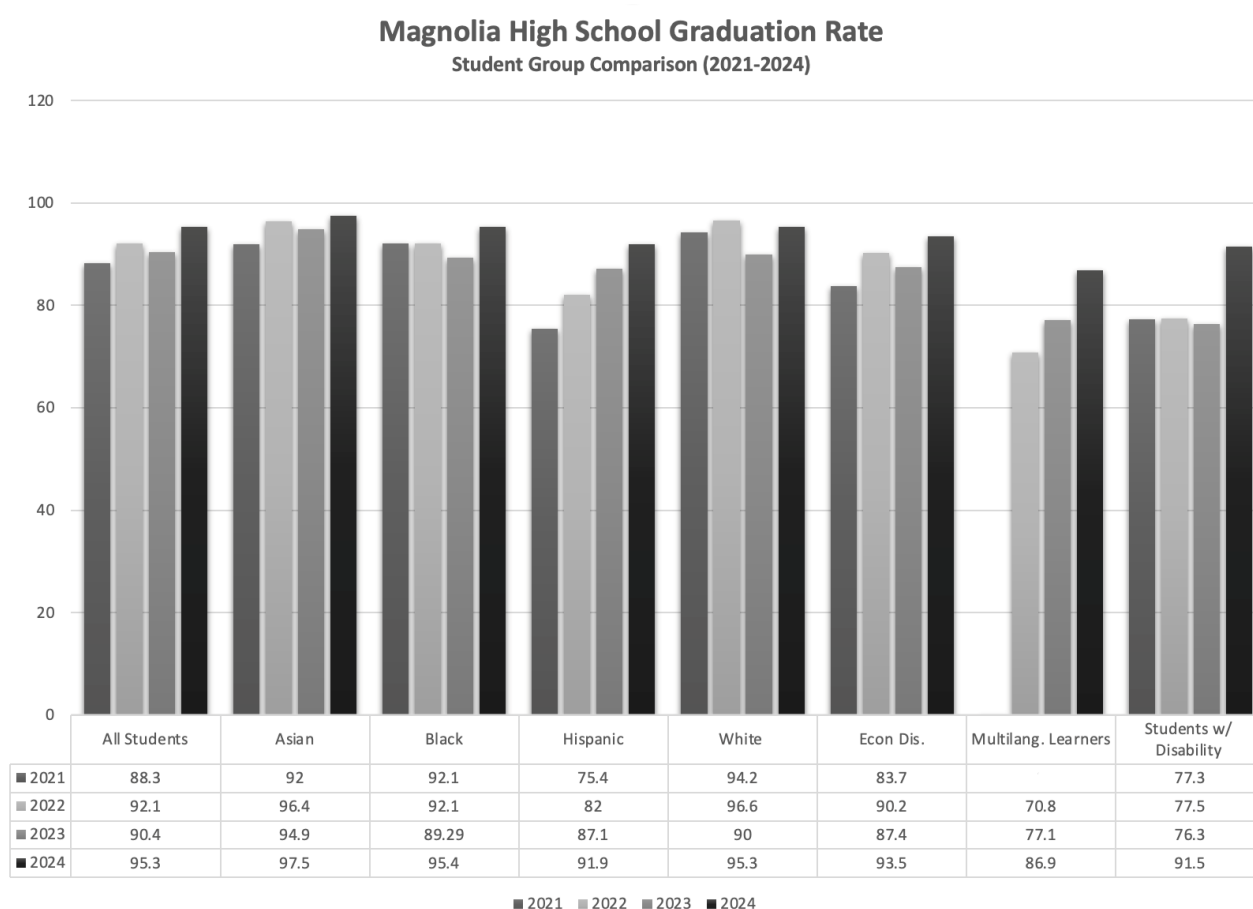


Note. From Magnolia High School End of Term Summative Exam Proficiency Report

Figure 3.6 indicates the graduation rate of student groups from 2021 to 2024. Graduation rates are shown by students who graduate high school within four years of enrolling. The rationale for including the 11th-grade Literature End of Term scores and the graduation rate in the context of the study is that the achievement level of the state assessment is low compared to the graduation rate. This trend of lower-than-expected proficiency is also seen across all state-required exams.

Figure 3.6

Magnolia High School Four Year Graduation Rate, Four Previous Cohorts 2021-2024



Note. From Magnolia High School End of Term Summative Exam Proficiency Report

Staff and Leadership Team Characteristics

At the time of this study, fifty-five percent of the teaching staff at MHS had 11 or more years of experience in education, and two-thirds held advanced degrees. Table 3.4 indicates the total degree level of administrators, teachers, and certified support staff when the action research study was conducted in the 2024-2025 school year. Most of the teaching staff race was white, while only seventeen percent of the student population was white. Over the last three years, the administrative team proactively supported staff with culturally responsive teaching, social-emotional learning, and equity training. The school staff often celebrated the professional and personal values of the staff; however, these celebrations led to challenging conversations about student actions and adult responses to behavior and grading practices.

Table 3.4

Magnolia High School's 2024-2025 Staff Educational Certificate Level

	Administrators	Teachers	Support Staff
Bachelor's (4)	0	56	0
Master's (5)	1	92	7
Specialist's (6)	7	26	3
Doctoral (7)	3	6	0

Note. From Magnolia High School's School Profile on the State's K-12 Report Card

The administrative team comprised nine assistant principals, one community director, and one principal. The team had significant changes over the last five years before the study due to retirements and promotions to other positions. Fifty percent of the administrative team had less than three years of experience. The administration team was structured so that all assistant principals had a student management load of 460 students each. The administration team had various duties that aligned with their skill set. For example, the researcher supported the

mathematics department, academic safety nets, graduation cohort monitoring, school data, and MTSS during this study.

The research site employed a large staff and student body population compared to other schools within the southeast. The large student population caused the administration team to departmentalize to support the instructional and operational practices at MHS. For example, the researcher supported 27 math department teachers and 18 staff members directly supporting MTSS Academic Press. The departmentalization unintentionally created silos and communication between initiatives.

Table 3.5 indicates the total years of experience of administrators, teachers, and certified support staff when the action research study was conducted in 2024. The rationale for including the certificate level and years of experience provides contextual components within the organizational learning theory. As an organization, leaders must be aware of the knowledge and expertise of employees. Musaji et al. (2020) stated, “Knowledge about how learning is influenced by the pace of experience accumulation is important because it can be calibrated to improve performance” (p. 206). Experience matters within an organization, regardless of whether the educator is new with fresh perspectives or a veteran learning from past experiences.

Table 3.5

Magnolia High School’s 2023 Staff Years of Experience

	Administrators	Teachers	Support Staff
< 1 Year	0	20	0
1-10 Years	1	66	6
11-20 Years	6	61	2
21-30 Years	3	26	1
> 30 Years	1	7	0

Note. From Magnolia High School’s School Profile on the State’s K-12 Report Card

Table 3.6 indicates the total race/ethnicity of administrators, teachers, and certified support staff when the action research study was conducted in 2024. The rationale for including the staff demographics within the context is to highlight the comparison of who is supporting the racially and linguistically diverse student body population. School leadership intentionally focused on employing talented personnel within the last four years who could be responsive to the intricate academic and non-academic needs of students and the community.

Table 3.6

Magnolia High School's 2023 Staff Ethnicity

	Administrators	Teachers	Support Staff
Asian	0	7	1
Black	4	32	3
Hispanic	1	13	0
Multiracial	0	4	1
White	6	124	5

Note. From Magnolia High School's School Profile on the State's K-12 Report Card

Teaching Cultural Characteristics

Sharkey County Public Schools (SCPS) administered a survey that helped indicate some of the cultural elements of families, students, and staff. The MHS students positively responded as a collective average to feeling cultural proficiency, belongingness, and a sense of well-being while at MHS, which was higher than the district average. However, the staff survey responses for cultural proficiency and feeling supported scored significantly lower than the district average.

Although different perspectives on education at MHS are welcomed, the staff was divided into two groups. This is evident by looking at the polar distribution in survey results. About 40% of the teaching staff had more of a fixed mindset in which students must not have multiple opportunities, and deadlines are critical based on perspective surveys and observations.

The other 60% of the teaching staff had a strong growth mindset belief with students. The growth mindset believes that skill abilities, such as intellectual ability, can be developed over time (Yeager & Dweck, 2020). The commonality within most of the teaching staff was a willingness to help each and every student. How school leaders and teachers support students and prepare them for life outside of high school differs among the teaching staff.

Data Sources

Due to the transient nature of the MHS student population and the various academic needs of current students, there was an urgency to strengthen the MTSS infrastructure and continuously evolve academic supports to warrant more off-track students graduating with their 2025 cohort. The purpose of this qualitative study was to analyze effective leadership strategies and reflective practices of those serving on the MTSS Committee to support the enhancement of the MTSS infrastructure to increase the number of students on track for graduation within their four-year cohort. Varying data sources were used in this study to gain a comprehensive view of the MTSS Committee, including collective and individual learning, with hopes of improving the organization.

Participants

The MTSS Committee members are primarily teacher leaders interested in supporting students within the multi-tiered intervention and prevention framework. Teachers volunteered to serve on the MTSS committee and have various roles and responsibilities based on interest and skill set. These roles include data analytics, skill deficit interventions, social-emotional learning, student leadership sponsorship, and cohort mentoring. The 2024-2025 school year was the third year the MTSS committee had existed at Magnolia High School. Teacher leaders volunteered

their time to mentor, organize initiatives, provide interventions to students, and facilitate professional development for the staff.

A unique staffing feature of Magnolia High School is that many of the MTSS committee members taught elective courses and advanced placement (AP) courses to students who may not need interventions; however, they volunteered their time to support the MHS mission and vision by providing access and opportunities for all students. There are representatives from all departments within the committee, and it allowed teachers to collaborate and learn with other professionals they would likely have needed more time to engage. MTSS Academic Press is a model for school improvement (Murphy, 2016). Teacher leaders must learn and reflect on their practices to enhance and transfer knowledge and support students in graduating on time.

Selection Criteria

The type of sampling used for this qualitative action research is non-probability sampling, the most common type of qualitative research (Merriam & Tisdell, 2016). Non-probabilistic sampling is purposeful, meaning the researcher wants to discover, understand, and gain insight within the study context (Merriam & Tisdell, 2016). Sampling teachers passionate about the MTSS framework was necessary for this study, as school leaders must cultivate teacher leadership and professional learning to sustain the MTSS infrastructure for years to come. The sample size depended on how many teacher leaders were on the MTSS Committee during the 2024-2025 school year.

Teacher leaders at MHS must volunteer to participate in the MTSS Committee. The MTSS Committee at MHS consisted of four assistant principals, one MTSS coordinator, and about 30 teachers. Due to the large staff size of Magnolia High School and the MTSS committee, the researcher used the maximum variation sampling method

(Glaser & Strauss, 1967) to identify participants in this study. Maximum variation sampling involves seeking out those who represent the broadest possible range of characteristics (Merriam & Tisdell, 2016). For this study, the participants represented different departments within MHS; this included teacher leaders who served different populations of students (i.e., gifted, multilingual learners, special education, and remedial learners) and various years of experience in education.

The next section of this chapter describes the data collection methods included in this qualitative action study.

Data Collection Methods

The qualitative inquiry used in the data collection and analysis methods for this study was not simply a research procedure but a journey to capture the perspectives and thoughts of the study participants. As Bloomberg (2023) elaborated, in all qualitative research, regardless of the data collection methods employed, extensive engagement with participants, deep interaction with the data, and immersion in the research setting are fundamental components.

The inherent essence of qualitative action research lies in its social science nature (Glanz, 2014), requiring methods that effectively capture the perspectives and thoughts of the study participants. Data collection mainly involves watching, asking, and reviewing (Merriam & Tisdell, 2016). The data methods used in this action research captured the watching, asking, and reviewing to ensure the findings lead to a more robust Multi-Tiered System of Supports (MTSS) infrastructure at Magnolia High School (MHS).

Multiple methods were employed to gather data for this qualitative action research study. These methods included:

1. Semi-structured individual interviews with the MTSS committee members and the researcher at the beginning, middle, and end of the research processes;
2. Focus Group conducted with the action research team;
3. Observations of meetings, MTSS committee members' interactions with students in need of academic interventions, and their delivery of professional development on MTSS topics to staff members;
4. Research fieldwork journal highlighting the plan-do-check-act throughout the process, observation notes of MTSS committee members' interactions with staff, students, and parents, personal leadership reflections;
5. Artifacts, including meeting notes, MTSS committee members' intervention logs, pre- and post-study program evaluation rubrics, and additional artifacts that support the MTSS infrastructure and leadership findings to support the research questions and purpose of the study.
6. Photo-elicitation, as participants were using images of “the three little pigs analogy: a house built of straw, sticks, or bricks” to share their thoughts on the components of the MTSS infrastructure.

The rationale for including the data collection methods mentioned above was to support the ethnographic method within qualitative data. Ethnographic methods primarily include participant observations, interviews, and document and archival analysis within the cultural context of the research site (DeMarrais et al., 2024). The researcher used a coding framework to analyze qualitative data through diverse methods, exploring patterns within the codes and formulating thematic insights. From these themes, patterns emerged from the data, and

triangulation of the findings enhanced the credibility of the results. Chapters 4 and 5 of this qualitative action research study will explain the data analysis methods.

Semi-Structured Interviews

Semi-structured interview protocols start with pre-determined questions but allow opportunities for the researcher to expand with follow-up probing questions based on intuitive direction (Bloomberg, 2023). During the interviews, the researcher provided the ARIT, comprised of teacher leaders in the MTSS Committee, a platform to share their valuable perspectives. The interviews primarily focused on their impact on the MTSS initiatives, MTSS program design, and the impact of the research interventions on student achievement. As Bloomberg (2023) suggests, the semi-structured interview protocol provided a framework to guide the discussion while allowing for flexibility and freedom in the interviewing process. This approach ensured that the participants comprehensively shared perspectives, fostering a richer understanding of the MTSS implementation at MHS.

Table 3.7 demonstrates how some interview questions aligned with the research questions. A comprehensive list of the interview questions aligned with research questions can be found in Appendix C and Appendix D.

Table 3.7

Research Questions and Sample Interview Questions Alignment

Research Question	Interview Questions
RQ1. How do high school leaders facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?	How can we enhance the supports provided to be preventative in intervening for students with academic deficits?
	If everyone were to leave the MTSS Committee, do you believe the work of MTSS

Research Question	Interview Questions
	would continue, and to what degree? Do we have systems to support sustainability?
RQ2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?	If you were to change anything in the process of providing interventions or the work of the MTSS Committee in the last 4.5 weeks, what would it be? How did you assess your effectiveness as an interventionist within the 4.5-week process?
RQ3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?	When thinking about a sustainable MTSS infrastructure, what skills and knowledge are important to pass along to the next group of teacher leaders on the MTSS Committee? How would you describe your impact on off-track students in the 2025 cohort you directly support?

Focus Group Interviews

The Action Research Implementation Team participated in focus group interviews after each cycle, emphasizing the collaborative nature of the research study. The rationale for including the focus group as a data collection method is that MTSS is a collaborative framework and dialogue about the needs of the MTSS program to certify that MHS values student and teacher success. Hays and Singh (2023) affirmed that focus group interviews catalyze participants to connect with others and expand or challenge different perspectives cooperatively.

The focus group consisted of the ARIT, a team of teacher leaders who have established working relationships to freely express their thoughts, opinions, and suggestions on improving the MTSS program at MHS. The social component of a focus group allowed the participants to discover new perspectives or confirm perspectives from their peers related to the problem of practice. Merriam and Tisdell (2016) explained that because the data was gathered from a focus group, where participants collaboratively constructed meaning through their interactions, the data

collection process was grounded in a constructivist framework. The data analysis methods will be discussed more in-depth in Chapter 3.

Observation Notes

The researcher collected data through observations and actively participated in the research process. The ARDT and the observation lens were based on the *participant-as-observer*, which balances the role of the researcher from a data collection perspective and partaking in an active participant role (Gold, 1958). In this action research study, the rationale for being closely involved in the design team was to support transferring knowledge about the contextual elements of the MTSS implementation and to certify that insight into possible interventions was a collaborative process for all leaders. The shift from the design team to the implementation team observation viewpoint became an observer-as-participant, allowing the researcher to be present and establish an insider identity without participating in research activities (Gold, 1958).

The rationale for the shift to observer-as-participant allowed the researcher to evaluate the sustainability and enhancement of the MTSS program if the researcher, the core leader and founder of the MTSS initiative at MHS, were to leave for a different leadership role. Merriam and Tisdell (2016) asserted that researchers should capture field notes immediately after the observation to increase the reflective aspect of narrating the observed experiences. This assertion supports the methods of ethnography, which is the process of understanding what is happening within the cultural context of the research study (DeMarrais et al., 2024).

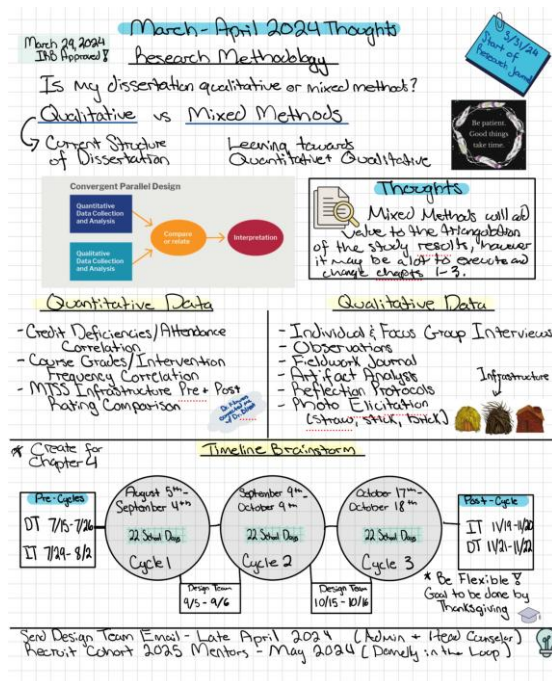
Researcher's Fieldwork Journal

DeMarrais et al. (2024) recommended that the fieldwork journal include dated entries and that the researcher write about the process of research decisions, emotional reactions, questions, problems, and other reactions within the research process. The researcher kept notes and

reflections in a research journal. The journal consisted of every reflective element of the research study and personal reflections during the study. Figure 3.7 serves as an example of a journal entry. The journal captured the researcher's thoughts throughout the study.

Figure 3.7

Journal Entry



Other work and personal reflections throughout the study added value to the importance of leaders reflecting on transferring leadership skills and decision-making processes based on the context of what the leader was experiencing. For example, if a leader is overwhelmed in their personal life, this can influence the decision-making processes in the workplace. The journal also served as an instrument to capture observations throughout the five-month study. The research journal was also written in a digital drawing/note-taking application to access notes on multiple devices, increasing the accessibility of capturing thoughts quickly.

This qualitative study utilized documents to communicate information and capture intervention responses. Merriam and Tisdell (2016) established that artifacts and documents

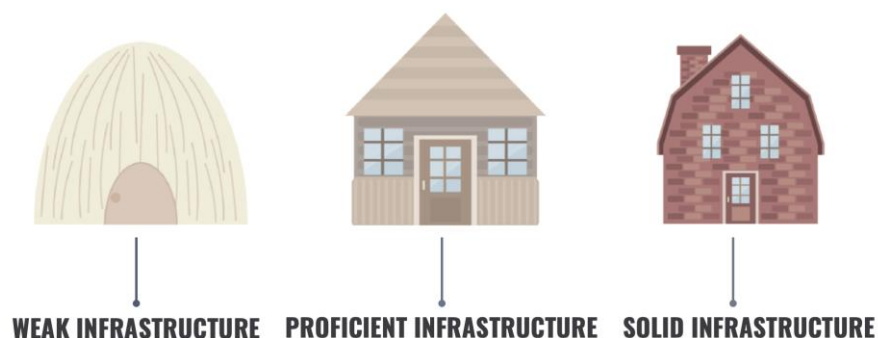
represent meaningful physical communication between the participants and the setting. The researcher analyzed the ARIT documents, such as intervention notes and check-in sheets. The ARDT produced these documents as they engaged in the interventions to support academic needs, participant implementation guides created by the ARDT, pre-and-post-program evaluation rubrics, and other researcher-generated documents. The rationale for including documents and artifacts within the study allowed the researcher to carefully examine the value of documents in supporting the problem of practice and provide readers with artifacts to duplicate within their contextual setting.

Photo Elicitation

Photo-elicitation is a qualitative technique incorporating photos into research interviews, allowing reflexivity and generating rich data (O'Brien et al., 2023). In this action research study, the researcher provided the participants with three images of homes built with straw, wood, and brick, corresponding with the children's story "The Three Little Pigs." The participants used the three homes to measure the MTSS infrastructure indicators, such as the leadership team, prevention focus, and resource allocation. Participants chose an image of a house based on its construction material - straw being the least sturdy, wood being stronger, and brick being the most stable, as shown in Figure 3.8. The participants then discussed their reasons for selecting that photo to describe the MTSS infrastructure indicators.

Figure 3.8

Photo Elicitation Images Used to Describe the MTSS Infrastructure



Note. Image Adapted from the Ariel Education Initiative (2019)

The following section discusses the interventions used in this research. The ARDT created interventions to support the ARIT and participants in providing just-in-time interventions and support to high school students within the 2025 cohort. The ARDT crafted the interventions and gathered information to characterize their impact. The following section examines interventions used within this study.

Interventions

Glanz (2014) defined an intervention as a procedure or program the researcher implements to investigate its effect on an individual or group. Glanz (2014) acknowledged that leaders sometimes prematurely jump into change or implement interventions without undertaking a needs assessment and identifies four steps needed before implementing interventions; these steps are:

1. Reflect and pose questions in collaboration with relevant stakeholders.
2. Observe the climate, culture, and supporting artifacts, such as data contributing to the need for change.
3. Meet with key personnel to provide insights that observations cannot offer.

4. Establish a needs assessment committee, the ARDT, to plan appropriate interventions and support structures for those implementing change within the organization.

Although the theoretical framework used in the study shows that needs assessment is last, the framework takes into account that existing structures have been in place and that there is a need to do a needs assessment in a cyclical motion for the organization to conceive and define the problem of practice through double-loop learning.

The study aimed to analyze effective leadership strategies and reflective practices that support the enhancement of the infrastructure in a large suburban high school that closes the credit deficiencies gap of students while increasing the number of students on track for graduation within their four-year cohort. Therefore, the ARDT and researcher developed specific interventions to enhance teacher agency and leadership skills to serve as a Cohort 2025 mentor and provide interventions to students off-track for graduating with their four-year cohort peers in 2025. Additionally, the interventions were collaboratively designed, adjusted, implemented, and designed to ensure that school staff could replicate the skills and knowledge to enhance the infrastructure of the MTSS initiatives at MHS.

The ARDT based the primary interventions on organizational learning, the theoretical framework. The cyclical motion of the theoretical framework grounded the interventions, as it required participants to conceive, define, analyze, apply, and improve as individuals and teams while acquiring additional knowledge. Throughout the research interventions and data analysis, the theoretical framework of organizational learning anchored the data-based decision-making and analysis of continuous quality improvement.

Organizational Knowledge (Conceive & Define)

Organizations must learn about cultural factors and data that contribute to establishing the problem of practice and establishing a clear vision before implementing new strategies and implementation interventions. At MHS, the first step of implementation was for the ARDT to collect and review data that identified students who were off-track or at risk of being off-track. The ARDT worked together to develop and refine data analysis protocols with the intent for these protocols to be replicated or deconstructed by future administration teams. Based on the data, the ARDT researched to deepen understanding and formulated actionable interventions that addressed barriers that hindered timely graduation. Subsequently, the ARDT reinforced a unified vision guided by data and MHS organizational goals to create an implementation guide for those providing interventions to students and evaluate the effectiveness of the interventions.

Organizational Implementation (Analyze & Apply)

The ARIT supported the intervention implementation. The ARDT developed a weekly monitoring log containing specific discussion probes to standardize interventions provided to students by the interventionist to minimize the variability. Additionally, the team offered frequent *just-in-time* professional development sessions to support individual learning and to increase the individual and team learning of ARIT. Throughout the 4.5-week cycles, the ARDT made slight modifications to the implementation plan to be responsive to the needs of students.

Organizational Examination (Improvement)

Organizations must examine their practices and consistently improve to strengthen the desired outcomes. The ARDT established mentor and mentee reflection activities to monitor the effectiveness of the intervention program. They also created a cohort monitoring data procedure to ensure students were progressing to graduate with their peers in 2025. At the end of each

cycle, the ARDT made adjustments and determined whether single-loop learning with minor adjustments was needed in the next cycle or returned to the baseline with double-loop learning.

The action research interventions encompassed the creation process of developing an intervention implementation guide, cohort data protocol, and cohort monitoring tool, alongside professional development for cohort mentors and reflection activities for mentors and mentees. These interventions, detailed in Table 3.8, correlate with the theoretical framework and specify targeted group(s) and frequency. The ARDT set the frequency of the interventions. However, the ARDT was aware of intentionality versus reality, so they monitored the interventions for fidelity with observation tools.

Table 3.8

Interventions of the Study

Theoretical Framework Correlation	Intervention Activity	Targeted Group(s)	Frequency of Intervention
Organizational Knowledge (Conceive & Define)	• <i>Intervention Implementation Guide Process</i>	• <i>Action Research Design Team</i>	• <i>Referenced Weekly</i>
	• <i>Cohort Data Protocol Process</i>	• <i>Action Research Design Team</i>	• <i>Every 4.5 Weeks</i>
Organizational Implementation (Analyze & Apply)	• <i>Cohort Check-In Monitoring Sheet Process</i>	• <i>Action Research Implementation Team</i>	• <i>Referenced Weekly</i>
	• <i>Cohort Mentor Professional Development</i>	• <i>Action Research Implementation Team</i>	• <i>Every 4.5 Weeks</i>
Organizational Examination (Improvement)	• <i>Mentor Reflection Activities</i>	• <i>Action Research Implementation and Design Team</i>	• <i>Every 4.5 Weeks</i>

Theoretical Framework Correlation	Intervention Activity	Targeted Group(s)	Frequency of Intervention
	• <i>Mentee Reflection Activities</i>	• <i>Action Research Implementation and Design Team</i>	• <i>Every 4.5 Weeks</i>
	• <i>Cohort Monitoring Data Procedure Processes</i>	• <i>Action Research Implementation Team</i>	• <i>Every 4.5 Weeks</i>

The succeeding section introduces the data analysis methods of the interventions. The researcher used qualitative research analysis methods to gather and analyze the data during the study. The data analysis identified emerging themes, cohesive patterns, and thick case descriptions.

Data Analysis Methods

Data analysis examines patterns, themes, associations, and interrelationships among the data collected in the study (Glanz, 2014). Due to the nature of qualitative research, data is analyzed simultaneously with data collection (Merriam & Tisdell, 2016). The researcher intertwined data collection and analysis in an iterative cycle. Recognizing the vital role of concurrent data analysis during collection, the action researcher and the ARDT adjusted the direction of the study accordingly. Merriam and Tisdell (2016) described data analysis as unpredictable from the onset of the study. Therefore, the data collection and analysis shaped the final product.

The significance of an established data collection process is that ongoing analysis allows the data to be focused, reduces repetitiveness, and supports a method to avoid the overwhelming volume of data that needs to be collected and processed (Merriam & Tisdell, 2016). The study

adhered to three phases of data analysis, which involved organizing the data, identifying patterns, and interpreting the findings (Glanz, 2014).

Coding

The researcher used a coding protocol to make sense of the large amount of raw data collected during the study. Merriam and Tisdell (2016) noted that “coding is nothing more than assigning some sort of short-hand designation to various aspects of your data so that you can easily retrieve specific pieces of data” (p. 199). Miles (2020) referenced coding as *data condensation*, a system of classifying data. Bloomberg (2023) reminded researchers that coding is cyclical, allowing the researcher to return to the data to interrogate and interpret for deeper meaning.

For this study, the researcher used inductive analysis to develop code names and deductive analysis to hypothesize concepts arising from the raw data. Inductive analysis involves meticulous examinations of raw data to extract concepts, themes, or a model through interpretations crafted by the researcher. Deductive analysis consists of analyzing data to assess the alignment with pre-existing assumptions, theories, or hypotheses formulated by the researcher (Thomas, 2006). Thomas (2006) emphasized that using inductive and deductive analysis is appropriate for a research study.

The data analysis and coding procedures started at the beginning of Cycle 1 and consistently throughout the study to make sense of the data. Merriam and Tisdell (2016) further described this process: “naming the categories, determining the number of categories, and figuring out systems for placing data into categories” (p. 236). A deductive analysis of the MTSS infrastructure indicators outlined in the American Institutes for Research (AIR) (2021) MTSS Fidelity of Implementation Rubric grounded the initial naming categories. However, they

transitioned into a more deliberate approach as the research progressed and data insights unfolded, resulting in an inductive analysis.

Thomas (2006) indicated a procedure that researchers should use for the inductive coding analysis of qualitative data, which includes the following: (1) preparation of raw data, (2) close reading of the text, and (3) the creation of categories based on the general categories and specific categories initially created by the researcher. Table 3.9 provides an example of the coding data sample. Chapter 5 details the analysis of the qualitative coding scheme.

Table 3.9

Code Sample for Data

Code	Meaning	Data Sample
P	Prevention	“From as soon as you can, pre-planning to set the stage.”
SPS	Student Problem Solving	“They're showing up to all of their classes and that they look forward to intervention time so that they can connect with me and ask me questions.”
PS	Post Secondary	“The kids were very engaged with it, talking about what they want to do, what needed college, what didn't need college.”

Thematic Analysis

Thematic analysis is a suitable qualitative method particularly beneficial for researchers dealing with extensive qualitative datasets (Nowell et al., 2017). Thematic analysis offers flexibility by allowing researchers to determine themes in various ways based on their judgment. Nevertheless, researchers must maintain consistency in their approach across each analysis session. (Braun & Clarke, 2012). Bloomberg (2023) adds that trustworthiness is essential, and analysis seeks perspectives other than the researcher. Table 3.9 details the phases of thematic analysis used in this study.

One of the advantages of using thematic analysis is that it allows flexible freedom to modify to meet the needs of the study, yet a complex account of the data (Braun & Clark, 2012). Thematic analysis offers a structured framework for uncovering the deeper meanings and patterns in qualitative data, facilitating the identification of commonalities, distinctions, and trends. This methodical approach safeguards against overlooking crucial information and upholds the rigor of the analysis process (Nowell et al., 2017). As action research and qualitative research continue to grow, exploring the procedure for conducting a reliable thematic analysis could enrich qualitative research methodology (Nowell et al., 2017).

Table 3.10

Phases of Thematic Analysis and Connection to Trustworthiness

Phases of Thematic Analysis	Connectedness to Trustworthiness	Researcher's Action Steps
Phase 1: Familiarizing Yourself with the Data	• Active and prolonged engagement with data • Researcher Triangulation • Archive all raw data in a secure manner • Peer Debriefing	• Immersing in data by reading and rereading textual data, reviewing audio and video recordings • Document hypothesized codes/themes • Document observations related to the research questions
Phase 2: Generating Initial Codes	• Documentation of MTSS team notes and artifacts • Researcher Triangulation • Reflective Journaling • Audit Trail • Code Generation • Peer Debriefing	• Develop initial production of codes • Document the process from moving beyond unstructured data to data as a storyline • Develop codes for each piece of data • Develop a coding manual
Phase 3: Searching for Themes	• Researcher Triangulation • Themes and subthemes vetted by peer debriefing	• Maintain thorough documentation on the evolution and hierarchical structures of concepts and themes • Inductive analysis

Phases of Thematic Analysis	Connectedness to Trustworthiness	Researcher's Action Steps
Phase 4: Reviewing Themes	• Researcher Triangulation • Themes and subthemes vetted per debriefing	• Review coded data and consider whether they appear in a coherent pattern • Organize data into themes and refine and reduce based on data
Phase 5: Defining and Naming Themes	• Peer Debrief • Researcher Triangulation • Audit Trail	• Determine what aspect of the data each theme captures • Write detailed analysis to develop appropriate theme names • Scrutinize the data analysis again
Phase 6: Producing the Report	• Thick Description • Member Checking • Peer Debriefing • Audit Trail	• Finalize the thematic analysis in a concise, logical, and robust data representation. • Scan for trustworthiness and existing literature

Note: Adapted from Braun and Clark (2012) and Nowell et al. (2017)

The phases of thematic analysis were critical for the researcher to analyze qualitative data. Throughout the action research cycles, the researcher consistently reflected and refined the codes used to develop initial themes. Having a system and process became invaluable to the analysis and findings of this study. Nowell et al. (2017) stated, “If readers are not clear about how researchers analyzed their data or what assumptions informed their analysis, evaluating the trustworthiness of the research process is difficult” (p. 2). After the study, the researcher created final themes that aligned the findings with the research question. The following section explores how reliability, validity, and generalization help improve the overall trustworthiness of the study.

Quantitative Data Analysis

This qualitative action research included elements of quantitative data analysis to support the triangulation of this case study. The pre-and post-MTSS infrastructure rubric data will undergo scrutiny through the application of the Mann-Whitney U-Test, comparing the results of the MTSS team before and after implementation with those of a minor, randomly selected group

of fewer than ten teachers from Magnolia High School. The U-Test evaluates perspectives of the MTSS infrastructure from those closely connected to the work of MTSS and educators who participate in MTSS initiatives as the model for school improvement yet need to be intimately connected to the intricacies of MTSS. Glanz (2014) inserted that the Mann-Whitney U-Test is a standard statistical test for comparing two small groups in action research. The Mann-Whitney U-Test compares data from two independent smaller groups compared to the T-Test, a popular statistical technique used for larger groups to determine statistical significance (Glanz, 2014).

The Mann-Whitney U-Test is a nonparametric statistical test appropriate for action research (Glanz, 2014). Nonparametric refers to a statistical test that is distribution-free and preconceived assumptions (Corder, 2014). In summary, while parametric tests like the T-test compute the mean of two independent groups, the U-test evaluates the rank sum of the two groups. The results of the U-Test can be H_0 , where there is a null hypothesis and no tendency for ranks to differ amongst the independent groups or H_A is where the researcher establishes an alternative hypothesis due to the rank sums differing significantly between the two independent groups. Commonly, the set level of risk or alpha (α) is set to 0.05. Essentially, there is a 95% likelihood that any observed statistical variances are genuine and not merely coincidental (Corder, 2014). Figure 3.10 demonstrates the Mann-Whitney U-Test formula used in this qualitative action research study.

Figure 3.9*Mann-Whitney U-Test Formula*

$$U_1 = n_1n_2 + \frac{n_1(n_1 + 1)}{2} - R_1$$

$$U_2 = n_1n_2 + \frac{n_2(n_2 + 1)}{2} - R_2$$

The Mann-Whitney U-Test formula in Figure 3.9 will be used to compare the MTSS Infrastructure rubric perspective results of the ARIT (n_1) and a group of random teachers at MHS (n_2) to evaluate if there is a statistical difference in the perception of the MTSS infrastructure from the group. If there is a statistical difference, the researcher plans to consider an alternative hypothesis and measure how far apart the rank sums differ amongst the groups.

The primary question answered by the U-Test was: *Does the work of the MTSS team transfer to the perceptions of staff members seeing the interventions transfer to Tier I instruction and closing the achievement gap of students?* The addition of the quantitative data analysis section adds value to the research and the trustworthiness of the study. Quantifying the perceptions of the MTSS infrastructure at MHS and using qualitative methods adds to analyzing the ability of interventions to support academic needs within the MTSS program.

The following section further explains how trustworthiness is necessary for the transferability of this action research study.

Reliability, Validity, and Generalizability

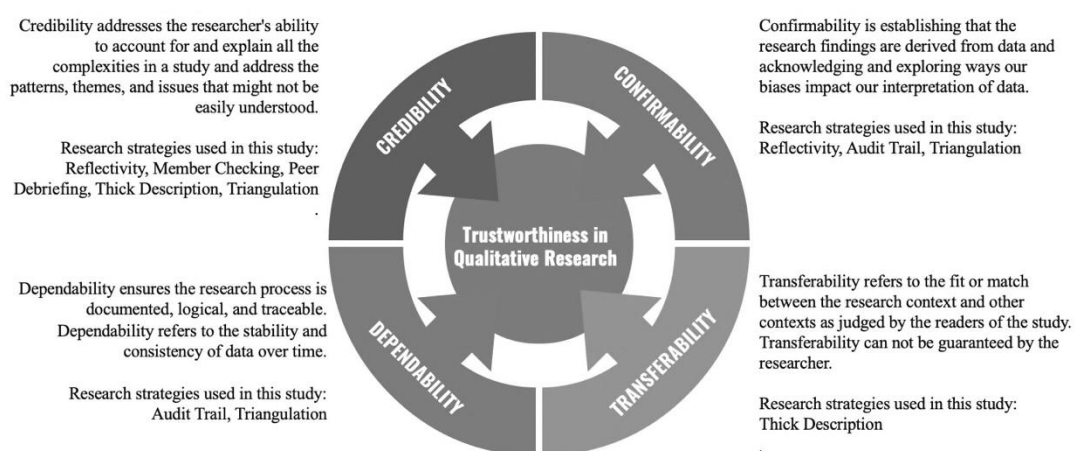
There is tremendous value in educational leaders conducting action research to address problems of practice within their particular context and setting. Merriam and Tisdell (2016) noted that “Being able to trust research results is especially important to professionals in applied

fields because practitioners intervene in people's lives" (p. 237). This action research study provides insight into one of the most important measures of school accountability, the four-year graduation rate. Education leaders seeking ways to provide interventions to increase their graduation rate should be able to trust that the resources and findings are credible and transferable. Due to the nature of qualitative research being flexible and fluid, there needs to be a high level of trustworthiness. Bloomberg (2023) identified four criteria for creating trustworthiness in a study: credibility, confirmability, dependability, and transferability.

Credibility, confirmability, dependability, and transferability do not lead to trustworthiness in isolation. Figure 3.10 serves as a visual to aid the reader in the research strategies used and the criteria correlation that leads to trustworthiness. The outside text of each criterion displays the definition of each criterion and the research strategies used in this action research dissertation to support the trustworthiness of this study. Finally, a clear understanding of the validity and reliability of the findings of this study should help with the data-based decisions affecting students receiving academic interventions.

Figure 3.10

Overview of Trustworthiness Criteria in Qualitative Research



Note. Adapted from Bloomberg's (2023) Trustworthiness Criteria

Qualitative researchers enhance trustworthiness and authenticity by crafting studies that incorporate rigor by developing detailed methods for data collection, organizing the data, and analyzing the gathered information into themes (Glanz, 2014; Bloomberg, 2023). The researcher intentionally gathered and analyzed multiple data sources, qualitative and quantitative, in this action research study, employing suitable qualitative research methods to uphold trustworthiness and authenticity. The researcher scrutinized the data collection methods and analysis throughout the research study.

The strategies employed to support trustworthiness throughout the study encompassed:

1. Reflexivity: This adds credibility and confirmability to the study by clarifying any biases through self-reflection and continually monitoring the researcher's subjective perspectives by recording reflective field notes throughout the process (Bloomberg, 2023).
2. Member Checking: Return interpretations and findings to the individuals from whom they originated and seek their validation for plausibility, which adds credibility to the study (Merriam & Tisdell, 2016; Bloomberg, 2023).
3. Peer Debriefing: Engaging in discussions with informed colleagues outside the study concerning the methodology, the alignment of emerging findings with raw data, and the validity of preliminary interpretations to add credibility to the study (Merriam & Tisdell, 2016; Bloomberg, 2023).
4. Audit Trail: Enhances confirmability and dependability, which requires detailing the data collection methods and maintaining transparent field notes and transcript records. This adds confirmability and dependability to the study (Bloomberg, 2023).

5. Thick Description: Adds credibility and transferability to the study by ensuring that the study has the necessary details so the readers understand the methodology and findings (Bloomberg, 2023).
6. Data Triangulation: Adds credibility, confirmability, and dependability to the study by using multiple data sources to compare and cross-check findings (Merriam & Tisdell, 2016; Bloomberg, 2023).

The triangulation of the research methods is presented in Table 3.11.

Table 3.11

Subjectivity Statement

Although many safeguards were put into place to ensure that this study was dependable and credible in hopes of adding value to structures that support MTSS implementation within the high school setting, there are preconceived ideas, values, and experiences that could influence the study outcomes. The following paragraphs will explore the experiences of the researcher, educational and personal philosophy, career background, and values.

As a first-generation black college graduate, the researcher was motivated to return to the K-12 setting to teach and invest in a system that the researcher thought was unintentionally designed to create barriers for minority students. Although the researcher believed in equitable learning experiences, the researcher's purpose was devoted to Black and Latinx students. From a critical theory mindset, the researcher believed heavily that the system was not created for all student's children to have the opportunity to maximize their potential through access and opportunity. The researcher believes students fail because adults and systems fail students.

The researcher served six years as a math and science teacher in a Title I school before being appointed assistant principal at Magnolia High School, the study host site. MHS was a

vastly different environment from the Title I school, as it was located in one of the wealthier areas in the district. The researcher realized that a need for interventions and support would be a massive undertaking as the needs and transient nature of MHS shifted around the COVID-19 pandemic. The researcher's critical philosophy welcomed the opportunity to evaluate and question the existing structures and processes that inhibited students from meeting their highest potential. MHS formally started the work of MTSS before it was a SCPS initiative. Graduation rate was and continues to be the researcher's focus.

During the COVID-19 pandemic, the district leadership changed after the superintendent, who had previously served as the superintendent for 26 years, retired. The new superintendent rolled out a revised strategic priority, and MTSS was a critical focus area in the strategic priority. District leadership recognized the researcher's work at Magnolia High School and appointed him to support MTSS for secondary schools at the district level. Due to the quick appointment, the researcher did not have an opportunity to transfer knowledge to the MHS team, leading to an unstable MTSS infrastructure.

After reflecting on the transition from school to district leader, the researcher realized that Magnolia High School could benefit from learning, developing, and reflecting on the problem of the practice of enhancing the infrastructure. An issue the researcher encountered was creating a solid MTSS program that was transferrable and easily duplicated or enhanced. The researcher returned to MHS in the 2023-2024 school year as an assistant principal responsible for leading the MTSS initiative. In research, especially when the researcher had a connection to the site and study participants, to build credibility within the findings. *A priori* is a research notion that the researcher knows the study's outcomes before it is carried out. Action research is based on the leaders' problems of practice that demand reflection and analysis (Glanz, 2014). Thus, the

researcher needed to return to MHS to conduct an action research study to learn as an individual and a school; this phenomenon also supported the organizational learning theory that drove the study.

The researcher was aware of his biases and was reflective throughout the research process. The researcher captured their thoughts in a research journal, member-checked, and incorporated elements of quantitative data analysis to triangulate the qualitative data findings to minimize subjectivity, data saturation, and biases throughout the study.

Limitations

Limitations arise when potential challenges and shortcomings are inherent in the research, which the researcher has little to no control over (Bloomberg, 2023). The limitations arose from the nature of qualitative action research and the context of the study. The researcher served as a participant and observer. Those roles could not be separated in this study. However, the involvement in the ARIT significantly decreased, with the researcher being an observer compared to an active participant in the implementation design team. The ARDT, which included school leaders and the ARIT, consisted of teacher leaders and counselors providing interventions to the 2025 off-track cohort students, collaborating to identify problems, learning as a team and individually, developing solutions, and reflecting on their practices.

Additionally, the researcher's position as an administrator in the building affected the participants. Positionality refers to what researchers know and believe about the world around them and is shaped by their experiences in a social context (Bloomberg, 2023). To minimize the impact of the researcher's positionality, all participants were not directly evaluated by the researcher during the duration of the study. Finally, due to the quarter block schedule, the timing

of the interventions had to be 4.5 weeks to account for every 9 weeks grades are posted on the student's transcripts.

Chapter Summary

This chapter describes the data collection and analysis methods used in this dissertation. The preference for action research as the qualitative method stems from its iterative emphasis on action and reflection. The researcher detailed the context, problem of practice, and critical members comprising both the Action Research Design Team (ARDT) and the Action Research Implementation Team (ARIT). The teams collaborated to enhance their comprehension of MTSS through interventions, implementing solutions, and engaging in reflective practices.

The researcher outlined the data sources, collection methodologies, and analytical approaches employed in the two-cycle research study. The data sources included semi-structured interviews, focus groups, research journals, transcriptions, artifacts/documents, and photo elicitation. The data underwent analysis through coding and thematic analysis methodologies. Chapter 3 further described reliability, validity, generalizability, subjectivity, and limitation statements that impacted the study.

Chapter 4 details the findings at Magnolia High School and explores the intervention cycles. It also provides additional context regarding the research site, problem framing, and the data amassed to bolster student support within the Magnolia High School MTSS infrastructure.

CHAPTER 4

FINDINGS FROM THE ACTION RESEARCH CASE

Chapter 4 presents the findings from the pre-planning cycle and the two action research cycles conducted in this study. The chapter begins by revisiting the context of the research site and the framing of the problem, establishing a foundation for understanding the purpose of the study. Emphasis was placed on constructing a rich, thick description of events and actions unfolding during the research cycles. Timelines and data sources were provided in great detail to enhance the trustworthiness and credibility of the findings presented in this chapter. Chapter 4 weaves together the key moments and insights from the research process, providing a comprehensive account of the findings and their impact.

The purpose of this action research study was to investigate leadership strategies and collaborative practices that improve the MTSS infrastructure of a large suburban high school. The goal was to address student credit deficiencies and increase the number of off-track students graduating within their four-year cohort while supporting post-secondary planning. This qualitative action research study included an Action Research Design Team (ARDT) and an Action Research Implementation Team (ARIT).

1. How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?
2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?

3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?

Chapter 4 details the actions the researcher took for this nine-week action research study. It begins by expanding on the context in Chapters 1 and 3, followed by an in-depth description of Cycles 1 and 2. The chapter then moves to post-study reflections, emphasizing the continuous quality improvement process initiated to ensure the ongoing implementation of the interventions beyond the study. Finally, Chapter 4 concludes with a summary. Figure 4.1 illustrates the action research model, encapsulating the process discussed throughout the qualitative research study, particularly in Chapters 4 and 5.

Figure 4.1

Action Research Model



Note. Adapted from Glanz (2014); Tichnor-Wagner et al. (2017); Zepeda (2019)

The Context of the Study

Magnolia High School (MHS; pseudonym) is a suburban public high school in the Southeastern part of the United States. MHS was one of 25 high schools a part of Sharkey County Public Schools (SCPS; pseudonym), and it served over 3,300 students in ninth-twelfth grade. The school also staffed over 180 certified teachers at the time of the qualitative research study. Given the student population size of MHS, the faculty strived to minimize variability by prioritizing reducing disparities within classrooms and across school operation processes. The operational and instructional direction of MHS was closely aligned with the district. MHS adopted the SCPS initiative to include a multitiered system of supports (MTSS) as a framework for school improvement.

At the time of the study, 55% of the MHS teaching staff had been in education for 11 years or more, and two-thirds held advanced degrees. Most staff were white, while only 15% of the student body was white. The staff retention rate was stable over the five years preceding the study, averaging 20-40 new staff members. Many new staff changes were due to retirements, promotions, and extra-curricular staffing, influencing the staff allotment. In the past three years, MHS made a concerted effort to support the staff through culturally responsive teaching, social-emotional learning, and equity training.

MHS opened in 2004 and maintained its original motto, “Standard of Excellence,” with aspirations of being a top-performing school in academics, athletics, and the arts. Throughout 21 years, being a top-performing school was a vision and a reality despite the needs of the increasing student population. The free and reduced lunch rate had doubled within the last 6 years from 23% to 55%, student group population shifts, and exponential growth in the multi-

lingual population, yet the class of 2024 cohort produced the highest AP Exam pass rate and graduation rate of 94% in school history.

The 2024-2025 school year welcomed a challenge to continuously reflect, refine, and define problems of practice to maintain and exceed the 2023-2024 benchmarks, with the clear understanding that the needs of the class of 2025 Cohort were significantly higher. The 2024-2025 school year was led by an administration team that had not changed leaders or duties for the first time in eight years and a smaller cohort of new teachers to MHS. The stability of the staffing allowed an opportunity to be reflective and incorporate continuous quality improvement practices throughout the 2024-2025 school year.

Problem Framing Based on the Site

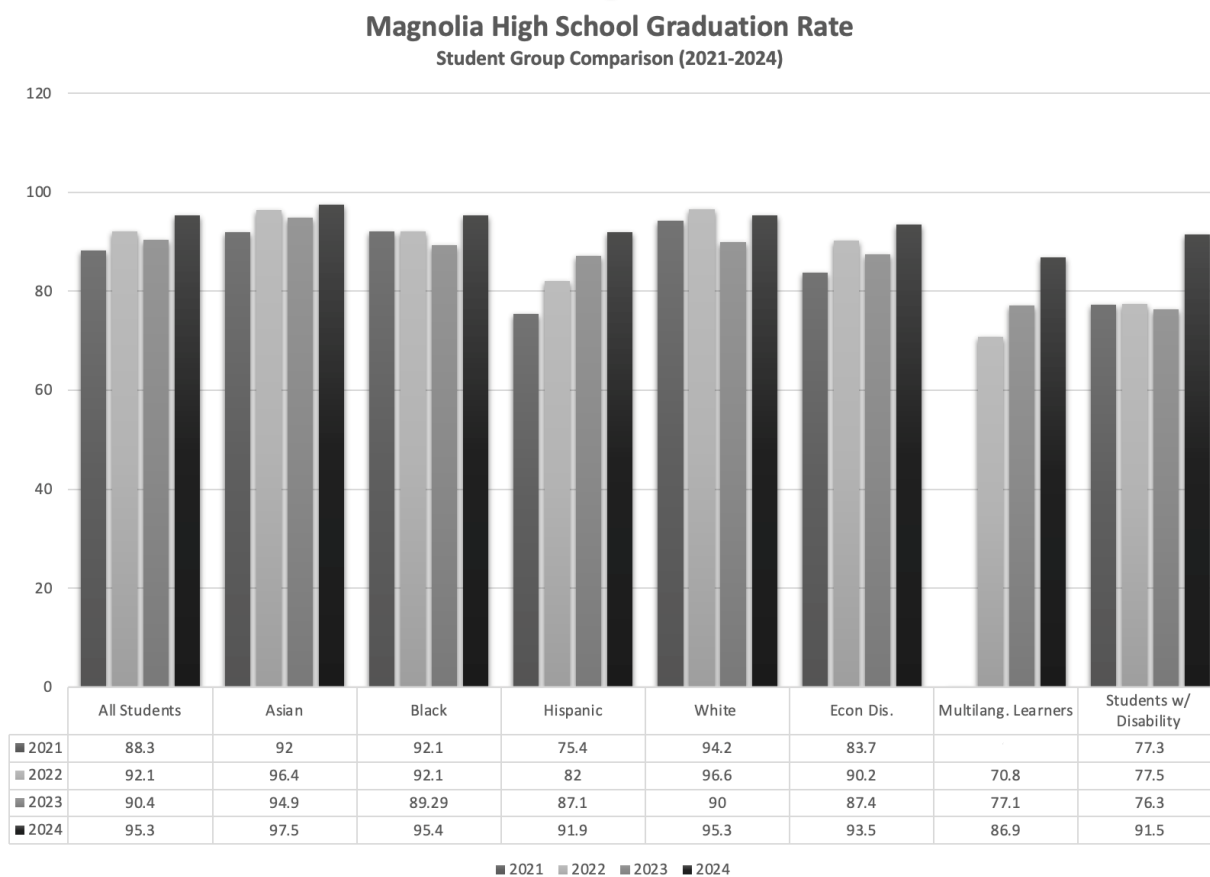
MHS often hosted district and state-level MTSS professional development meetings as it started using MTSS as a framework to support students beginning with the full-year implementation in 2021-2022, a year before SCPS prioritized MTSS in the strategic plan. As a part of its early actions, the MHS leadership team used the continuous quality improvement cycle to welcome new challenges to enhance the MTSS infrastructure annually and respond immediately if there was a flaw within the implementation plan.

Through the continuous improvement cycle, the team, in alignment with SCPS, realized that there was a need to focus on equity-based initiatives that changed the narrative from all students to each and every student in the 2022-2023 school year—mainly using a Multi-Tiered System of Supports (MTSS) components Academic Press and Supportive Community (Murphy, 2016) as a framework for school improvement. The 5-year strategic plan from the SCPS highlighted a need to address the support structures for each and every student.

At MHS, the most significant data point used to evaluate the cumulative wellness of the initiatives is the high school graduation rate. Figure 4.2 demonstrates the 4-year graduation rate over the last four years and shows the graduation rate trends within several different student group populations. The data was collected by an internal student data analysis portal developed by Sharkey County Public School's Data Governance Division.

Figure 4.2

Magnolia High School Four Year Graduation Rate, Four Previous Cohorts 2021-2024



In 2022, while implementing an MTSS framework, the MHS 2022 Cohort graduation rate reached its highest point at 92.1%. During the 2022-2023 school year, the school board appointed the researcher as the Coordinator of Instructional Support for Secondary Schools to support MTSS implementation across secondary settings. While on special assignment and

absent from MHS, the 2023 Cohort graduation rate declined by 2%. Through reflective practices, the researcher identified gaps in the infrastructure and recognized the need to transfer knowledge to other leaders to ensure the faithful implementation of MTSS principles. It became clear that reviewing the processes and increasing student and teacher engagement in MTSS work were essential to meeting the needs of every student. Reflecting on their leadership, the researcher returned to MHS to collaborate on strengthening the MTSS infrastructure.

SCPS provided school leaders with a Cohort Analyzer that desegregates data on credits earned versus credits attempted, enrollment/withdrawal status, and matriculation trends to establish an on-track graduation rate for each cohort. When referring to the graduation dropout rate for the cohort, when a student withdraws from their school before graduation and never enrolls at another school, that student counts against the four-year graduation rate for the last school attended. Therefore, schools must support each and every student they enroll. Table 4.1 *Cohort Analyzer On-Track Graduation Rate Calculation (2025-2028)* was pulled on the first day of the 2024-2025 school year as a baseline of the percentage of each cohort on track for graduation.

Table 4.1

Magnolia High School Cohort Analyzer On-Track Graduation Rate Calculation (2025-2028)

	2025 Cohort (Seniors)	2026 Cohort (Juniors)	2027 Cohort (Sophomores)	2028 Cohort (Freshmen)
Graduation On-Track Rate	76.54%	74.81%	81.35%	100%

For context, the 2028 cohort will initially show 100% “on track” status, as these freshmen were beginning their high school courses, and grades are not finalized on the first day of school. Consequently, students in the 2028 cohort cannot yet be classified as off-track for graduation. In

contrast, only 76.54% of students in the 2025 cohort are currently on track for graduation, nearly 4.5% lower than the 2024 cohort when both were analyzed during pre-planning for their respective years. This underscores the urgency of strengthening the MTSS infrastructure to provide immediate interventions. Given MHS's 4x4 block schedule, where students earned four 0.5 credits, one-half credit per course, every 9 weeks, it was critical to ensure that students in the 2025 cohort succeeded in their current classes and any courses they needed to recover. The school could not delay interventions for these students; they had to be ready for students to receive them on day one of the 2024-2025 school year.

The process of designing interventions and plans, reviewing infrastructure, and identifying off-track students in the 2025 cohort began immediately after IRB approval in March 2024. The Action Research Design Team (ARDT) developed interventions, cohort mentors, schedules, and resources in June and July 2024. During teacher pre-planning, MTSS professional development was a key focus to address the needs of off-track students as soon as they arrived at MHS on August 5th. The intervention model and core practices created by the MTSS Committee were centered not on functioning as a credit recovery assembly line but on equipping students with the tools to leave MHS prepared to achieve their hopes, dreams, and aspirations in post-secondary settings.

The Story and Outcomes

The work of MTSS is collaborative. The belief system at MHS was that all staff members were involved in the MTSS process, as all students needed high-quality Tier I instruction, which is the Academic Press component of Murphy's (1986, 2016) MTSS as a school improvement initiative. Murphy (1986, 2016) identified that students desire to feel connected to the building beyond their academic needs as a supportive community. The Academic Press and Supportive

Community create a system supporting the whole learner. In the 2023-2024 school year, the MHS MTSS team optimistically believed they had systems to achieve the highest graduation rate in school history. However, they projected an uphill battle for the 2025 Cohort. When reviewing the 2025 cohort data, at the beginning of the 2023-2024 school year, the Cohort had the most off-track students and the most disciplinary infractions from their 10th-grade year (2022-2023).

During the 2023-2024 school year, disciplinary infractions and Carnegie credit deficiencies decreased significantly from the previous year; however, Cohort 2025 ended the school year with more students entering their senior year off-track compared to Cohort 2024. There were significant gains in reducing the impact of off-track students; however, the achievement gap was still present.

The work of MTSS is complex, especially at a diverse high school serving nearly 3,300 students. The MHS MTSS Committee consisted of around 45 staff members committed to contributing to support and interventions that help students obtain the tools, skills, and resources to succeed in their post-secondary journey. The committee had specific sub-teams that supported initiatives such as equal opportunities, freshmen core curriculum interventions, and social-emotional learning. For this qualitative research study, the MTSS administrators and principals served on the ARDT, and the sub-team, MTSS cohort mentors, and a counselor served on the ARIT. The interventions and data-based decision-making from the experiences within the ARDT and ARIT hope to inspire other practitioners to truly make MTSS a collaborative process and break silos that can happen within large organizations.

Action Research Design Team

The ARDT included the principal, an assistant principal (the researcher) supporting 12th-grade students, the Mathematics Department, MTSS Academic Press, an assistant principal

supporting the Special Education Department, 10th-grade students, and MTSS: Positive Behavior Interventions and Supports, an assistant principal supporting the Language Arts Department, MTSS: Connectedness and Wellness, Advanced Placement Program and Multilingual Student Services, and the MHS MTSS Coordinator whom was a retired school administrator and had been at MHS since the founding year. Table 4.2 shows the ARDT member, their primary role at MHS, and their MTSS focus area at MHS.

Table 4.2

Action Research Design Team Members

Member	Primary Role at MHS	MTSS Focus Area
Primary Researcher/Assistant Principal 3	Assistant Principal	MTSS: Academic Press
Principal 1	Principal	MTSS Infrastructure
Assistant Principal 1	Assistant Principal	MTSS: Connectedness and Wellness
Assistant Principal 2	Assistant Principal	MTSS: Positive Behavior Interventions and Supports
Teacher/Mentor 1	MTSS Coordinator	MTSS Infrastructure

The selection of the ARDT members was primarily to receive valuable insight and learn from experts in the other MTSS framework domains. The primary researcher had an extensive background in skill-based academic interventions, data-based decision-making, and MTSS Infrastructure. However, growth opportunities existed for leading programs emphasizing behavioral interventions and social-emotional learning supports. Although the qualitative study primarily evaluated the academic needs of students in the 2025 cohort off-track for graduation, whole-child learning, and behavioral support structures are necessary to keep students engaged in their intervention plans for on-time graduation. Secondly, the ARDT represented expertise

in supporting gifted, multi-lingual learners and students with disabilities and pedagogical knowledge in the core content areas.

The primary researcher served as the primary MTSS leader at Magnolia High School and had several years of providing research-based academic interventions with advanced degrees in special education, mathematics and literacy focus, and secondary biology. Additionally, the researcher had a wide range of endorsements to support diverse learners, including Reading, English to Speakers of Other Languages (ESOL), and Gifted, and sought a doctoral degree in Educational Leadership at the time of the study. The primary researcher had local school and district leadership experience and had been requested to provide consultant work for other school leadership teams and state-level MTSS initiatives. When the researcher returned to MHS from a district leadership role in the 2023-2024 school year, the principal assigned them as an assistant principal over the 11th-grade office to support Cohort 2025.

Action Research Implementation Team

The implementation team (ARIT) comprised six cohort mentors who served as teachers and one counselor representative (co-department chair) who voluntarily participated in the MHS MTSS Committee. The MTSS Coordinator also served as a teacher-leader and is on the ARDT and the ARIT. Including the MTSS Coordinator on both teams enabled the primary researcher to observe numerous interventions and ensured that the researcher was not the sole gatekeeper of knowledge. This action facilitated the knowledge transfer and implementation by others at MHS, thereby in hopes of strengthening the infrastructure. The cohort mentors who served for Cohort 2024 renewed their commitment to serve Cohort 2025 and participated in the study. There were no new cohort mentors in the 2024-2025 school year, which gave the study a multi-year continuous quality improvement perspective.

The cohort mentors were matched with a counselor to serve the students. For example, off-track students with last names (A-CK) were scheduled for academic advisement with the cohort mentor and the counselor. At Magnolia High School, during the study, six counselors served students in the 10th-12th grades, organized by students' last names. For this study, the cohort mentors primarily provided interventions and monitoring, and the counseling co-department chair provided a counseling department perspective on the study outcomes. Advisory structures, which partner students in small groups with an adult who meets with them frequently and provides direction and support for students, have positively influenced student achievement (Lieber, 2009). The researcher assigned all ARIT members a pseudonym to ensure confidentiality.

In May of 2024, cohort mentors in the final MTSS Committee Meeting were asked if they would like to continue their work with mentoring off-track students. The primary researcher gathered feedback, and the most significant ask was for the teachers to schedule their off-track students in their academic advisement block. For scheduling purposes, in June 2024, the MHS leadership team identified and scheduled off-track students with teachers. In July 2024, the researcher asked the ARIT to confirm their desire to be 2025 Cohort mentors and consent to the study before collecting pre-planning data (see Appendix B). Once participants consented, the researcher conducted the first intervention meeting on July 30th to prepare the ARIT to start interventions for off-track students on the first day of school, August 5th.

The ARIT had members with varying years of teaching experience and subject-based knowledge. The Cohort 2025 mentors (ARIT) served different student groups with their class schedules; for example, the ARIT member teaches Advanced Placement Research and Advanced Placement Language, a course that does not typically serve students at risk of not graduating on

time. However, the ARIT team members relentlessly advocated for students in need. Table 4.3 summarizes the ARIT member's years of experience, subject area, and student caseload alpha breakdown.

Table 4.3

Action Research Implementation Team

Member	Years of Experience	Subject Expertise	Mentee Caseload
Teacher/Mentor 1 (MTSS Coordinator)	34	Science/Language Arts	HAM-LED
Teacher/Mentor 2	21	Social Studies/Language Arts	A-CK
Teacher/Mentor 3	19	Fine Arts/Math	LEE-O
Teacher/Mentor 4	15	Social Studies Elective	P-SL
Teacher/Mentor 5	35	Math	SM-Z
Teacher/Mentor 6	24	Social Studies	CL-HAL
Counselor	5	Counselor	CL-HAL

Further, Table 4.4 shows the action research study timeline from July to October 2024.

Table 4.4

Action Research Timeline of Events

Action	Audience	Materials	Date Completed
Seek IRB Approval	School District	SCPS IRB Application Package	February 29, 2024
Seek IRB Approval from the University	IRB Committee	IRB Application Packet	March 29, 2024
Initial Research Study Contact	ARDT/ARIT	IRB/UGA CMS I Overview/Email/IRB Consent Form	April 28, 2024

Action	Audience	Materials	Date Completed
Obtain Consent	ARDT/ARIT	IRB Consent Form	July 26, 2024
Cycle I ARDT Meeting	ARDT	Theoretical and Logic Model, Empirical Findings Table, Intervention and Data Analysis Implementation Guide, Focus Group Interview Protocol, Recording Device	July 29, 2024
Cycle I ARIT Meeting	ARIT	Intervention and Data Analysis Implementation	July 30, 2024
Cycle I Interventions Begins	ARIT	Intervention Implementation Guide	August 3, 2024
Cycle I ARIT Individual Interviews	ARIT	Interview Protocol, Recording Device	August 26, 2024
Cycle I ARIT Meeting (Focus Group)	ARIT	Intervention and Data Analysis Implementation Guide, Intervention Materials, Focus Group Interview Protocol, Recording Device	August 29, 2024
Cycle I Interventions Ends	ARIT	Intervention Implementation Guide	September 6, 2024
Cycle II Interventions Begins	ARIT	Intervention Implementation Guide	September 9, 2024
Cycle II ARIT Individual Interviews	ARIT	Interview Protocol, Recording Device	September 25, 2024
Cycle II ARDT Individual Interviews	ARDT	Interview Protocol, Recording Device	September 27, 2024
Cycle II ARIT Meeting (Focus Group)	ARIT	Intervention and Data Analysis Implementation Guide, Intervention Materials, Focus Group	October 8, 2024

Action	Audience	Materials	Date Completed
Cycle II ARDT Meeting (Focus Group)	ARIT	Interview Protocol, Recording Device Theoretical and Logic Model, Empirical Findings Table, Intervention and Data Analysis Implementation Guide, Focus Group Interview Protocol, Recording Device	October 8, 2024
Cycle II Interventions End	ARIT	Intervention Implementation Guide	October 9, 2024

Pre-Planning Action Research Cycle: The Story

The pre-planning period started at Magnolia High School on July 25th and ended Friday, August 2nd, in preparation for providing interventions on the first day of school, August 5th. At the first faculty meeting of the school year, July 5th, the principal and the ARDT provided a high-level overview of the MTSS key performance indicator (KPIs) metrics from the previous year and the MTSS strategic goals and other areas for the 2024-2025 school year. The staff needed to hear on the first day that MTSS work was a high priority at MHS, as there was significant evidence that previous MTSS initiatives have effectively supported the mission and vision. The principal emphasized to the staff that the administration team sought feedback on implementing the goals, highlighting that all staff members, including those involved in MTSS implementation, were integral to achieving success.

In department meetings, each administrator and the teachers within the department engaged in a feedback protocol following the school-wide faculty meeting. The feedback protocol reviewed five strategic implementation initiatives and asked specifically what the staff

should build upon or remove to meet the goal. A high level of feedback from the MTSS initiatives included three themes:

1. Incorporate more ways for teachers to collaborate and share best practices within the MTSS framework.
2. Increase professional development opportunities that target specific components such as PBIS and Social and Emotional Wellness.
3. Continue the academic intervention structures; however, develop processes to reduce variability.

Following the feedback protocol, on July 25 and July 29th, the faculty engaged in breakout sessions to learn more about the strategic goal implementation plan and professional development on effective Tier I instruction within the MTSS framework. The researcher (MTSS: Academic Supports), Assistant Principal 1 (MTSS Wellness and Connectedness; ARDT member), and Assistant Principal 2 (MTSS: Behavioral Supports; ARDT member) lead the professional learning, focusing on their MTSS domain.

The staff participated in a comprehensive overview of the local school improvement plan. The ARDT continued to discuss implementing interventions for the 2025 Cohort off-track students. In preparation for the July 30th ARDT meeting, the design team reviewed staff and student actions to ensure that leader actions supported the professional learning community (ARIT) and that individual teacher and student actions promoted high levels of student engagement. The logic model in this qualitative action research study supports this dialogue sequence among ARDT members.

On July 30th, the ARIT and the ARDT members met with the counseling department to discuss the intervention cycle, the purpose of the intended interventions, and the process for

progress monitoring the effectiveness. The counseling department was instructed to participate in a co-teaching model. They would co-teach the interventions and progress monitoring with the cohort mentors in the ARIT. The MHS counselors had a caseload of 450 students. The ARIT, ARDT, and counselors analyzed the MTSS infrastructure, and the ARDT believed it would be beneficial to streamline the support by having a consistent intervention schedule. Researchers have indicated that scheduling time for interventions in high school is a significant infrastructure challenge (Savitz et al., 2022; Venghaus et al., 2023).

Initially, the ARDT believed that the counseling department may resist having another task to complete. However, to their surprise, after a quick meeting before the conversation with the counseling department, the department showed enthusiasm about the support structure. A counselor sent a message to the researcher immediately after the meeting and stated, “Thank you for lunch yesterday as part of our meeting; it was a treat! I think the new advisement time structure with off-track students is a great idea. Enjoy your day.” Additionally, many counselors stated that the time built in was needed and innovative.

On July 31st, the researcher and Assistant Principal 1 met with the course team leaders of the four core curriculum areas (language arts, mathematics, science, and social studies) to discuss academic safety nets, reducing variability within the course team, and professional development to facilitate impactful professional learning communities (PLCs). Academic safety nets are a part of the MHS Coherence Framework, in which the course teams answered the third professional learning question: “What do we do when students have not mastered the standards” (DuFour et al., 2016, p. 70)? The professional development was critical during pre-planning, as students who are off track or at risk for graduation in 2025 must succeed in their current courses while recovering credits from past course failures. Although each child has unique needs, research

indicates that all students benefit from exposure to high-quality Tier I instruction (Sutherland et al., 2023).

Toward the end of the pre-planning events at MHS, the researcher and the 12th-grade assistant principal hosted a Class of 2025 Parent Meeting. During this meeting, the researcher and the principal spoke to parents about the exciting events planned for the year, the support structures for students, and the goal of achieving the highest graduation rate in school history. The work of MTSS is collaborative; stakeholders, specifically parents, need to know of the support structures in place and be a part of the intervention decision-making.

On the final day of pre-planning, the principal hosted a meeting with the cluster schools, which included four elementary schools, two middle schools, and MHS. He outlined a vision focused on caring for people, impacting students, and emphasizing that the graduation experience is a K-12 effort. The cluster schools met with their respective vertical teams (K-12th grades). In the 2024-2025 school year, the MTSS Vertical Team was established. ARDT members met with 30 teacher leaders and administrators to launch a vertical approach supporting all K-12 students within the Magnolia Cluster. Due to off-track students in the 2025 Cohort showing academic deficits before 12th grade, the vertical team aimed to provide insights for future cohorts. Further research should be conducted on the impact of the vertical team and student matriculation through the cohorts.

Initial Interviews

The researcher asked each member when it would be most convenient to conduct individual interviews, and all members were eager to be interviewed immediately or after school the same day. The researcher conducted initial interviews with all ARIT members at the beginning of Cycle 1, within the first two days of school. These interviews aimed to gather input

from ARIT members on the MTSS infrastructure and capture their perspectives on the Cycle 1 intervention plan before implementation. During this period, ARIT members met their caseload of off-track students for the first time, transitioning from theoretical pre-planning to practical intervention as students began their senior year. To ensure the quality of the interviews, the researcher first interviewed the Teacher 1/MTSS Coordinator to verify that the questions were appropriate and aligned with the qualitative research questions outlined in the action research study. Table 4.5 shows the dates of all interviews.

Table 4.5

Initial ARIT Interview Timeline

Team Member	Date of Initial Interview	Action Research Role
Teacher 1/MTSS Coordinator	August 5, 2024	MTSS Cohort Mentor, ARIT, ARDT
Teacher 2	August 6, 2024	MTSS Cohort Mentor, ARIT
Teacher 3	August 6, 2024	MTSS Cohort Mentor, ARIT
Teacher 4	August 5, 2024	MTSS Cohort Mentor, ARIT
Teacher 5	August 5, 2024	MTSS Cohort Mentor, ARIT
Teacher 6	August 6, 2024	MTSS Cohort Mentor, ARIT
Counselor	August 5, 2024	MTSS Cohort Mentor, ARIT

During the ARIT interview, the researcher asked five questions and a photo elicitation activity in which the candidates were to describe the MTSS infrastructure at MHS with “the three little pigs” house reference, referred to in Chapter 3. The researcher designed interview protocol questions that captured their input on the MTSS infrastructure and their initial thoughts on the Cycle 1 intervention. The semi-structured interviews allowed the interviewees to have

open dialogue and elaborate on their thoughts. Table 4.6 shows the initial interview questions and the alignment with the research questions.

Table 4.6

Initial Interview Questions and Research Question Alignment

Research Question	Interview Questions
RQ3	Based on your pre-planning experience and the current infrastructure, do you see the work of the MTSS Committee this year as preventative or reactionary?
RQ1	If everyone were to leave the MTSS Committee, do you believe the MTSS work would continue, and to what degree? Do we have systems to support sustainability?
RQ3	When considering a sustainable MTSS infrastructure, what skills and knowledge should be passed along to the next group of teacher leaders on the MTSS Committee?
RQ2	As we start our intervention cycle, what are you most excited about? Are there components to the plan that make you apprehensive?
RQ2	Based on the current intervention plan for off-track students, do you feel it would benefit students?

The duration of the interviews varied between participants but averaged 10 minutes. The researcher took notes using the GoodNotes app on an iPad, which allowed the researcher to record and annotate the interview responses. The GoodNotes app served as the researcher's digital tool. Additionally, an artificial intelligence tool, Otter.ai, was used to record and transcribe the interviews. For transparency in research practices and to the interviewees, the data triangulation, transcriptions, and copies of the interview recordings were available for the ARIT members to review only their responses.

Next, the researcher provided a rubric to ARIT members and a random group of teachers who were not a part of the MTSS Committee to gauge the perception of the MHS MTSS

Infrastructure from those deeply involved in the work compared to staff members who were aware of the MTSS initiatives, however, did not participate in the planning, designing, and delivery of interventions and initiatives. The researcher adapted the AIR Rubric Section 5: MTSS infrastructure, which served as a program evaluation tool for schools to assess where they are and make improvements. SCPS required all schools to complete an MTSS AIR Rubric annually at the beginning and end of the school year. Having teachers provide feedback on the MTSS infrastructure was within the normal feedback cycle for schools in SCPS. Including quantitative data analysis as a component of this action research study was appropriate.

The primary researcher masked the identity of the random group of teachers selected and needed to be made aware of who completed the rubric or the selection. The MTSS Coordinator/Teacher 1, who served on the ARDT and ARIT, extracted new teachers to MHS within a school year and the MTSS Committee members within the last three years. The identity of the participants who were not a part of the MTSS Committee was only known to the MTSS Coordinator/Teacher 1 to identify years of experience, subject area, and time at MHS for later analysis in Chapter 5. Each responder was given a number for identity purposes for the primary researcher. At the same time, the coding identifiers were locked on a district computer in a drive only accessible to the MTSS Coordinator/Teacher 1.

The researcher used a quantitative data analysis method called the U-Test, which analyzed the feedback from the rubric from ARIT members and a small semi-random sample size of staff members. An introduction to the U-Test was discussed previously in Chapter 3, and the analysis of the data and findings is further explained in Chapter 5. The rationale of using a quantitative method to compare perspectives of the MTSS infrastructure adds to the triangulation of this qualitative study.

The primary researcher collaborated with all ARIT members for several years, engaging in ongoing discussions about continuous quality improvement cycles for student interventions. The ARIT members felt at ease expressing their genuine opinions and thoughts during the initial interviews. The researcher observed that their verbal and non-verbal communication reflected their usual demeanor throughout the interviews in the researcher's journal. The ARIT members could share their responses freely within their respective contexts. Many ARIT members have been with MHS for over a decade, having experienced multiple administrative teams, making their input particularly valuable as it offered a long-term perspective on the problem of practice. The common themes identified during the interviews were communicated to ARDT as Cycle 1 progressed.

Action Research Cycle 1: The Story

Each action research cycle lasted 4.5-5 weeks. Cycle 1 progressed from August 5th - September 6th. The ARDT met in July 2024 to ensure the intervention plan was appropriate before allowing the MTSS Coordinator/Teacher 1 and Teacher 4 to plan student advisement lessons. During Cycle 1, starting on the first day of school, 147 off-track students had weekly small group advisement lessons co-taught with the assigned 2025 Cohort mentors (ARIT) and the designated counselors and bi-weekly individual interactions with either the counselor or Cohort 2025 mentor. Table 4.7 shows the intervention and reflective activities that happened in Cycle 1. During Cycle 1, the researcher conducted semi-structured individual interviews to allow the ARIT to be self-reflective on their delivery of the intervention plan, make suggestions to the ARDT on improving the MTSS infrastructure, and what was learned by using data-based decision-making to enhance the Cycle 2 intervention plan.

The researcher and ARDT members recognized after reflection on observations from 2023-2024 that students who were identified as being off-track for graduation with similar needs were receiving a different level of support from counselors and cohort mentor pairs.

Additionally, the face-to-face time with counselors was variant. In cycle 1, the ARDT designed the intervention cycle for the cohort mentor and counselor to be present and co-deliver intervention lessons and progress monitor students during a designated 40-minute block once a week with individual student follow-up weekly. The ARDT created and edited a one-pager for the intervention plan to ensure that all the resources were readily available for the 2025 Cohort mentors and that the counselors had access to all the tools.

Students receiving special education services did not participate in the action research intervention cycles in this study. However, the students received support from the special education department. The rationale for excluding students from this study was two-fold: students were already receiving specialized instruction, and the intervention cycle structure would prevent them from getting specialized support from their case managers. To ensure that students with disabilities had access to the research intervention materials, the ARDT invited a special education teacher leader to attend the weekly check-in meetings with Teacher 1, Teacher 4, and the school clerk who supported MTSS clerical tasks.

Every Monday, when school was in session, the researcher, Teacher 1, Teacher 4, a special education teacher rep, and the MTSS clerk met in the researcher's conference room to check the progress of the weekly intervention cycle. This included reviewing the intervention lessons and feedback and evaluating the needs of teacher mentors, counselors, and students involved in the intervention cycle.

The advisement days were August 5th, 6th, 13th, 20th, 27th, and September 3rd. During the first week of school, due to new student registrations and the distribution of Chromebooks to students, the complete lesson and counselor participation in the advisement lesson were inconsistent. On August 6th, the primary researcher visited all off-track students to introduce himself as the 12th-grade assistant principal, offered support, and handed each student a Class of 2025 bracelet to motivate them to graduate with their 2025 cohort. The counselors met with the primary researcher on August 11th to redeliver the intervention plan discussed and pre-planning, as well as to communicate the need for counselors to complete a graduation plan for their off-track students and share it with the 2025 Cohort mentors to raise awareness of the credit deficits.

The ARDT designed Cycle 1 advisement intervention lessons to target ‘just-in-time’ lessons for students to use in practice. For example, one lesson included an opportunity for students to reflect on their K-12 experience and write a letter to their future selves. Another lesson or activity was creating and sustaining momentum with practical goal setting. Within the first two weeks of school, there was some movement of students moving in and out of the cohort monitoring group. The ARDT instructed counselors to carefully evaluate off-track general education students and students who the counselors felt were at risk of becoming off-track based on previous attendance and course performance history. The 147 initial students were narrowed down to 103 students.

Table 4.7

Cycle 1 Advisement Lesson Topics

Date	Lesson Title	MTSS: PBIS Matrix Theme
8/5/2024	Launch Cohort 2025!	Open-Minded
8/6/2024	Establishing Community	Respectful
8/13/2024	Exploring Possibilities	Open-Minded

Date	Lesson Title	MTSS: PBIS Matrix Theme
8/20/2024	Title IX (Mandatory County Lesson)	Accountable
8/27/2024	Navigating GVS	Reflective
9/3/2024	Communicating Your Needs	Respectful
9/5/2024	Communicating Your Needs Part II	Respectful

At the end of the second week of the interventions, the ARIT realized that the data tools that allowed them to see attendance, behavior, and course performance (ABC) student data were not readily available to the mentors. The researcher and the MTSS Coordinator/Teacher 1 designed an internal ABC early warning system to identify students within each caseload needing additional support on August 19th. The researcher had access to separate reports that identified course failures, disciplinary incidents, and attendance presented on Excel documents. The data was filtered, and parameters were set to identify and prioritize students in need. The ARIT determined that the data would be pulled every two weeks. Table 4.8 demonstrates the parameters to identify on-target, developing-risk, and at-risk per ABC domain. The MHS Technology Instructional Coach also created a workaround to the data viewing challenge and supported the ARIT on August 22nd by utilizing the student information system (SIS).

Table 4.8

Student Data Paramotors for Early Warning Indicators

	On Target	Developing Risk	At Risk
Attendance	0-2 unexcused absences	3 unexcused absences	4 or more unexcused absences
Behavior	0 Major Incidents	1 Major Incidents	2 or more Major Incidents
Course Performance	0 Course Failures	1 Course Failure	2 or more Course Failures

Professional development is essential in a learning organization. Two members of the ARIT and ARDT engaged in a four-hour professional development hosted by the district office and all high school MTSS leaders in the district on August 22nd. The professional learning topics included reviewing legislation surrounding MTSS, MTSS infrastructure, graduation rate, and MTSS/RTI for high school students.

Cycle 1 Observations

On the second day of school for the 2024-2025 school year, the researcher visited all six cohort intervention rooms supported by the six teachers in the ARIT and their counselor pairs. Students seemed to be very quiet but enthusiastic about the school year. cohort mentors were actively trying to get to know their students and providing students with the intervention lesson entitled “*Establishing Community.*” The cohort mentors (ARIT) and the counselors modeled how to be good listeners, and students practiced this skill with their peers. At the end of the lesson, students were introduced to creating a vision board for their post-secondary goals. The researcher visited each room and observed that the ARIT provided the same lesson, and the pacing was appropriate. There was little to no variation in student experiences across the MTSS program.

Additionally, on August 13th, the researcher observed two classrooms engaging in the “Exploring Possibilities” lesson and creating their vision board. Staff members donated magazines for students to use images to make their vision boards. One student in the Teacher 6 classroom asked to create a digital board, and Teacher 6 supported his decision and complimented him for tailoring the experience to his needs. The final observation for Cycle 1 was held on September 3rd, and the lesson was entitled “*Communicating Your Needs.*” Cohort mentors and counselors had students look at their grades and practice effectively communicating

with teachers on how to get the help they need to succeed. This communication lesson involved role-playing and drafting emails to the teachers. All observation notes were captured in the researcher's journal.

Cycle 1 Individual ARIT Interviews

The researcher conducted individual interviews on August 26th, beginning week 4 of the intervention cycle, and concluded on August 27th, as outlined in Table 4. 9. The rationale for conducting the interviews at this time was to gather the individual perspectives of the ARIT members before gathering feedback from the Focus Group Interview on August 29th. The individual interview and focus group interview outcomes, with student data, guided adjustments to Cycle 2 of the research phase.

Table 4.9

Cycle 1 Interview Timeline

Team Member	Date of Initial Interview	Action Research Role
Teacher 1/MTSS Coordinator	August 26, 2024	MTSS Cohort Mentor, ARIT, ARDT
Teacher 2	August 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 3	August 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 4	August 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 5	August 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 6	August 26, 2024	MTSS Cohort Mentor, ARIT
Counselor	August 27, 2024	MTSS Cohort Mentor, ARIT

The researcher asked the ARIT members four main questions, with some having a follow-up question to guide participants in reflecting on the actions taken in Cycle 1. The ARDT team reviewed the interview protocol before administering it to the ARIT. The semi-structured

interviews allowed the interviewees to have open conversations and elaborate on their perspectives. Participants were provided the questions one day before the interview. The rationale was to enable ARIT members time to be aware of the questions being asked and to allow the participants to reflect on their responses. Table 4.10 shows the Cycle 1 interview questions and the interview questions aligned with the research questions.

Table 4.10

Cycle 1 ARIT Interview Questions and Research Question Alignment

Research Question	Interview Questions
RQ3	How can cohort mentors and administrators enhance collaboration to support off-track students in the 2025 Cohort?
RQ2	Within the first 4.5 weeks, how effective do you believe the intervention structure is working for off-track students, and how can you tell?
RQ2	Based on the current intervention plan, what improvements can be made?
RQ2/RQ3	What have you learned so far about your professional knowledge in supporting your caseload? What skills, tools, or knowledge do you need to support your off-track students best?

After the interviews, the researcher provided participants with an assessment of the transcription of their interview and asked if the interview responses were a true and accurate depiction of their thoughts while checking for understanding. Assessing the transcription and member checking adds trustworthiness to the qualitative research study. Universally, some of the immediate feedback that the researcher gathered from the Cycle 1 individual interview questions included that the rosters were not settled until the beginning of Week 3, the beginning of school-mandated lessons took time away from the specific lessons, cohort mentors were not following

the implementation plan with fidelity, and the collaboration between the researcher as an administrator supporting students was firm; however, the level of support was inconsistent with other leaders in the building.

The ARIT interview feedback suggested the questions were thought-provoking and allowed the ARIT member to reflect on their individual and group practices. In fact, during the interview, Teacher 3 reflectively responded to the question based on the current intervention plan and what improvements could be made and followed up with the researcher by email the next day with a Google Document of ideas that they had to improve some of the MTSS initiatives. This action demonstrated that the culture was set that teachers had efficacy and autonomy to add insight to the implementation plan. The researcher and Teacher 3 met on September 4th to discuss her ideas and provide teacher leadership opportunities for implementation shortly.

Cycle 1 ARIT Focus Group

The ARIT met with the primary researcher to conduct a semi-structured focus group interview on August 29th. The meeting served dual purposes: the regular monthly meeting and a time to ask reflective questions to gather feedback for Cycle 2. All ARIT members were present in the meeting, excluding Teacher 6. Teacher 6 had a mandatory testing and accountability training that was rescheduled. The following was the meeting agenda :

1. Review the student information system (SIS) functions to review student grades and contact parents.
2. Review the 4.5 Week Intervention Plan (Focus Group)
3. Gather feedback on the student reflective survey
4. Review the internal academic, behavior, and course performance (ABC) data protocol.

The researcher conducted the focus group interview in a conference room. The meeting was recorded using an artificial intelligence program called Otter.Ai. The researcher asked three questions identified and aligned with the appropriate research question in Table 4.11. The semi-structured interview allowed for open conversation and dialogue between the ARIT members.

Table 4.11

Cycle 1 ARIT Focus Group Questions and Research Question Alignment

Research Question	Focus Interviews Questions
RQ2	What went well with the intervention plan during the first 4.5 weeks, and how do you see the work involved in the second 4.5 weeks?
RQ2	What has been your experience in supporting off-track students thus far?
RQ3	What skills, tools, or knowledge do you need to support your off-track students best?

Throughout the focus group, the ARIT freely spoke about their celebrations and concerns; for example, Teacher 5 mentioned that her counselor mentor needed to be more involved and commented that other counselors were, according to what other ARIT members experienced. The researcher considered accountability measures that aligned with the logic model of this study to reduce variability. The logic model demonstrated that leaders, professional learning communities, teachers, and students influence student achievement and engagement. The researcher used a journal to capture thoughts and ideas from the meeting and correlate the findings to the transcription of the meeting.

On September 3rd, the teacher leaders of all three MTSS areas (academics, behavior, and connectedness/wellness) included Teacher 1 and Teacher 4. The purpose of the work session was to establish the Magnolia Cluster Vertical MTSS Meeting agenda, review the core beliefs, and

develop topics through November 2024 for the weekly MTSS Monday Newsletter for staff members. The final student advisement lesson was held on September 3rd, which concluded Cycle 1 interventions. Students receiving the interventions were given a survey that captured feedback from the intervention cycle and checked in on their engagement at MHS. Table 4.12 is a sample of the questions that were asked to students. The results of the student surveys were not directly included in the data analysis; however, they serve as an example of questions to ask high school students if the ideas from this action research study are replicated.

Table 4.12

Cycle 1 Student Survey Questions

Question	MTSS Domain
How connected do you feel to school? (Likert)	Wellness
How much support do you feel PRIDE provides you this year compared to last year? (Likert)	Wellness and Academics
What is a potential barrier to you being successful?	Wellness and Academics
What resources can PRIDE provide you with to ensure your success?	Wellness and Academics
What PRIDE activity has been most meaningful? Why?	Academics

After Cycle 1, the researcher presented the MTSS journey of SCPS and MHS to nine metro districts and their senior leaders at a regional state department meeting. The presentation included the SCPS strategic initiative, priorities for the 2024-2025 school year, data-based decision-making, and lessons learned from MHS implementation of MTSS to address the graduation rate. Metro leaders were introduced to the theoretical framework that drove this action research study. After the presentation, other districts asked to visit MHS. The researcher invited participants to observe MTSS interventions during Cycle 2 of this study.

During Cycle 1, the researcher collected artifacts such as student feedback tools, the researcher's journal, goal-setting sheets, program implementation documents, lesson plans, and observation notes. As the researcher unfolds the actions in Cycle 2, the next section will capture the adjustments and lessons learned.

Action Research Cycle 2: The Story

Cycle 2 started on September 9th and continued through October 9th, 4.5 weeks, the end of the MHS Quarter 1 grading period. On September 9th, members from the ARDT analyzed the student survey results, ABC data, and teacher mentor reflections to make recommendations for Cycle 2. The team concluded that the plan did not need any adjustments; however, leader actions were required to increase to ensure that the action items within the intervention implementation plan were happening with fidelity. For example, although most counselors attended, not every counselor attended every intervention session. However, there were counselor outliers following the implementation plan. Additionally, teacher mentors and counselors did not universally meet individually with students in Cycle 1. The implementation plan called for the teacher mentor and counselor to have individual meetings twice a month with students.

The researcher and the administrator supporting the counseling department met with all counselors to share Cycle 1 successes, collaborate best practices, review the implementation guide, and redeliver expectations on September 10th. All counselors recognized the value of the intervention implementation guide and reported that many of those students had not skipped the intervention time built into their schedule. One counselor stated, "I believe students enjoy the intervention time and see this as a safe, supportive environment. When I look at their attendance, many students' attendance is better on days we have the intervention time. (cite)". To support students and the missed opportunity to meet with students, the administration team decided to

double the days students have the intervention time for September and close the counseling office during this time.

Additionally, the ARDT was concerned about student engagement throughout the year and decided to add a gamification element to their intervention plan. In September, students who needed credit recovery could complete one full credit for free and avoid paying the \$40.00 registration fee. The intervention lessons continued through Cycle 2. The lessons primarily focused on post-secondary goal setting. Table 4.13 shows the intervention lesson titles provided to students and the lesson connection to the schoolwide PBIS Matrix.

Table 4.13

Cycle 2 Advisement Lesson Topics

Date	Lesson Title	MTSS: PBIS Matrix Theme
9/10/2024	Recalibrating	Reflective
9/12/2024	Career Exploration/EOS	Reflective, Open-Minded
9/17/2024	Eyes on the Prize	Open-Minded
9/19/2024	Identifying Potential Careers	Open-Minded
9/24/2024	Focus on the Finish Line	Accountable
9/26/2024	Communicating your Needs	Accountable
10/1/2024	Gearing Up for Graduation	Accountable
10/3/2024	Introduction to Magnolia Time	Accountable, Open-Minded

As Cycle 2 continued, teacher mentors received ABC data bi-weekly to support academic goal-setting and student conversations. They conversed with parents, counselors, and teachers who supported their mentees on specialized plans to address their academic needs. The goal-setting template teacher mentors used can be found in this action research dissertation (Appendix E).

On September 12th, Teacher 3 was prompted by an interview question regarding potential improvements to the current intervention plan. Specifically, the question asked, “Based on the current intervention plan, what improvements can be made?” This inquiry sparked several days of reflection. Teacher 3 developed multiple ideas to enhance and expand the implementation of Multi-Tiered System of Supports (MTSS) for her teacher leadership project. These ideas were an extension of her thoughts from Cycle 1. Teacher 3 proposed 17 to 20 different strategies, and with the researcher's assistance, these were refined into three to four actionable ideas. Her primary focus was ensuring that MTSS practices and knowledge were transferred effectively to other teacher leaders and involving additional stakeholders in supporting MTSS initiatives at MHS. This directly addressed Research Question 3. Additionally, the researcher reflected on leadership actions that could support MTSS initiatives, which aligned with Research Question 1, and documented these reflections in the research journal.

During a faculty meeting on September 20th, the MHS staff received updates on the ongoing MTSS initiatives and tiered intervention programs. Topics covered included using the student information system (SIS) to identify students involved in MTSS programs and assess their needs and introducing a new ABC report. This report, accessible to all teachers, enables the prioritization of at-risk students by reviewing key data points such as attendance, behavior, and course performance. Furthermore, the staff was reminded to regularly review the "MTSS Monday" newsletter and discussion post, which provides timely practical tips and strategies for implementing MTSS, including academic, PBIS (Positive Behavioral Interventions and Supports), and SEL (Social Emotional Learning) components at the Tier 1 level. The discussion post also allowed teachers and staff members to share their best practices, fostering collaborative engagement among staff members.

Finally, at the faculty meeting, teachers were reminded of the multi-level prevention system and the steps to take after teachers had exhausted Tier 1 strategies (Appendix F), such as notifying the MHS Office of Student Supports and the researcher's office to provide additional support and resources to support the student before the student failing a course. The staff members then separated into department meetings to follow up on student support structures within their respective departments.

Cycle 2 Observations

On September 10th, the researcher observed the counselors taking the lead and providing students with information such as the college application process and reviewing the graduation requirements, GPA weights, and other crucial post-secondary planning information in three classrooms. Students seemed to be engaged at the beginning; however, the researcher observed the presentation delivery to be less dynamic than other observed lessons. Towards the end of the lesson, more students seemed to be disengaged. The cohort mentors (ARIT) actively monitored and corrected student behaviors during the presentation.

On September 24th, the researcher observed cohort mentors (ARIT) and counselors providing interventions. Based on the interactions between the adults providing the interventions and students, it was evident that a relationship had been established in Cycle 2. Teacher 4 told a student she was thinking of him and was glad to see him after missing the last session. The student returned her perceived jester of kindness with a smile. Students were actively engaged in completing a post-secondary survey to capture their goals and career interests. As students completed their survey, the cohort mentors and counselors met with students individually to follow up on goal-setting sheets. All observation notes were captured in the researcher's journal.

Cycle 2 Individual ARIT Interviews

The researcher interviewed the ARIT members on September 26th (Table 4.14), midway through Cycle 2, to collect feedback and assess needs two weeks before students took their final exams. The outcomes of individual and focus group interviews, combined with student data, informed necessary adjustments to Cycle 2. These interviews allowed ARIT members to reflect on the intervention cycle and strategize for preparing students for their upcoming final exams on October 8th and 9th. The researcher notified participants of the interview schedule one week in advance via email and Microsoft Outlook calendar invitations.

Due to a tropical storm, SCPS announced a digital learning day on September 26th, during which staff reported to campus while students remained at home. The researcher offered open interview availability, accommodating participants by canceling pre-scheduled calendar invitations to allow for flexibility. However, the counselor on the ARIT was unavailable for an interview on this day. On September 27th, staff and students were excused from attending school due to the hurricane weather conditions.

Table 4.14

Cycle 2 Interview Timeline

Team Member	Date of Initial Interview	Action Research Role
Teacher 1/MTSS Coordinator	September 26, 2024	MTSS Cohort Mentor, ARIT, ARDT
Teacher 2	September 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 3	September 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 4	September 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 5	September 26, 2024	MTSS Cohort Mentor, ARIT
Teacher 6	September 26, 2024	MTSS Cohort Mentor, ARIT

The researcher asked ARIT members three questions, with some of the questions having a follow-up question to guide participants in reflecting on the actions taken in Cycle 2. The ARDT reviewed the interview protocol before administering it to the ARIT. The semi-structured interviews allowed the interviewees to have open conversations and elaborate on their perspectives. The researcher provided participants with the questions one day before the interview. The rationale was to allow ARIT members time to be aware of the questions being asked so that they could reflect on their responses. Table 4.15 shows the Cycle 2 interview questions and the interview questions aligned with the research questions.

Table 4.15

Cycle 2 Interview Questions and Research Question Alignment

Research Question	Interview Questions
RQ3	Based on your experience in Cycle 2, what intervention lessons have been most effective for students and why?
RQ2	How can cohort mentors and the administration team increase their collaboration to support off-track students?
RQ2	What have you learned about students and yourself through supporting students off track for graduation?

After the interviews, participants were given a transcript of their responses and asked to verify whether it accurately reflected their thoughts and confirmed their understanding.

Reviewing the transcription and conducting member checks enhances the trustworthiness of the qualitative research study.

Cycle 2 Individual ARDT Interviews

The researcher conducted individual interviews with the ARDT members on September 26th (Table 4.16), midway through Cycle 2, to gather feedback and assess how leadership can

effectively support the ARIT and the students involved. These interviews allowed ARDT members to reflect on the intervention cycle and identify potential shortcomings in the system before students took their final exams on October 8th and October 9th. The researcher notified participants of the interview schedule one week in advance through email and Microsoft Outlook calendar invitations.

Due to a tropical storm, SCPS announced a digital learning day on September 26th. During this day, staff reported to campus while students remained at home. The researcher offered open interview availability to accommodate the participants. On September 27th, neither staff nor students were required to report to school.

Table 4.16

Cycle 2 Interview ARDT Timeline

Team Member	Date of Initial Interview	Action Research Role
Teacher 1/MTSS Coordinator	September 26, 2024	MTSS Cohort Mentor, ARIT, ARDT
Teacher 2	September 26, 2024	Principal, ARDT
Teacher 3	September 26, 2024	Assistant Principal, ARDT
Teacher 4	September 26, 2024	Assistant Principal, ARDT

The semi-structured interviews allowed the interviewees to have open conversations and elaborate on their perspectives. The researcher asked ARDT members three main questions, with some having a follow-up question to guide participants in reflecting on the actions taken in Cycle 2. The researcher provided participants one day before the interview. The rationale was to allow ARDT members time to be aware of the questions being asked and reflect on their responses.

Table 4.17 shows the Cycle 2 interview questions and the interview questions aligned with the research questions.

Table 4.17

Cycle 2 ARDT Interview Questions and Research Question Alignment

Research Question	Interview Questions
RQ1	With your knowledge of the current infrastructure to support off-track students, how can we better support them?
RQ3	How can cohort mentors and the administration team increase their collaboration to support off-track students?
RQ1	What have you learned about students and yourself through supporting students off track for graduation?

After the interviews, participants were provided with transcripts of their responses and asked to verify the accuracy of the transcription and confirm their understanding. This transcription review and member-checking process enhanced the trustworthiness and credibility of the qualitative research study.

The final advisement lesson for students in Cycle 2 took place on October 1st. During this session, the cohort mentors made several announcements regarding graduation preparation, senior year events, and strategies for a successful second quarter (Q2). After Cycle 2, students in the off-track cohort were given a survey to provide feedback (Table 4.18) to the ARIT and ARDT about their needs as they move into Q2.

On October 2nd, a day after the last intervention lesson, the researcher reviewed graduation data recently released by the state. During this review, a school counselor approached the researcher to discuss one of her off-track students who was facing significant challenges at home, resulting in a Child Protective Services referral. While meeting with the student, the

counselor reported that the student expressed how the intervention advisement program had been a crucial source of motivation, helping her to stay on track and see a purpose in her efforts. The student also noted the support from the ARIT, which had not been available to her in the previous school year.

The researcher documented this interaction with the counselor in the research journal. Later that day, the MHS principal, an ARDT member, attended his monthly leadership development meeting and informed the researcher that the district office had requested him to speak at the October 2024 School Board Meeting about the MTSS journey and the processes implemented at MHS to support on-time graduation. The researcher reflected that the impetus for this study originated from concerns raised by the school board in October 2023 regarding declining graduation rates. This concern and the need for schools to establish improvement goals, mainly through implementing MTSS, led to MHS being recognized at the school board meeting a year later for its proactive approach and the successful execution of the intervention cycle outlined in this study.

Table 4.18

Cycle 2 Student Survey Questions

Question	MTSS Domain
How connected do you feel to school? (Likert)	Wellness
How much support do you feel PRIDE provides you this year compared to last year? (Likert)	Wellness and Academics
What is a potential barrier to you being successful?	Wellness and Academics
What resources can PRIDE provide you with to ensure your success?	Wellness and Academics
What PRIDE activity has been most meaningful? Why?	Academics

Students took their final exams on October 8th and October 9th, marking the end of the first quarter (Q1). The ARIT met on October 8th to conduct a continuous quality improvement protocol, analyze the support provided to students, and conduct a focus group interview.

Cycle 2 ARIT & ARDT Focus Groups

On October 8th, the ARIT convened with the primary researcher for a semi-structured focus group interview. The meeting served dual purposes: it functioned as the regular monthly ARIT meeting and an opportunity to ask reflective questions to gather feedback in preparation for Q2. All ARIT members were in attendance. The meeting agenda was as follows:

- 1. Review of overall Q1 data (encompassing Cycle 1 and Cycle 2)
- 2. Conduct a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis
- 3. Review of the 3rd 4.5-week intervention plan (Focus Group)

During the focus group, participants were asked three key questions. The interview took place in the researcher's conference room and was recorded using the artificial intelligence software Otter.ai. Table 4.19 outlines the specific questions asked during the interview and their alignment with the research questions.

Table 4.19

Cycle 2 ARIT Focus Group Questions and Research Question Alignment

Research Question	Focus Interviews Questions
RQ2	What went well during the second 4.5 weeks with the intervention plan, and how do you see the work evolving in second quarter Q2? What can be improved?
RQ2	What skills, tools, or knowledge do you need to best support your off-track students?
RQ3	What opportunities exist to expand collaboration with stakeholders to strengthen the current MTSS infrastructure?

All ARIT members were present during the focus group interview, excluding the counselor. The counselor served a three-week jury duty, making the counselor unavailable on campus. The team responded to the interview questions surrounding proactive measures to support students moving forward, communicating with stakeholders earlier, and supporting multilingual learners. The researcher celebrated the graduation rate and sub-group data for the class of 2024 with the team as the state department released the rates to the public.

Additionally, on October 8th, the ARDT met with the primary researcher for a semi-structured focus group interview. This meeting had two objectives: to assess leadership action steps for immediate adjustments and to gather reflective feedback in preparation for Q2. All members of the ARIT were in attendance. The meeting followed the agenda below:

- 1. Review of overall Q1 data (covering Cycle 1 and Cycle 2)
- 2. Review of the Q2 intervention plan (Focus Group)

Participants were asked three key questions during the focus group, held in a conference room and recorded using Otter.ai. Table 4.20 details the specific questions asked during the semi-structured focus group interview and their alignment with the research questions.

Table 4.20

Cycle 2 ARDT Focus Group Questions and Research Question Alignment

Research Question	Focus Interviews Questions
RQ1	What adjustments must be made to support the MTSS infrastructure to support students off-track for graduation?
RQ1	What skills, tools, or knowledge do we need to best support your off-track students moving forward?
RQ3	What opportunities exist to expand collaboration with stakeholders to strengthen the current MTSS infrastructure?

All members of the ARDT were present during the meeting. The researcher went over a high-level overview of the work of the ARIT and their responses to the data. The team spent much time discussing the professional development needs as MHS student population needs have shifted, post-secondary career exploration and interest, and the continuous quality improvement cycle to expand the work in grades 9th-11th to make the MTSS graduation work more of a preventative model.

Cycle 1 and Cycle 2 Artifacts

The action reach team artifacts included the theoretical framework, logic model, and action research cycle to drive the intervention cycle and continuous quality improvement. Additional artifacts included ARIT meeting agendas, documentation about student intervention materials, transcriptions of ARDT and ARIT individual and focus group interviews with transcriptions and recordings, program evaluation rubrics, and research journal notes. Table 4.21 summarizes the alignment between the research questions, data sources collected, and the theoretical framework.

Table 4.21

Alignment of Research Questions and Data Sources to Theoretical Framework

Research Questions	Collected Data Sources	Alignment to Theoretical Framework
RQ1: How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?	• Pre-Planning Cycle ARDT Focus Group Interview Responses • Cycle 2 ARDT Individual Interview Responses • Cycle 2 ARDT Focus Group Interview Responses • Documentation • Research Journal • Program Evaluation Rubric	• Organizational Knowledge • Organizational Examination

Research Questions	Collected Data Sources	Alignment to Theoretical Framework
RQ2: How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?	• Pre-Planning Cycle ARIT Individual Interviews • Cycle 1 and Cycle 2 ARIT Individual Interview Responses • Cycle 1 and Cycle 2 ARIT Focus Group Interview Responses • Observations • Researcher's Journal • Documentation	• Organizational Knowledge • Organizational Implementation
RQ3: What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?	• Cycles 1 & 2 ARDT and ARIT Focus Group Interview Responses • Cycle 2 ARDT Individual Interview Responses • Cycle 1 and Cycle 2 ARIT Focus Group Interview Responses • Researcher's Journal • Documentation	• Organizational Examination

Chapter Summary

Chapter 4 details the context of MHS and the problem framing based on the site. The purpose of this study was to analyze leadership strategies and reflective practices that support the enhancement of a large suburban high school's Multi-Tiered System of Supports (MTSS) infrastructure that supports closing the credit deficiencies gap while supporting students' post-secondary goals. The researcher, with the support of the ARDT, enhanced the MTSS infrastructure by scheduling weekly intervention times for off-track students to be engaged with their cohort mentor (ARIT) and counselor. Given the nature of the study, the researcher utilized focus groups, observations, documents, and research notes to gather insight on enhancing the MTSS infrastructure. The researcher extensively utilized 27 semi-structured interviews to capture the individual perspectives of the ARDT and ARIT members, considering the experiences of collaborating to support off-track students.

Chapter 5 will present the case findings in chronological order, reflecting the progression of the study across two 4.5-week action research cycles. The perspectives of the ARDT and ARIT will be emphasized to highlight key insights. This chapter will offer a detailed account of data collection, findings, and analysis. From the various data sources highlighted in Chapter 4, the triangulation of data sources will be used to infer research themes in Chapter 5 as they relate to the three research questions of this study.

CHAPTER 5

ANALYSIS OF FINDINGS FROM THE ACTION RESEARCH CASE

Chapter 5 analyzes the findings presented in Chapter 4, offering a comprehensive review to highlight the key outcomes. Eight findings emerged from the research, each closely tied to the major themes identified in Chapter 4. These themes were the cornerstone of the findings, providing critical insights into implementing interventions within the Multi-Tiered System of Supports (MTSS) framework. This chapter revisits and reexamines the thematic analysis that guided the research process, offering a detailed exploration of how the study unfolded. The focus remains on the collaborative efforts of the Action Research Implementation Team (ARIT) and the Action Research Data Team (ARDT) in addressing the needs of students identified as off-track for graduation.

The purpose of this action research study was to investigate leadership strategies and collaborative practices that improve the MTSS infrastructure of a large suburban high school. The goal was to address student credit deficiencies and increase the number of off-track students graduating within their four-year cohort while supporting post-secondary planning. This qualitative action research study included an Action Research Design Team (ARDT) and an Action Research Implementation Team (ARIT).

1. How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?

2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?
3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?

Qualitative Data Analysis Methods

Chapter 5 chronologically presents the case findings within each research question as the study unfolded during the two 4.5-week cycles. To support the rationale of organizing Chapter 5 chronologically, Merriam and Tisdell (2016) suggested that qualitative action research data analysis is not solely focused on *what* happened but on *how* it occurs over the action research cycle. The researcher sequentially organized how the findings emerged while investigating the research questions. Merriam and Tisdell (2016) further explained that “at the most basic level, data are organized chronologically or sometimes topically and presented in a narrative that is largely, if not wholly, descriptive” (p. 215). Chapter 5 presents the process for developing themes to answer the research questions.

This qualitative action research study investigated the leadership strategies and collaborative practices that improved the MTSS infrastructure of a large suburban high school to address student Carnegie credit deficiencies and increase the number of off-track students graduating within their four-year cohort while supporting post-secondary planning with students. During the summer of 2024, the ARDT identified 103 students within the 2025 cohort by an internal cohort monitoring student information system (SIS) as off-track for graduation or at risk of falling off track. An assistant principal scheduled the students in regular advisement sessions grouped as smaller, alphabetized cohorts for academic and post-secondary planning

interventions. These alphabetized groups of off-track students were based on existing alphabetized counselor caseloads. The design team created six counselor and teacher mentor groups based on the six 10th-12th grade counselors at Magnolia High School (MHS) and six teacher mentors who were ARIT members. The team sought to improve student engagement and support students recovering previously failed Carnegie credits, ensure students had the tools to pass their current courses, and provide tools for post-secondary readiness and goal setting.

The researcher aimed to establish an MTSS framework and inform faculty about the comprehensive student support plan before the school year began on August 5th. Therefore, planning and professional development happened during MHS pre-planning week, seven workdays before students returned to school. The researcher met with the ARDT to discuss the research plan, theoretical framework, logic model, and intervention plan and make adjustments before distributing the plan to the ARIT. The meeting also served as a semi-structured focus group to gather feedback.

Staff professional development on the MTSS framework occurred during the pre-planning week. Specifically, the ARIT and counselors met with ARDT members to review the intervention plan and seek feedback before implementation. The ARDT led the intervention plan structure, and the MTSS Coordinator/Teacher 1 also served on the ARIT as a bridge from the administrative lens to the practitioner lens within the ARIT. Teacher 4 served as a teacher leader within the ARIT, co-developing many intervention lessons provided to students.

In each 4.5-week cycle, the ARDT and the ARIT held a collaborative meeting and conducted focus group interviews to foster collective input. The MTSS Coordinator/Teacher 1, Teacher 4, and the researcher also met weekly to ensure that student intervention lessons remained relevant and practical. Additionally, the MTSS Coordinator/Teacher 1 and the

researcher met weekly to review data and evaluate program needs. The researcher maintained consistent, informal interactions with individual ARDT members throughout each cycle to gather ongoing feedback. The combination of formal collaborative meetings, informal discussions, and semi-structured interviews was consistent across Cycles 1 and 2. The data collected included two focus group interviews with the ARDT, two with the ARIT, four individual ARDT interviews, twenty individual ARIT interviews, six pages of observation notes, numerous documents related to the study, and entries in the researcher's journal.

Chapter 5 comprehensively analyzes data collection methods, findings, themes, and data analysis. In the pre-cycle phase, a quantitative component is included to enhance the triangulation of findings and perspectives from MHS staff members. Multiple data sources, such as responses from semi-structured interviews, focus groups, documents, the researcher's journal, and meeting transcripts, were triangulated to synthesize the extensive data into overarching themes. The primary researcher revisited the three action research questions considering the findings presented in the chapter. The data revealed a narrative of educators collaborating to support students off track for graduation, equipping them with the academic tools and skills needed to pursue their post-secondary goals. The upcoming sections will outline these findings from the action research process.

Findings Overview

The researcher identified key findings using an inductive coding process for the first round and then a deductive coding process to verify emerging codes. The responses that drove the coding process included individual interviews from the ARDT and ARIT members, focus groups, weekly meeting notes, documents related to the study, and observation notes. The

researcher kept auditory and journal notes to confirm the themes that the coding process produced. As a result, eight findings emerged from the study after data analysis:

1. Participants indicated that the social dynamics of student and staff perceptions of academic intervention play a significant role in the development of the MTSS program.
2. Participants indicated a need for leaders to expand the collaboration network with various stakeholders.
3. Cohort mentors saw the value of consistent data analysis and student observations to assess the effectiveness of interventions.
4. Cohort mentors highlighted the importance of professional development in supporting students with executive functioning deficits and fostering self-efficacy and accountability.
5. Cohort mentors identified the need for a staff professional learning opportunity to support teachers in implementing a multi-level prevention system to address diverse student needs, such as multilingual learners, to enhance teacher efficacy and strengthen preventive measures at the Tier I level.
6. Participants indicated that infrastructure needs to be enhanced to reduce time constraints and competing initiatives when providing interventions and support.
7. Participants indicated that effective communication across all stakeholders is critical to meeting the needs of students.
8. Participants revealed a need to reduce variability within the leadership team regarding how students who are at risk are supported.

Data Analysis Process

Qualitative Data Analysis Process

The data analysis followed an inductive coding process applied to focus group and individual interview transcripts. The researcher conducted coding using Delve Tool, an online qualitative data analysis software, where initial codes were inspired by key terms from the American Institute of Research (AIR) MTSS Fidelity of Implementation Rubric. Terms like fidelity, prevention, and infrastructure served as starting points for coding. The researcher labeled interviews by timing, indicating whether they occurred during Planning Cycle 1 or Cycle 2. The coding process followed a sequential order based on interview timing, followed by a second round of deductive coding to align with the initial coding scheme and research questions.

After completing the second coding round, the researcher consolidated similar codes into broader categories, carefully maintaining their original meanings. These broader codes were designated as minor codes within the more significant categories. A third coding round ensured consistency across the data. To validate the methodology and alignment of findings with the raw data, the researcher consulted two external peers, a process known as peer debriefing (Merriam & Tisdell, 2016; Bloomberg, 2023), which added credibility to the qualitative analysis.

After the researchers had finalized the codes in the Delve Tool, they used Excel to track the frequency of each code across various research stages (see Table 5.1). Codes were then grouped into categories using post-it notes, which evolved into themes (Appendix H). The final organization of codes from three rounds of analysis, study artifacts, and the researcher's journal led to the development of initial themes. A fourth coding round refined these themes as they emerged from the data.

Table 5.1*Codes and Occurrences within the Study*

Major Codes	Total Occurrences	Initial	Cycle 1	Cycle 2
Collaboration (C)	176	37	53	86
Positive Relationships (PR)	118	31	37	50
Student Accountability (SA)	107	28	54	25
Student Problem Solving (SPS)	91	19	37	35
Infrastructure (I)	81	44	26	11
Academic Support (AS)	75	11	31	33
Prevention (P)	73	32	22	19
Communication (CM)	71	15	40	16
Data-Based Decision Making (DB)	68	24	29	15
Professional Development (PD)	65	22	17	26
Student Perceptions (SP)	49	18	17	14
Leadership (L)	48	27	10	11
Program Planning (PP)	45	19	18	8
Time Constraints (TC)	44	13	27	4
Whole Child Learning (WC)	39	12	11	16
Staff Perception (SFP)	35	12	15	8
Fidelity (F)	32	15	16	1
Post Secondary (PS)	30	0	0	30
Teacher Efficacy (TE)	30	0	15	15
English Barrier (EB)	27	0	6	21

Table 5.2 shows the major and minor codes in relationship to the research questions. These particular codes influenced the researcher's themes. The emerging themes within each cycle later developed into specific themes within each research question, which finally influenced the researcher's final findings, which can be found in Chapters 5 and 6.

Table 5.2*Major Codes and Minor Codes by Research Question*

	RQ1	RQ2	RQ3
Major Codes	Infrastructure (81)	Student Accountability (107)	Collaboration (176) Positive
	Professional Development (65)	Student Problem Solving (91)	Relationships (118) Academic
	Leadership (48)	Prevention (73)	Support (75)
	Program Planning (45)	Data-Based Decision Making (68)	Communication (71)
	Time Constraints (44)	Student Perceptions (49)	Whole Child Learning (39)
	Staff Perceptions (35)		Post-Secondary Readiness (30)
	Teacher Efficacy (30)		English Barrier (27)
Minor Codes	Resource Allocation (9)	Reactionary Responses (13)	Social Emotional Learning (8)
		Fidelity (12)	

The next section demonstrates how a quantitative data analysis component was added to the triangulation of the study.

Quantitative Data Analysis

This action research case study was designed primarily as a qualitative exploration of the MTSS (Multi-Tiered System of Supports) infrastructure in a high school setting. However, a quantitative element was added to enhance the depth and trustworthiness. This approach allowed for additional triangulation, where findings could be validated across different data sources, adding rigor to the qualitative insights and supporting the validity. To gain a well-rounded

perspective, the researcher aimed to capture initial feedback on staff members' perceptions of the MTSS infrastructure through a structured evaluation using the AIR Rubric.

The researcher organized participants into two carefully selected semi-random sample groups to ensure a diversity of viewpoints. The first group included ARDT and ARIT members who were deeply involved in MTSS implementation within this study. The second group consisted of teachers employed at the school for at least three years but had not participated in the MTSS Committee. This grouping allowed the researcher to compare the views of those actively engaged in MTSS processes with those not directly involved in its daily operations, highlighting any perceptual differences based on involvement level.

To systematically capture these perspectives, the researcher modified the AIR Rubric by condensing it and designing a scale for each domain. This scaled approach allowed participants to quantify their thoughts on different aspects of MTSS infrastructure, such as fidelity, prevention, and sustainability. These quantitative scores were then analyzed to detect meaningful patterns or differences between the two groups' responses. Specifically, the Mann-Whitney U-Test was employed, as it was well-suited for comparing data from two independent small groups, providing an effective alternative to the T-Test when sample sizes are limited. The Mann-Whitney U-Test allowed for an assessment of statistical significance without assuming a normal data distribution, thus accommodating the qualitative study's smaller participant groups (Glanz, 2014).

The quantitative data collected through this process provided actionable insights into the perceived strengths and improvement areas within the MTSS infrastructure. By comparing the feedback from involved and non-involved staff members, the researcher could identify alignment and discrepancies in perceptions, which informed adjustments in the research design and

strategic implementation with the ARDT. This approach allowed the ARDT to establish a more robust MTSS framework, reinforced by a balance of qualitative insights and quantitative validation.

Table 5.3 summarizes the themes and their correlation to the research questions.

Table 5.3

Summary of Themes Connected to Research Questions

Research Questions	Themes
1. How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?	Systematic Leadership and Resource Management in MTSS Program Implementation Strengthening Teacher Efficacy through MTSS-Focused Professional Development and Perception Shifts
2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?	Cultivating Student Efficacy through Accountability and Executive Functioning Proactive MTSS Implementation through Data-Based Decision-Making
3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?	Comprehensive Whole-child Support for Academic and Post-Secondary Readiness Fostering Collaborative Stakeholder Networks within the MTSS Framework

The following section provides a detailed analysis of findings from Research Question 1, specifically focusing on the themes emerging from the quantitative and qualitative data. It offers a nuanced understanding of MHS staff perspectives on MTSS effectiveness and impact.

Results: Research Question 1

Overview of Research Question 1 Themes

The data led the researcher to two final themes aligned with the first research question: How do high school administrators facilitate enhancing a Multi-Tiered System of Support infrastructure that intervenes in the academic deficits of students? The two themes were (1) systematic leadership and resource management in MTSS program implementation and (2) strengthening teacher efficacy through MTSS-focused professional development and perception shifts. The alignment of the themes, codes, and theoretical framework can be found in Table 5.4. The data analysis and emerging themes in the planning phase, Cycle 1 and Cycle 2, unraveled the final themes.

Table 5.4

Research Question 1: Themes and Major Codes in Correlation to the Theoretical Framework

Themes	Major Codes	Theoretical Framework
Systematic Leadership and Resource Management in MTSS Program Implementation	Infrastructure (81)	Organizational Implementation
	Leadership (48)	
	Program Planning (45)	Organizational Examination
	Time Constraints (44)	
Strengthening Teacher Efficacy through MTSS-Focused Professional Development and Perception Shifts	Professional Development (65)	Organizational Implementation
	Staff Perceptions (35)	
	Teacher Efficacy (30)	

To finalize the themes for Research Question 1 (RQ1), the researcher used various data points and triangulation methods to support the findings. A triangulation matrix, Table 5.5, connects the themes to data sources and triangulation methods.

Table 5.5

Research Question 1: Triangulation Matrix

Themes	Triangulation	Data Sources
Systematic Leadership and Resource Management in MTSS Program Implementation	Reflectivity	Initial ARDT Focus Group, Initial ARIT Interviews, Cycle 1 ARIT Interviews and Focus Group, Cycle 2 ARDT/ARIT Interviews and Focus Group
	Member Checking	
	Audit Trail	
Strengthening Teacher Efficacy through MTSS-Focused Professional Development and Perception Shifts	Peer Debriefing	
	Thick Description	MTSS Implementation Rubric Results
	Quantitative Data Triangulation	Observations
		Document Analysis
		Researcher's Journal

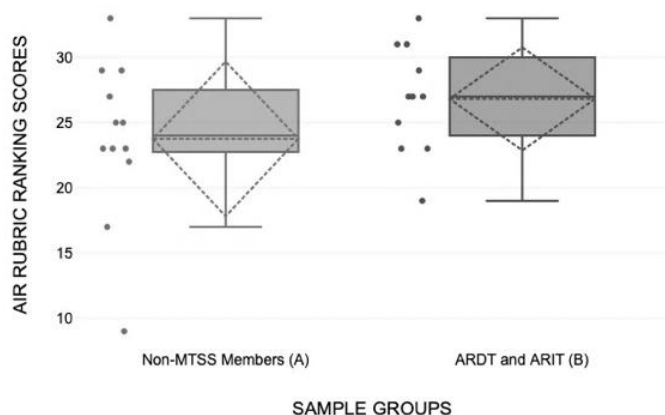
Sharkey County Public Schools (SCPS) utilized the AIR MTSS Implementation Fidelity Rubric to monitor areas of strength and weaknesses within the implementation of the MTSS program. The researcher extracted and adapted the MTSS infrastructure component of the AIR MTSS Implementation Fidelity Rubric (Appendix G). The researcher gathered the AIR Rubric results and counted the cumulative score of each rubric. The rubric responses were broken into two groups: Sample A, a semi-random group of twelve non-MTSS committee staff members at MHS, and Sample B, the eleven members.

The researcher conducted a non-parametric Mann-Whitney U-test with a significance level (α) set at 0.01 for all data points, including outliers. A two-tailed approach was employed

without assuming the direction of the difference to assess statistical significance through null hypothesis testing. The results yielded a U-value of 45, with a critical U-value threshold of 24 at $p < 0.01$. Therefore, the findings were not statistically significant at the 1% level, as the p-value was calculated at 0.20254, which exceeds the significance threshold ($\alpha=0.01$). Thus, the researcher failed to reject the null hypothesis, suggesting no statistically significant difference between non-MTSS members (Sample A) and the MTSS members participating in the study (Sample B) at the 1% level. Setting the significance level at 5% ($\alpha=0.05$) or less is a very stringent criterion, requiring strong statistical evidence (Gastwirth & Xu, 2014).

Figure 5. 1

AIR Rubric Results Box Plot



The quantitative analysis component of the AIR Rubric ranking scores provided a crucial means for the researcher and the ARDT to evaluate the perspectives of staff members directly engaged in the MTSS program compared to those not actively participating in an MTSS committee. This analysis aimed to determine whether the ongoing efforts to improve the MTSS program were perceived consistently across the building. Additionally, the AIR Rubric data analysis method was appropriate to ensure the work of MTSS was not confined within the MTSS committee and that the impact of the interventions was spread amongst the school. The

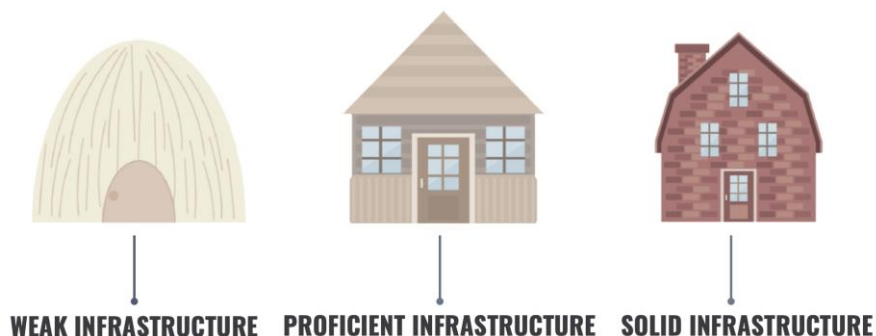
researcher selected the Mann-Whitney U Test as an appropriate non-parametric analysis method to compare the MHS staff perspectives.

In the initial interviews, the researcher employed photo-elicitation to prompt members of the ARIT to articulate their interpretations of the MTSS infrastructure, utilizing the “Three Little Pigs” analogy (Figure 5.2) as a framework. This analogy captured the perceptions expressed by the ARIT about the strength of the MTSS infrastructure for the 2024-2025 school year. The findings reveal varied perspectives: one participant described the infrastructure as a *‘house made of sticks,’* indicating proficiency, but noted that the roof was *‘made of straw,’* signifying a developing level. Two participants similarly identified the infrastructure as proficient, represented by a *‘house made of sticks.’* Another two participants perceived the infrastructure as exceeding proficiency, nearly at a distinguished level, equating it to a *‘house made of brick.’* Additionally, one participant described a *‘brick foundation’* with some areas having a thatch roof, while another assessed the infrastructure as reaching the distinguished level.

The photo-elicitation allowed the participants to visualize the MTSS infrastructure with something they were familiar with and have open discussions with the researcher, which the researcher captured in the research journal and conducted member checking to ensure the reflective responses were true and accurate to the interviewees’ responses.

Figure 5.2

Photo Elicitation Images Used to Describe the MTSS Infrastructure



Note. Image Adapted from the Ariel Education Initiative (2019)

From the quantitative analysis of the AIR rubric and the qualitative analysis of the photo-elicitation activity, the researcher concluded that the infrastructure was above proficient and that the perceptions of staff members and the MTSS team were consistent. The next two sections discuss how the major themes, (1) systematic leadership and resource management in MTSS program implementation and (2) strengthening teacher efficacy through MTSS-focused professional development and perception shifts for RQ1 emerged.

Systematic Leadership and Resource Management in MTSS Program Implementation

Throughout the study, participants discussed how MTSS support evolved, highlighting the need to balance student support with collaboration among teachers, families, and school leadership. Participants largely agreed that the structured approach, scheduling students within an advisement block and pairing students with counselors according to their alpha caseload, contributed positively to the intervention infrastructure. Teacher 2 expressed this sentiment, stating,

I think last year we really made some changes that moved us into having instead of systems plural, having a system to help with students, and so I think we moved from this

weak infrastructure where it was kind of we had stuff but it wasn't working together to a system where things are working together.

While previous years saw insufficient resources and scheduling practices, participants now observed a more interconnected and cohesive MTSS initiative.

Participants also emphasized the critical role of leadership in removing barriers to effectively implement MTSS with fidelity. Counselor 1 highlighted the value of having logistical tasks completed in advance: *“I love that you guys already did kind of like the dirty work before giving it to us.”* Reducing the cognitive demands associated with MTSS tasks allowed professionals to execute the interventions more efficiently. Teacher 3, in the initial interview, shared, *“I feel like we hit this ground running faster. And we already had the kids identified. We're able to build relationships with them quickly.”* Teacher 5 noted: *“I think that structure has been more effective than the structures we've done lots of things over the years. So has been in our the most effective structure that we have used to date.”*

Leadership plays a vital role in ensuring that staff members are equipped with the proper resources, guidance, and clarity, preventing unnecessary challenges that could undermine the fidelity of MTSS interventions. Effective leadership fosters an environment where willing educators are supported rather than discouraged by disorganized systems. As a school leader, prioritizing MTSS means securing fiscal, scheduling, and human resources to ensure consistent implementation. Principal A underscored this: *“The work is done through people; while you are very systematic with your processes in MTSS, you have done a great job in putting the right people in the right spots to help support our kids.”*

Principal A also encouraged the researcher to find ways to sustain team motivation without overwhelming them. Reflecting on this, the researcher recognized the importance of

minimizing competing initiatives that could detract from MTSS efforts, ensuring a focused and supportive environment for teachers and students.

Strengthening Teacher Efficacy through MTSS-Focused Professional Development and Perception Shifts

As the leadership team enhanced the MHS MTSS infrastructure, the researcher used the research journal to reflect on how teachers showed significant efficacy and urgency in supporting students. Though the teacher mentors were all veteran teachers, there was a need to continue their professional development and build the capacity of other teacher leaders to carry out this work. Throughout the interview cycles, participants stated that their work was not new. However, due to the newness of other initiatives, teachers were hesitant to put MTSS into practice. Teacher 4 stated the following,

I think understanding that MTSS is a framework, that it's something that has been around education for years, and not something new, collectively as an educator, when you're doing it for a while, there are new things that come up, and we get excited about it, and then it's just dropped, and then the next new thing comes up, but just realizing, okay, this work has existed, this framework has existed, we're putting it into practice, and it's not going anywhere.

Teacher 4 emphasized the literature analysis from Chapter 2, which was that MTSS and its components had been part of public education for decades. However, teachers still need to grasp MTSS in their daily practice.

Assistant Principal 1 emphasized the need for continuous professional development and for teachers to find the meaning of MTSS within their context. The ARDT found that the individual and team learning aspects of the theoretical framework could be improved to ensure

that teachers see the connection and have the skills to carry out MTSS with fidelity. The ARDT and ARIT acknowledged that time constraints and perceptions of MTSS as another initiative could cause a sense of overwhelmingness. However, there needed to be a deeper understanding of MTSS as the primary daily work of finding out what works for students, providing them the resources to succeed, and ensuring it worked through data-based decision-making.

Results: Research Question 2

Overview of Research Question 2 Themes

The researcher identified two primary themes in response to the second research question: How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning? These themes were (1) cultivating student efficacy through accountability and executive functioning skills and (2) proactive MTSS implementation through data-based decision-making. Table 5.6 aligns these themes, codes, and the theoretical framework. The final themes emerged through data analysis and were further developed during the planning phase, Cycle 1 and Cycle 2.

Table 5.6

Research Question 2: Themes and Major Codes in Correlation to the Theoretical Framework

Themes	Major Codes	Theoretical Framework
Cultivating Student Efficacy through Accountability and Executive Functioning	Student Accountability (107)	Organizational Implementation
	Student Problem Solving (91)	Organizational Examination
	Student Perceptions (49)	
Proactive MTSS Implementation through Data-Based Decision-Making	Prevention (73)	Organizational Implementation
	Data-Based Decision Making (68)	

To finalize the themes for Research Question 2 (RQ2), the researcher employed multiple data points and triangulation methods to substantiate the findings. Table 5.7, a triangulation matrix, presents the connections between the themes, data sources, and triangulation methods.

Table 5.7

Research Question 2: Triangulation Matrix

Themes	Triangulation	Data Sources
Cultivating Student Efficacy through Accountability and Executive Functioning	Reflectivity Member Checking Audit Trail	Initial ARDT Focus Group, Initial ARIT Interviews, Cycle 1 ARIT Interviews and Focus Group, Cycle 2 ARDT/ARIT Interviews and Focus Group
Proactive MTSS Implementation through Data-Based Decision-Making	Peer Debriefing Thick Description	Observations Document Analysis Researcher's Journal

The next two sections discuss how the major themes, (1) cultivating student efficacy through accountability and executive functioning and (2) proactive MTSS implementation through data-based decision-making for RQ2, emerged.

Cultivating Student Efficacy Through Accountability and Executive Functioning

Throughout this research study, ARDT and ARIT members consistently noted that students' executive functioning skills were initially underestimated. Observations and data collected by ARIT members underscored a clear need for explicit instruction in organization, planning, decision-making, goal setting, and task initiation. To support these skills, ARIT members utilized individualized goal-setting sheets for students (Appendix E). They observed common patterns: many students struggled to begin tasks without prompting, and some requested help with

time management and effective communication, such as emailing teachers for assistance. Teacher 6 remarked in multiple interviews that motivating students to engage in activities beneficial to them sometimes felt like “bribing.”

One example of this incentive-based approach was the offer of free credit recovery as a reward for completing an academic challenge in September, at the end of Cycle 1. Teacher 5 commented, *“The free credit recovery did seem to be a very big motivator for the kids, my advisement group.”* However, despite the initial enthusiasm, only about 37% of students completed the credit recovery course by the end of September. Observations indicated that these challenges were not merely about student willingness or accountability but pointed to a gap in executive functioning skills. For instance, in a focus group, ARIT members shared student feedback from a Google Form showing that students enjoyed goal-setting and vision board activities. Nevertheless, many students lacked the skills to independently create, maintain, and monitor their goals. Students often intended to complete outstanding work quickly but failed to follow through. Teacher 1 described guiding a student through goal setting: *“I want you to write the name of the assignment and then the day that you’re going to actually work on it.”*

The ARIT measured their effectiveness primarily through academic performance. Conversations with teachers and ARIT observations revealed a recommendation for strengthening the MTSS infrastructure by embedding accountability and goal-setting lessons throughout students’ high school experience. Teacher 2 reflected on adjusting their approach, saying, *“I’ve changed how I talk to the kids about course performance. So instead of just saying, are you missing work? There’s a follow-up: Have you spoken to your teacher about the class? What trouble are you having?”* ARIT members reported to the researcher that they needed to provide explicit

support, including modeling advocacy and accountability strategies for students to cultivate these skills.

Proactive MTSS Implementation through Data-Based Decision-Making

During the pre-planning and two 4.5-week cycles, the ARIT highlighted the need to continuously use data to identify students proactively, use data to adjust interventions, and address the needs of students. Teacher 3 in Cycle 1 reported that she was initially a little discouraged to see how the students in her intervention group performed in their classes when grades started to come in; however, she reviewed the data and adjusted the support she offered. At the end of Cycle 2, Teacher 3 reported to the researcher that overwhelming the students did better in their classes.

Additionally, the ARIT members reported that they learned to use data to drive student interactions. Specifically, Teacher 4 stated the following concerning her initial perceptions versus what the data was suggesting,

I have learned it's so easy for the students to start off doing well, and then they start showing themselves around week five or six, their true self comes out, and not to celebrate too early. I felt like, at least for my group, like, oh, everybody's doing great, then I realized they are with me for a reason.

The team realized that perceptions do not always represent the reality of what is happening when it comes to student performance or engagement; data is needed to support teacher and leader moves, which is in correlation to the logic model of this study.

There has to be a balance between data and teacher observation; for example, Teacher 6 stated, *"I'm having lots of students that have made proficient on ACCESS, but are not proficient and are upper-level classes."* Assessing Comprehension and Communication in English State to

State (ACCESS) is an English language acquisition test (Kim et al., 2020). This suggested that the ARIT was using data points such as the ACCESS test results to be preventative. However, the ARIT used multiple data points to determine where students stood academically. Teacher 6 continued, *“For students who have a language barrier that exited direct served supports, they can't progress academically because we don't have any kind of system.”* The researcher noted this discussion in his research journal and developed a follow-up to the ARDT discussed in the findings in RQ3.

The ARIT made specific recommendations to strengthen the MTSS infrastructure to the researcher, including identifying students earlier. Teacher 5 stated,

Maybe next year we add supports similar to what we are doing for seniors for juniors, really trying to do as much prevention as possible. Every year, it needs to be more and more, prevention in the lower grades so that we don't end up with kids needing to significant support their senior year.

Overall, the ARIT members were pleased with the intervention structures in the 12th grade; the specific targeted population within this study; however, overwhelmingly, the ARIT believed the intentionality needed to be replicated in the other grades to be proactive. The researcher reflected on RQ1 and the systematic leadership theme: are best practices and systems shared efficiently with other grade-level assistant principals?

Results: Research Question 3

Overview of Research Question 3 Themes

In examining the third research question, what insights do the ARDT and ARIT gain as they collaborate to strengthen an existing Multi-Tiered System of Supports (MTSS) program? The researcher identified two principal themes: (1) holistic support for the whole child to

promote academic and post-secondary readiness and (2) building collaborative stakeholder networks within the MTSS framework. Table 5.8 presents the alignment of these themes with relevant codes and the theoretical framework. These themes emerged and evolved through data analysis conducted during the planning phase, Cycle 1 and Cycle 2.

Table 5.8

Research Question 3: Themes and Major Codes in Correlation to the Theoretical Framework

Themes	Major Codes	Theoretical Framework
Comprehensive Whole-child Support for Academic and Post-Secondary Readiness	Positive Relationships (118)	Organizational Implementation
	Academic Support (75)	Organizational Examination
	Whole Child (39)	
	Post Secondary (30)	
Fostering Collaborative Stakeholder Networks within the MTSS Framework	English Barrier (27)	Organizational Implementation
	Collaboration (176)	
	Communication (71)	

The researcher used various data points and triangulation methods to validate the findings and solidify the themes for Research Question 3 (RQ3). Table 5.9 provides a triangulation matrix that outlines the relationships among the themes, data sources, and triangulation methods.

Table 5.9

Research Question 3: Triangulation Matrix

Themes	Triangulation	Data Sources
Comprehensive Whole-child Support for Academic and Post-Secondary Readiness	Reflectivity	Initial ARDT Focus Group, Initial ARIT Interviews, Cycle 1 ARIT Interviews and Focus Group, Cycle 2 ARDT/ARIT Interviews and Focus Group
	Member Checking	
Fostering Collaborative Stakeholder Networks within the MTSS Framework	Audit Trail	
	Peer Debriefing	

Themes	Triangulation	Data Sources
	Thick Description	Observations
		Document Analysis
		Researcher's Journal

Teacher 2 stated, *“the lesson, I think we've circled back to most often, but I do think that the career finder lesson that was really interesting, just to get to know my kids a little bit differently and to have conversations with them about, okay, so do you these are strengths? Do those sound interesting? And so, if so, great. So then let's you know what's the plan?”*

Comprehensive Whole-child Support for Academic and Post-Secondary Readiness

At the outset of this action research study, the focus centered on assessing specific academic interventions, such as cognitive routines in mathematics and literacy, to support coursework performance. However, during the initial planning stages with the ARDT, school leaders identified an alternative priority. Recognizing that closing the academic gap for 12th-grade students several years behind would be challenging, the ARDT shifted focus toward supporting the “whole learner.” This comprehensive approach included addressing academic, behavioral, and wellness needs, emphasizing executive functioning and communication skills, which would facilitate graduation and help students pursue their post-secondary goals.

Throughout the action research cycles, positive relationships emerged as a key factor in effectively supporting students. ARIT and ARDT members noted that even the most skilled interventionist may face challenges engaging students without authentic connections and a demonstrated commitment to student well-being. Teacher 6 illustrated this by observing how relationships with certain students were initially weak in Cycle 1 but grew stronger as the cycles

progressed. This bond became so impactful that students began recognizing Teacher 6 in social settings, emphasizing the significance of building connections.

Additionally, ARIT members stressed that positive relationships between students and administrators are equally essential. They noted that students benefitted from seeing administrators in roles beyond discipline—celebrating achievements or supporting school activities. ARIT members especially appreciated the researcher’s visits to advisement classes, encouraging the principal to engage similarly. Principal A visited classes at the close of Cycle 2, and ARIT members reported it as a highly positive experience reinforcing the value of relationship-building. Consequently, the school adapted by reducing advisement sessions, allowing students more time for academic support, social engagement, and enrichment, though many chose to remain with their mentor or teacher.

Participants also identified the need for professional development to strengthen Tier 1 instruction to effectively support a diverse range of learners. ARIT members, particularly teachers at MHS, voiced concerns regarding inconsistencies in instructional practices, especially around reassessment and skill remediation. With rapid demographic shifts and a growing population of English Language Learners (ELLs), participants emphasized the urgency of equipping teachers with strategies to support these learners, an area further explored in Chapter 6.

Finally, ARDT and ARIT members emphasized aligning academic experiences with their post-secondary aspirations. The ARDT developed ideas for connecting students with career professionals, offering workshops to explore various fields and demonstrating the relevance of high school skills to real-world careers. Assistant Principal A proposed using the Equal Opportunity Schools (EOS) survey to identify students with similar career interests and offer

targeted career workshops. Furthermore, the ARDT discussed embedding career-oriented planning into instructional practices, fostering meaningful connections between academic content and future post-secondary goals.

Fostering Collaborative Stakeholder Networks within the MTSS Framework

The final theme identified in this action research study centered on collaboration and communication, which emerged as the most frequently coded elements throughout the cycles. The ARDT and ARIT recognized the necessity of coordinated support among all stakeholders involved in student success. With multiple groups, such as the MTSS team, faculty, parents, and community partners, engaging with students and communicating clearly and effectively was essential. However, the study highlighted communication challenges, especially given the time demands on the ARIT for collaboration with staff supporting students at risk of not graduating.

To address these challenges, the researcher developed a practical tool within the student information system (SIS): a flashing icon that appears whenever teachers take attendance or check grades. This icon identifies students in the MTSS off-track advisement group and their counselor and teacher mentor. This feature empowered staff to proactively engage with the MTSS team as needed.

Several team members stepped forward to strengthen MTSS-related communication and collaboration practices. Teachers 2 and 3 volunteered to integrate MTSS components into the new teacher induction program, ensuring that all incoming teachers at MHS had the tools and understanding to support students through a Tier 1 instructional lens. Teacher 1, Teacher 4, and Counselor A suggested targeted outreach for families, including emails with specific strategies to support their children at home. Additionally, Teacher 5 advocated for stronger partnerships with feeder middle schools to identify and support students who may benefit from MTSS before

transitioning to high school. Teacher 6 also emphasized the need for further professional development on “*fierce conversations*,” the researcher scheduled this training for January 2025, ensuring ongoing learning after the study.

Within the study, effective communication with students was another essential component in ARIT and ARDT support efforts. Consistent and aligned messaging helped reinforce important topics, as Teacher 2 reflected, “*The conversations with students were good because then you're hearing it from your advisement teacher, you're hearing it from the counselor, now you're hearing it from an administrator, which brings weight to the seriousness of the topic.*”

As the study concluded, the ARDT explored ways to more directly involve parents in supporting student success. Bottoms (2022) stated, “Bold goals cannot be achieved by local schools acting in isolation. District leaders, school board leaders, business leaders, community members and parents must be invested.” (p. 13). The next phase of the MTSS program focuses on fostering parent engagement through networking opportunities with other parents with children with similar needs, further strengthening the support system surrounding each student.

By the end of the semester, 91% of off-track students in the study identified as off-track for graduation successfully completed and earned credit for all enrolled courses, regardless of whether the courses were required for graduation. Additionally, 94% of off-track students in the study passed all courses necessary to meet graduation requirements.

Chapter Summary

This chapter presented eight key findings developed over two 4.5-week action research cycles, utilizing a systematic coding process and data triangulation from multiple sources, including interviews, focus groups, artifacts, observation sheets, and researcher journals.

Through this process, the researcher identified core themes aligned with the three research questions. Organizational learning theory (Senge, 1990; Argyris & Schön, 1996) provided the framework for interpreting these findings, highlighting how the research site adapted, learned, and implemented strategies to improve the Multi-Tiered System of Supports (MTSS) framework within the high school setting.

Research Question 1 examined how high school administrators can enhance an MTSS framework to address academic needs, and the findings underscored the crucial role of strategic leadership in MTSS success. Administrators were vital in ensuring that the MTSS framework was equipped with human and material resources to meet student needs. Findings also highlighted that teacher professional development to increase understanding of MTSS and effective intervention practices was essential to fostering a supportive learning environment. School leaders set a foundation for sustainable improvement in MTSS processes through strategic resource allocation and capacity building.

Research Question 2 centered on assessing and refining an existing MTSS infrastructure to positively impact student learning outcomes. Findings here revealed that supporting executive functioning skills, such as goal setting, task initiation, and time management, was key in helping students succeed within the MTSS framework. Additionally, the research found that data-driven and proactive decision-making practices were instrumental in adjusting interventions and supporting student progress. By implementing regular data reviews and adapting interventions in response to students' changing needs, the school maintained a responsive and flexible MTSS framework that actively supported academic growth.

Research Question 3 explored the collaborative learning experiences of the ARDT and ARIT as they worked to enhance the MTSS infrastructure. Findings highlighted the importance

of holistic support for students, extending beyond academics to behavioral, social, and emotional development. Additionally, post-secondary readiness emerged as a theme, emphasizing that MTSS initiatives support current academic performance and equip students with the skills they need for future success. The study also revealed the vital role of stakeholder collaboration in building a resilient MTSS framework. Teachers, counselors, administrators, and intervention specialists collaborated to share insights, problem-solve, and create a cohesive support structure, fostering a collaborative culture dedicated to student success.

In summary, this chapter provided a comprehensive overview of the findings associated with each research question, revealing crucial elements of MTSS improvement within the high school context. These insights collectively emphasize the importance of strategic leadership, proactive and responsive infrastructure, and collaborative efforts among stakeholders to create an MTSS system that supports current academic success and future readiness.

Chapter 6 will further explore the implications of these findings, drawing connections to the existing literature on MTSS and organizational learning, discussing the limitations of the study, and proposing recommendations for educational leaders seeking to strengthen MTSS practices within their settings. These conclusions will offer practical guidance for implementing an MTSS framework that is adaptive, resourceful, and capable of meeting the diverse needs of high school students.

CHAPTER 6

CONCLUSIONS, IMPLICATIONS, AND CONNECTIONS TO LEADERSHIP

Chapter 6 serves as the culmination of this action research study. It presents the conclusions drawn from the findings and their connection to existing literature and explores implications for practitioners, policymakers, and researchers. The chapter begins with a summary of the action research cycles, theoretical framework, and logic models thoroughly outlined in Chapter 3. This context establishes a foundation for understanding the subsequent discussions.

Next, the chapter synthesizes the findings from Chapters 4 and 5, addressing the three research questions and relating them to the literature reviewed in Chapter 2. The chapter also critically examines the study's limitations, focusing on design and data collection methods to provide transparency and contextualize the results. Following this, the chapter offers recommendations and considerations for practitioners, policymakers, and researchers seeking to apply these insights to improve practices, inform decision-making, and guide future studies.

The purpose of this action research study was to investigate leadership strategies and collaborative practices that improve the MTSS infrastructure of a large suburban high school. The goal was to address student credit deficiencies and increase the number of off-track students graduating within their four-year cohort while supporting post-secondary planning. This qualitative action research study included an Action Research Design Team (ARDT) and an Action Research Implementation Team (ARIT).

1. How do high school administrators facilitate enhancing a Multi-Tiered System of Supports infrastructure that intervenes in the academic deficits of students?
2. How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning?
3. What is learned by the action research design and implementation teams as they collaborate to enhance an existing Multi-Tiered System of Supports program?

Summary of the Research Design

The research design for this action research study was grounded in best practices for qualitative research, emphasizing a commitment to ethical research standards and methodological practices. The study employed triangulation to ensure depth and reliability by integrating qualitative data collection methods, including interviews, observations, and document analysis. Additionally, quantitative elements were incorporated to enhance the findings and support a comprehensive analysis of key themes.

The following sections will provide a detailed overview of action research methodology, including its iterative and reflective nature and theoretical and logic models, all guiding this study.

Action Research

Action research, a form of applied qualitative research, facilitates school improvement and leadership development by involving practitioners in inquiry to enhance organizational practices (Glanz, 2014). Unlike more rigid research designs, it is collaborative, engaging researchers and participants in partnership to drive meaningful change (Stringer & Aragón, 2021). The process includes six iterative steps—reflection, focus selection, data collection, data

analysis, interpretation, and action—promoting continuous learning and improvement (Glanz, 2014). By emphasizing reflective cycles, action research helps educational leaders prioritize impactful initiatives that enhance schools and deepen their understanding of practice (Bloomberg, 2023).

Merriam and Tisdell (2016) indicated that action research is not solely about the participants making meaning of a phenomenon in their practice but also about them engaging in the problem-solving practice. This study aimed to reflect on team and individual actions contributing to student success at Magnolia High School (MHS) and to examine the MTSS infrastructure for sustainable program development. Action research was chosen for its effectiveness in collaborative response to achievement data and problem-solving (Grundy & Kemmis, 1981; Merriam & Tisdell, 2016). Figure 6.1 is the adapted action research model used to drive this dissertation.

Figure 6.1

Action Research Model



Note. Adapted from Glanz (2014); Tichnor-Wagner et al. (2017); Zepeda (2019)

The next section will discuss the theoretical framework the researcher and the ARDT used to inform the study.

Theoretical Framework

This action research study integrated the Five Learning Disciplines (Senge, 1990) and the Organizational Inquiry Theory (Argyris & Schön, 1996). Senge (1990) explored how organizations learn effectively, while Argyris and Schön (1996) examined problem-solving through inquiry, distinguishing between espoused theory, formal procedures, and theory-in-use, practical actions. The Five Learning Disciplines emphasized organizational interconnections, cultural influence, shared purpose, individual growth, and collaborative capacity (Senge, 1990).

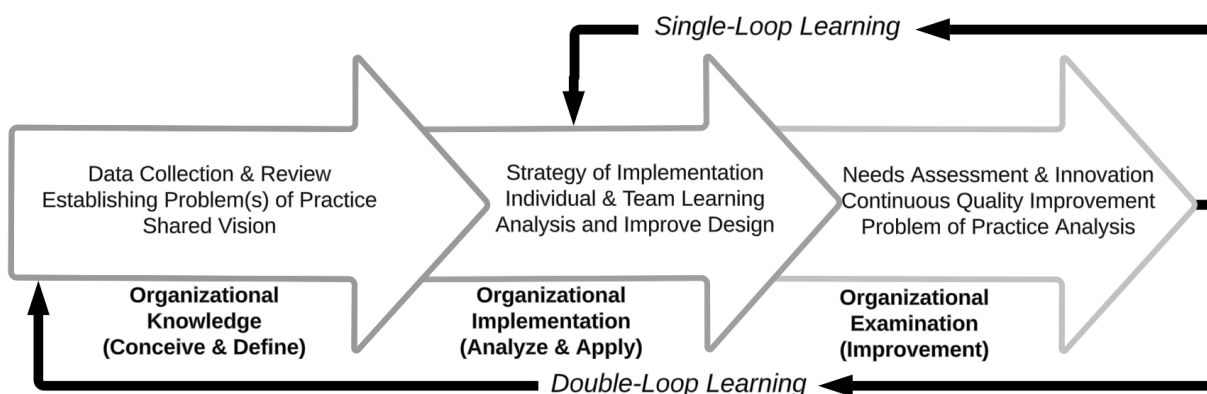
The framework was essential in capturing successes and challenges in supporting MTSS at MHS, as research on high school MTSS was limited. Reflective, collaborative practices based on the theories created by Senge (1990) and Argyris and Schön (1996) guided efforts to support diverse learners. The design team adapted the framework, embedding mental models within shared vision and data analysis to focus on continuous improvement. Single-loop and double-loop cycles facilitated the mid-course corrections in aligning leader actions with the MHS mission and vision, as illustrated in Figure 6.2.

The theoretical framework of organizational learning served as a foundation for this study, reflecting the MHS mission to function as a continuous quality improvement organization. Organizational learning emphasizes the iterative process of reflecting on practices to enhance outcomes (Argyris & Schön, 1996), making it a fitting lens for examining the MTSS cohort mentor program. Although double-loop learning, which involves challenging underlying assumptions and redesigning systems, was not explicitly incorporated into this study, its absence was a limitation of the study.

Single-loop learning, which centers on refining strategies and improving within existing frameworks, played a critical role during the transitions between Cycles 1 and 2. This process allowed the team to make targeted adjustments based on emerging data and participant feedback. Furthermore, the team revisited the single-loop learning when the study concluded to enhance implementation practices and promote team learning. This iterative application of the theoretical framework underscores the commitment to immediate program improvement and the long-term cultivation of a reflective and adaptive organizational culture.

Figure 6.2

Hybrid Theoretical Framework: Organizational Learning



Note. Adapted from Senge (1990) and Argyris & Schön (1996).

The following section summarizes the logic model used in this qualitative action research study.

Logic Model

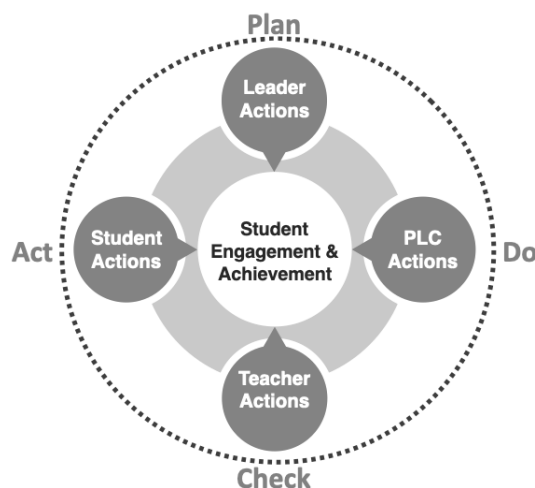
The ARDT and ARIT concentrated on pinpointing specific group actions that positively influenced student outcomes, aiming to understand how collaborative efforts improved student engagement and achievement. As shown in Figure 6.3, the revised model depicts (the

interconnected actions of leaders, teachers, and students as part of an integrated system, illustrating how their combined efforts impact student success.

At the outer ring of the model is a semipermeable circle representing the plan-do-check-act (PDCA) cycle, a continuous process that encourages ongoing assessment, reflection, and adaptation. This design emphasizes the need for continual learning and improvement at the individual level and within teams (connection to the theoretical framework), fostering a culture of growth that pushes the entire organization forward.

Figure 6.3

Sharkey County Public Schools Model of Actions for Improved Student Engagement and Achievement Conceptual Edit



Note. Adapted from Sharkey County Public Schools Division of Teaching and Learning Theory of Change (2021)

Summary and Discussion of the Findings

Discussion of the Findings from Research Question 1

The researcher identified two primary themes emerging from the first research question: how do high school administrators facilitate the enhancement of a Multi-Tiered System of

Supports (MTSS) infrastructure to address students' academic challenges? The two themes are (1) systematic leadership and resource management in MTSS program implementation and (2) enhancing teacher efficacy through MTSS-focused professional development and shifts in perceptions. Furthermore, three specific findings surfaced in response to Research Question 1:

1. Participants indicated that the MTSS infrastructure needs to be enhanced to reduce time constraints and competing initiatives when providing interventions and support.
2. Cohort mentors identified the need for a staff professional learning opportunity to support teachers in implementing a multi-level prevention system to address diverse student needs, such as multilingual learners, to enhance teacher efficacy and strengthen preventive measures at the Tier I level.
3. Participants revealed a need to reduce variability within the leadership team in supporting at-risk students.

Regarding MTSS infrastructure, participants noted that at MHS, time constraints and competing initiatives presented challenges. The ARIT members frequently had to make real-time decisions to prioritize immediate student needs over mandated intervention lessons, assessments, or other obligations, impacting their ability to support their at-risk caseload effectively. Schiller et al. (2020) asserted that time and resources often hinder MTSS program design. For MTSS to contribute to school improvement, leaders must prioritize it and protect the time and resources needed to support students. Buffum et al. (2011) argued that it is disingenuous for schools to claim a mission of maximizing student learning while making interventions optional, thus giving students the choice to fail.

Another finding highlighted the need for purposeful professional development to better support an evolving student population, especially at the Tier I level, to create preventive

measures. Student needs at MHS shifted, with a growing population of multilingual learners, transient students facing learning loss, and diverse learning needs. Staff must strengthen Tier I strategies—the foundational layer of MTSS. When data shows that many students struggle at the Tier I level, schools can bolster school-wide support as the cornerstone of MTSS (Sutherland et al., 2023). Bryk et al. (2015) suggested that schools should aim to implement practices thoughtfully, prioritizing comprehensive understanding over rapid deployment.

The final finding for Research Question 1 underscored the importance of reducing variability in leader practices for supporting students. A qualitative study involving nearly 600 school personnel from across the country emphasized MTSS as a framework that fosters accountability, continuous improvement, and enhanced student outcomes (Bahr et al., 2023). Consistency in support practices across departments and classrooms is crucial, especially for students facing academic challenges. Leaders should ensure that Professional Learning Community (PLC) action items translate into classroom practice, reducing variability in support (Zepeda, 2019). Zepeda (2019) described this as the essential transfer of PLC insights to classroom implementation. Venghaus et al. (2023) also noted that school leaders are pivotal in driving change within their schools.

Discussion of the Findings from Research Question 2

The researcher identified two primary themes in response to the second research question: How does an implementation team assess the effectiveness of an existing academic intervention infrastructure and recommend improvements that impact student learning? These themes were (1) cultivating student efficacy through accountability and executive functioning skills and (2) proactive MTSS implementation through data-based decision-making.

Additionally, there were three research findings related to the Research Question 2, they are the following,

1. Cohort mentors the value of consistent data analysis and student observations to assess the effectiveness of interventions.
2. Cohort mentors highlighted the importance of professional development in supporting students with executive functioning deficits and fostering self-efficacy and accountability.

The first finding relates to how individuals providing student interventions must use data to inform their decisions. The MTSS framework relies on data-based decision-making and continuous improvement to enhance teaching and learning (Burns et al., 2016). Schools must be able to review student data promptly and make effective data-based decisions to drive student achievement (Oslund et al., 2021). In the research study, the ARIT believed that their interventions were working in Cycle 1; however, once the data was available, many ARIT members reported to the researcher that they had to shift their interventions.

As the ARIT members continued to work with students, their initial perception of the students was that they were unmotivated learners. However, the second finding for Research Question 2 emerged when the ARIT consistently highlighted a lack of crucial executive functioning skills, such as planning, goal setting, and prioritizing tasks. According to Cooper-Kahn and Dietzel (2024), executive functions are neurologically based skills encompassing mental control and self-regulation. These skills are essential for effectively managing oneself and internal resources to accomplish goals. ARIT members believed that if staff grasped the concept of executive functioning deficits and offered tools and strategies to students at the Tier 1 level to enhance their executive functioning skills, students would achieve more success.

Discussion of the Findings from Research Question 3

In examining the third research question, what insights do the ARDT and ARIT gain as they collaborate to strengthen an existing Multi-Tiered System of Supports (MTSS) program?

The dissertation researcher identified two principal themes: (1) holistic support for the whole child to promote academic and post-secondary readiness and (2) building collaborative stakeholder networks within the MTSS framework. Additionally, there were three research findings related to the Research Question 2:

1. Participants indicated that the social dynamics of student and staff perceptions of academic intervention play a significant role in the development of the MTSS program.
2. Participants indicated that effective communication and collaboration among all stakeholders are critical to meeting the needs of students.
3. Participants indicated a need for leaders to expand the collaboration network with various stakeholders.

Participants in the study often discussed the need to teach essential skills for students to succeed, yet also underscored the priority that students graduate on time. Thomas et al. (2020) found that balancing interventions for skill deficits and graduation required course support, a significant barrier for secondary school leaders. The ARIT mentioned that several students at the beginning questioned why they were in the intervention advisement group, and some students perceived that they were “*in the dumb group.*” Over time, perceptions started to change, and students realized they were benefiting from the support, as indicated by the survey responses

provided by students. The researcher journaled steps to increase communication with students and families about the need for the intervention before being placed.

There was a shift in staff perception, moving away from the notion that the MTSS team was solely responsible for ‘fixing the problem’ or offering credit recovery when a student was unsuccessful. For example, a student failed a math course with a 68% due to not completing a redemption assignment during fall break. The researcher engaged with the teacher to emphasize that the solution facilitates student learning rather than relying on credit recovery. A computer-based, multi-attempt assessment-driven credit recovery program cannot be substituted for high-quality Tier 1 instruction.

The teacher adjusted her perspective and collaborated with the student, and the student ultimately succeeded with the academic intervention and support provided by Teacher 3. Bottoms (2022) highlighted the necessity of high-quality access to Tier 1 instruction for post-secondary readiness. The goal was for the student to learn and develop skills needed in his post-secondary plans, not to check a box of mediocre credit recovery opportunities.

The final finding of this study was the need to increase collaboration and communication with all stakeholders to meet the needs of each and every student. Dougherty Stahl et al. (2013) suggested that systemic partnership and coordination of schoolwide resources are critical. All staff members, students, and families must know what is being offered to students and offer feedback on the effectiveness of said resources. Parents can provide observations and perceptions to help schools make informed decisions that school data may not capture (Weingarten et al., 2020). MTSS involves finding multiple avenues to support students. Therefore, involving all adults who impact students in the decision-making process is critical.

Furthermore, collaborating internally and with other schools to exchange best practices can significantly enhance student learning outcomes (Schleifer et al., 2017). Rather than expending excessive resources on issues already addressed by other institutions, a proactive approach should focus on fostering collaboration and professional development. Byrk et al. (2015) underscored the importance of such efforts, suggesting that leveraging the collective expertise and experiences of various schools can lead to more effective and efficient solutions, ultimately benefiting student achievement. This collaborative strategy promotes shared learning and encourages continuous improvement and innovation in educational practices.

Limitations of the Current Study

Several limitations within the study design may have impacted its depth and generalizability. These limitations are acknowledged to provide transparency and context for interpreting the findings.

Site Location Parameters

The researcher conducted the study at a school with a highly diverse student population and relatively minimal performance gaps among racial subgroups. For instance, the Black student population in the 2024 cohort had a higher graduation rate than their White peers. While this context reflects a strength of the school, it limited the ability to examine the impact of MTSS interventions on specific subgroups. Without a focused investigation of subgroup dynamics, such as achievement disparities or equity gaps, the findings may not capture the nuanced ways MTSS could address systemic inequities in other settings.

Time constraints presented another significant limitation for this study. MHS operated on a quarter scheduling system that required cycles to be defined within 4.5-week intervals to allow mid-course corrections before grades were finalized at the end of nine weeks. This scheduling

structure confined the duration of each cycle by limiting opportunities for longer-term observations or more adjustments to the interventions within the cycles. It also restricted the depth and breadth of data collection. Shorter cycles would have limited the number of data points available, while longer cycles would have reduced the opportunity for timely adjustments.

Moreover, the overall study lasted only four months, which is relatively brief for action research. Considering that MTSS implementation and its effects on student outcomes often unfold over multiple years, this timeframe was insufficient to capture the longitudinal impact of MTSS on students as they progressed through high school.

Participant Scope and Focus

The participant pool for this study was another significant limitation. While the full MTSS committee at Magnolia High comprises 38 members supporting multiple program branches (e.g., PBIS, Academics, Wellness & Connectedness), this action research study focused solely on the cohort mentor program, which included seven members. This narrow focus excluded the broader MTSS framework and its interconnected initiatives, limiting the ability to evaluate the overall effectiveness of the MTSS model. Specifically, the study investigated leadership actions and collaborative efforts to address credit deficiencies and support off-track students graduating within their four-year cohort. While valuable, this focus does not reflect the full scope or complexity of the MTSS framework.

Researcher Positionality

The researcher's positionality also influenced the study. As the primary MTSS leader in the building, the researcher was directly involved in initiating many of the MTSS programs and served as an evaluator for some MTSS committee members. To diminish potential bias, the researcher did not evaluate the counseling department during the academic year and only

evaluated two members of the ARIT, Teacher 1 and Teacher 4. Nevertheless, due to the inherent power dynamics and familiarity with the researcher, the dual role as an assistant principal and former district office leader may have impacted participants' responses.

Additionally, participants in the study had multi-year experiences working with the researcher on MTSS initiatives. These established relationships may have influenced engagement in the research or shaped feedback. While every effort was made to ensure transparency and trustworthiness, including allowing participants to access and review study data for accuracy and engaging the research teams in discussions about the findings, the potential for bias cannot be eliminated.

Generalizability and Methodological Considerations

As with all qualitative action research studies, the findings of this study are inherently contextual and cannot be generalized to other settings (Merriam & Tisdell, 2016). The study design was grounded in a theoretical framework and logic model, but its investigative nature limited its ability to provide definitive conclusions about the broader efficacy of MTSS interventions. Future research could benefit from employing a program evaluation design to systematically measure the effectiveness of MTSS programs.

Despite these limitations, this study contributes to the growing body of research on MTSS in high schools by highlighting leadership practices, collaborative strategies, and challenges in supporting off-track students. It underscores the importance of context-specific, data-driven approaches to improve student outcomes and serves as a foundation for further investigation.

Implications, Legal Ramifications, and Recommendations for Practitioners

Navigating the Challenges of MTSS

Budget and resource allocation are some challenges that continue to face the successful implementation of a Multi-Tiered System of Support (MTSS) program. MHS, the research site of this qualitative action research study, was fortunate to have resources to support the program by prioritizing local school budget allocation to support student interventions; however, appropriate resource allocation may not be the case at other high schools. Clayton (2023) recognized that the financial implications of starting an MTSS program are as critical as another component. Still, district-level leaders and decision-makers often disagree on what new programs or initiatives are valued within the strategic plan. To navigate the challenge of competing initiatives, educational leaders should lean on the work of scholars (Buckman et al., 2021; Durrance, 2023; Savitz et al., 2022; and Beck & Murphy, 1996) and consider MTSS as the framework for school improvement and not an initiative.

In addition to financial challenges, competing initiatives, scheduling, and decision-making are barriers to MTSS program implementation (Clayton, 2023). Throughout the four-year implementation and evolution of the MTSS initiative at MHS, constant challenges included figuring out when interventions were happening, prioritizing the immediate needs of individual students, and ensuring students received what they needed academically without devaluing the importance of non-core academic areas such as athletics and fine arts.

Implementing a detailed program implementation process for MTSS cannot be a carbon copy between schools, as each school has different student needs, resources, and human talent capital that influence the implementation of MTSS. The actions taken in this action research

study are not designed for schools to replicate precisely; however, the decision-making process and the rationale for continuous quality improvement could serve as a model for school improvement. Goodman and Bohanon (2018) recognized that the one-size-fits-all approach does not work in schools. Instead, they suggested that whatever a practitioner decides to do, four fundamental practices are evidence-based for an effective MTSS program. These components include:

1. Interventions are structured along a tiered continuum, with a robust academic Tier 1 serving as the core program, supplemented by intensified interventions to meet the specific needs of students.
2. Assessment data and other metrics are used to identify students for more intensive interventions and to choose the most effective interventions to support enrichment or remediation.
3. Data on student performance is collected to drive program decisions and continuous quality improvement.
4. Systems are created to ensure that MTSS is implemented with fidelity.

All schools need a solid infrastructure supporting the time, resources, and professional development to successfully implement the four abovementioned components. For practitioners, the focus is not solely on *what* actions are taken for students but on *how* decisions are made to determine what is best for individual student achievement.

There are also critical legal obligations that mandate interventions for students suspected of a disability. This is the Child Find Law, 34 C.F.R. § 300.111, which mandates that each state must have policies and procedures to ensure that all children with disabilities, birth through age 21, residing in the state and who require special education and related services or early

intervention services are identified, located, and evaluated. This federal rule has direct implications for the work of MTSS as it includes language, such as early interventions, related services, and evaluation. In the state where this study occurred, the Child Find Process (60-4-7-.03) further specifies that this rule includes students suspected of having a disability. Due to the state and federal policy of students being supported up to age 21, RTI/MTSS is not exclusively an elementary and middle school practice and directly impacts the implementation of tiered interventions at the high school level.

Zhang et al. (2023) indicated that all 50 states had adopted an RTI/MTSS model, significantly changing from exclusively using RTI terminology to MTSS as a whole-child support system model. The implications of the shift from RTI to MTSS for high school leaders are the reality they must weigh in order to provide research-based interventions. Additionally, the rate of improvement (ROI) as a data collection method for identification and placement for special education services while providing support to students who have Carnegie credit deficiencies is a construct that is imperative for leaders to grasp.

Balancing laws and policies such as IDEIA (2004), ESSA (2015), and Child Find all have the same legal spirit in the language, and they mandate schools to provide equitable learning opportunities to advance student learning. Educational leaders do not need to choose between conflicting policies when they ensure equitable learning experiences for every student, use ethical data-based decision-making practices, and act with empathy to prioritize what is best for students. This approach aligns with the foundational principles of MTSS and ensures high fidelity in its implementation.

Further qualitative or mixed-method research studies should explore the effectiveness of school district RTI/MTSS policies, local high schools within school district implementation of

MTSS, and the correlation to the rate of improvement (ROI) on response to interventions, monitoring the progress of Tier 1 instruction, and overall post-secondary readiness metrics.

MTSS for Diverse Learning Needs

MTSS, as a school improvement model, challenges the misconception that it is solely for students suspected of having a disability. It is designed to support all students and provides a framework for addressing challenges related to student achievement and the advancement of gifted and talented learners. Zhang et al. (2023) conducted a nationwide analysis of state RTI/MTSS policy that indicated 25 states, including the one in this study, have included students with disabilities, English Language Learners, and gifted learners into their comprehensive MTSS model. Although this action research study did not primarily focus on supporting gifted and talented learners within the MTSS framework, further research could explore tiered supports for identifying students through universal screeners and accelerating support for gifted students identified later in high school.

One of the most significant challenges at the research site, MHS, was navigating the needs of multi-lingual learners (formally, English Language Learners) with differentiating language acquisition challenges, COVID-19 learning gaps, international learning expectation variances, or suspected disability. Linan-Thompson et al. (2022) provided MTSS practitioners with cultural and linguistic considerations for data-based decision-making. The diversity of the MLL population is something to celebrate, with more than 400 languages spoken by MLL students reported to the United States Department of Education (U. S. Office of English Language Acquisition, 2019). While cultural and linguistic diversity is essential, supporting individual student needs becomes complex without the proper knowledge and professional development opportunities for practitioners. Table 6.1 summarizes the research by Linan-

Thompson et al. (2022) on responsive assessment practices for multilingual learners within the MTSS/RTI framework.

Table 6.1

Culturally and Linguistic Responsive Assessment Practices for Multi-Lingual Learners

Standard MTSS/RTI	Culturally & Linguistically Responsive MTSS
Use assessments that predict performance in target areas	Use instruments that predict performance on State-mandated language proficiency standards Use instruments that predict achievement on State-mandated literacy assessments in L1 (native language) and L2 (learned language)
Use valid and reliable assessment instruments for screening and progress monitoring.	Use instruments developed for and validated with MLLs Use equivalent instruments and procedures in both languages to compare performance across languages. Use instruments that allow documentation of language and literacy performance changes in L1 and L2 within and across grades.
Develop a comprehensive profile of student performance in target areas	Document oral language proficiency in L1 and L2 Document academic skills in the language(s) of instruction. Document skill development within and across grades Document factors that may impact performance (e.g., linguistic or cultural bias in assessment; testing in only one language)

Note. Adapted from Linan-Thompson et al. (2022)

To address the needs of the rapidly growing MLL student group, educators must enhance their professional knowledge, challenge any unintentional notions about academic abilities, and overcome biases to support this diverse group effectively. The importance of further research into culturally and linguistically responsive learning practices within the MTSS framework is underscored by the fact that at the research site, the MLL population is now the fastest-growing

student group, surpassing even the number of students with disabilities at MHS. According to the SCPS May 2023 “By the Numbers Report,” students come from 192 countries and speak 102 different languages, with 25% of the total 192,000 student population receiving English language support.

Furthermore, Gonzalez et al. (2022) pointed out, “Language and culture are inextricably linked, and children should see themselves reflected in the classroom in authentic ways that honor their identities and experiences” (p. 388). Balancing school culture with home cultures challenges MTSS practitioners to intentionally engage parents and stakeholders in collaborative efforts to support preventative and remediation plans for students facing academic challenges in high school. Cultural and linguistic diversity extends beyond MLL learners, impacting all student groups, and practitioners require additional professional development in culturally and linguistically diverse pedagogical practices. Gonzalez et al. (2022) concluded that typical school supports fail to reduce the learning challenges of youth with cultural and linguistic backgrounds. However, an MTSS framework can provide a welcome opportunity to shift educational practices to a preventive model for all students.

MTSS and Post Secondary Readiness

In the context of high school, the core of the MTSS framework should be the systems and actions of adults that ensure every student graduates on time and is prepared for their individualized post-secondary goals. Although RTI/MTSS elements have been a cornerstone for educators for decades, the COVID-19 pandemic brought attention to structural inequities of quality education, social justice movements, social, emotional, and behavioral challenges, and chronic absenteeism as students transitioned back into the traditional brick and mortar setting (Sabnis et al., 2020).

In the local context of this action research study, following the return from COVID-19 and hybrid learning, it is important to note that nearly half of the 2004 graduating class spent their last full complete school year in 6th grade before the pandemic. During their subsequent years in 7th and 8th grades, these students experienced digital or hybrid learning environments. Many high school students in SCPS faced the challenge of adjusting to high school after spending a significant portion of their middle school years in virtual or hybrid learning environments. They returned to face-to-face instruction at high school, navigating the academic rigor of high school while also preparing for their post-secondary plans amidst the challenges of varied instructional delivery models during the pandemic.

High school practitioners continued to face challenges in supporting learning deficits while understanding that there is only a short window to prepare students to graduate in four years and be ready to tackle the challenges of post-secondary plans. For instance, an 11th grader is having difficulty with American Literature. Upon investigation, the teacher finds that the student may not have been given opportunities to read aloud during COVID-19 disruptions, leading to noticeable vocabulary and reading fluency gaps. While many early literacy intervention programs typically require years to yield significant progress, this student must succeed in 11th-grade American Literature without delay to be eligible to graduate on time.

Miller et al. (2020) stated that “there is an urgency to provide effective services in a timely manner, especially to prevent widening gaps differentially impacting vulnerable students by efficiently matching students’ needs to research-based practices for those student populations so that no students are left further behind due to inappropriate support” (p. 31). Defining those supports and resource allocation is challenging for MTSS practitioners, and further research is needed to establish state and district-level support for local school implementation.

Teachers across the school district frequently inquire whether they should prioritize remediating students in basic reading, writing, or math skills to ensure their readiness for life beyond K-12 public education or focus instead on supporting them to pass their classes and graduate. However, teachers were aware that students did not have the foundational skills to master the standards. Although every child has a unique need, research shows that exposure to high-quality Tier I instruction is needed for all students (Sutherland et al., 2023).

To directly answer teacher concerns about providing a foundational skill intervention or Tier I instruction, the primary role of a teacher is to provide Tier I instruction. At the high school level, the MTSS infrastructure is critical for meeting the needs of students. Students must have the time and space to receive high-quality interventions in addition to high-quality Tier I instruction. It is not one over the other. This is where time, resource allocation, professional development, and data-based decision-making all play a critical part in ensuring students are graduating on time and prepared to tackle their post-secondary hopes, dreams, and aspirations.

When academic needs are unmet, students struggle to keep up with the curriculum, increasing the likelihood of dropping out of high school (Savitz et al., 2022). Conversely, students who graduate with a mastery of essential skills and core content knowledge are more likely to compete successfully in the global marketplace and earn higher incomes than those who drop out (Rose & Bowen, 2021). Viano (2021) highlighted that failing courses in high school is a significant barrier to graduation, as state-level policies typically require a specific number of credits to graduate. MTSS structures enable educators and leaders to assess and improve their support systems, thereby addressing and eliminating the barriers related to course failures (Durrance, 2023).

The implications of MTSS at the high school level are pivotal for shaping post-secondary trajectories. It is common for practitioners in high schools to hear from colleagues that RTI/MTSS is primarily for K-8 students, and there is a belief that if students have not acquired the necessary skills by this point, it is too late. The inability to intervene and provide the appropriate tools for the student regardless of age is educational malpractice. According to IDEIA (2004), ESSA (2015), and Child Find Procedures, educators are legally and professionally obligated to provide a top-tier educational experience that meets the needs of every student while also preparing high school students to become productive, contributing members of their communities.

Implications, Legal Ramifications, and Recommendations for Policymakers

Response to Interventions

The significance of RTI to policymakers is that all 50 states have RTI implementation policies guided by federal law, the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA 2004), and the Every Student Succeeds Act (ESSA 2015). When RTI was initially written into law, it served as an alternative model to identify students with specific learning disabilities; however, later, RTI developed into an early identification method to provide tiered support to improve student learning outcomes (Fuchs & Fuchs, 2017).

The IRIS Center (2022) identified two approaches to the RTI model seen nationwide. The first model is a problem-solving approach in which a school-based team works together to identify learning needs, offer an intervention menu, implement interventions, and evaluate the instruction. The second method is a standard protocol in which a pre-planned, validated intervention for all identified students addresses various needs. The first method, the problem-solving method, birthed the idea of MTSS as a more comprehensive model for supporting

students, which many states have adopted from the RTI being a standalone practice to an element within the larger MTSS umbrella. The approach involves a problem-solving team evaluating student performance, identifying learning needs, and selecting suitable interventions from available resources (IRIS Center, 2022). Its strength lies in its flexibility, allowing tailored interventions based on individual student evaluations. However, this flexibility can also be a weakness due to inconsistent evaluation procedures and criteria (Fuchs & Fuchs, 2006; Zhang et al., 2023).

MTSS is a school improvement model that supports all students and provides a framework for addressing issues related to student achievement. A nationwide RTI/MTSS state policies analysis by Zhang et al. (2023) revealed that 25 states had integrated students with disabilities, English Language Learners, and gifted learners into their comprehensive MTSS models. There is a problematic balance between federal and state authority in implementing educational policies, such as RTI/MTSS, which states treat as a matter of state rights. Each state labels its tiered supports differently; therefore, this dissertation adopts RTI as a structural component within the broader MTSS framework to explore how students respond to interventions. Forty states, including Georgia and Kentucky, use MTSS or a variant of the name for their tiered support systems. MTSS is an umbrella term in these states for their tiered support framework (Zhang et al., 2023).

State and District Support for MTSS

Research indicated that the most critical building blocks for MTSS include administrative support, personnel and logistics, budgets, fidelity, time and scheduling, data collection and progress monitoring, intervention tools, and competing initiatives (Clayton, 2023). Local school administrators can control many building blocks for a successful MTSS program. However,

principals answer to their direct supervisors, district leaders are accountable to the superintendent, and superintendents must respond to local school boards alongside state and federal mandates. As decision-makers become more distant from daily student interactions, there is a greater potential for messaging and purpose to be lost in policy.

The value of managed empowerment from the state to local school implementation is critical for MTSS to work effectively. A recommendation to state-level and district policymakers is to develop a “tight-loose” model in which local schools understand the purpose of MTSS at the local school with the appropriate resource allocation yet allow schools to figure out how to implement MTSS within their local context and have opportunities to reconnect with policymakers to discuss the needs. Clayton (2023) found that no one-size-fits-all model exists, even for schools within the same district and similar student group populations. Policymakers must recognize that student achievement data should drive implementation, not the reverse.

Choi et al. (2019) provided an example of this “tight-loose” management empowerment model, exploring the substantial investment California made to scale statewide MTSS support at the local school level, resulting in positive gains in academic progress measures. California developed a four-year plan that provided ongoing professional development with a train-the-trainer infrastructure model, created a state leadership MTSS team, developed a mini-grant strategy to support local school needs, and developed a higher education partnership for research and post-secondary readiness (Choi et al., 2019). The implication for district and state-level policymakers is that MTSS is not an extra initiative but a model to support all students. How MTSS looks at each school is uniquely different from the context of the students served in the community. Resource allocation and leadership matter to the success of a highly viable MTSS program.

Policy Implications of MTSS

MTSS is often cited as a method for promoting inclusion and equity. Still, scholars emphasize that “good intentions are not enough,” especially when there is a gap between intention and practice (Gregory et al., 2021, p. 206). The MTSS policy implementations can appear heartening. However, implementation and data-based decision-making at the local school level can lead to disproportionate referrals to special education services and the inappropriate removal of students from grade-level or honors courses, resulting in mismatches between student needs and interventions. Kauffman et al. (2024) mentioned that judgment and uncertainty in education policy surrounding MTSS make decision-making difficult, complex, and uncertain.

Kauffman et al. (2024) indicated that some sources of variability within schools include curriculum, timing of decisions, tools to make decisions, biases of decision maker(s), sustainability of interventions, and implementation fidelity. For policymakers, providing support and resources is critical for local schools to make appropriate tiered student intervention recommendations. The very nature of MTSS is to be a preventative model to address the needs of students. Kauffman et al. (2024) highlighted that MTSS is about catching problems as early as possible so that the problems do not fester into a disability or a complicated issue for educators to solve. The implications for policymakers that support MTSS in high school are that there needs to be a systematic universal screening and identification process for at-risk students before the student enrolls in high school. Early identification and timely intervention during high school help students graduate on time with their peers (Pate et al., 2022). The 9th-grade year is a crucial predictor of high school success (Lowder et al., 2022).

There continues to be a significant concern in education that MTSS can lead to inequitable learning opportunities, negatively tracking students, and disproportionality placing

students into special education services due to poor judgment (Kauffman et al., 2024). The state in which this study occurred made significant changes to its MTSS framework, including identifying all learners and their individual needs in the MTSS framework, including identifying gifted and talented learners through universal screening. In 2023, the state revised its MTSS visual model, transitioning from a tiered triangle to a braided rope framework that integrates academic and student behavior, wellness, and belongingness. Like a braided rope, each strand must be robust and tightly integrated to promote the holistic development of every student.

Recommendations for policymakers are not to make new policies surrounding RTI/MTSS but to invest in understanding the current laws and the appropriate implementation of said laws in the context of local school needs. Moreover, policymakers must emphasize that MTSS is not solely for students who face challenges; it serves as a framework to ensure equitable educational practices and opportunities for every student. Kauffman et al. (2024) emphasized, “MTSS and its variants might add noise (random or unwanted variability) to educational decisions” (p. 207). MTSS is about understanding the needs of the students, providing students with what they need to thrive now and for post-secondary readiness, and ensuring that the tools designed to support students effectively meet their needs. Policymakers should remove barriers and allocate resources to local educational agencies (LEAs) and schools, enabling school leaders to make equitable decisions that support the students they engage with daily.

Implication and Recommendation for Researchers

The context in which this study was conducted significantly influenced the research design, methodology, limitations, and the researcher’s subjectivity statement. These contextual factors impact the replicability of the study in future research. Learning from other schools is

vital for improving school efforts (Bryk et al., 2015). Schools function best as learning organizations, continuously reflecting on current challenges and designing intentional steps for improvement (Glanz, 2014). However, Bryk et al. (2015) cautioned that educational organizations often rush to implement changes without fully understanding how to execute them effectively, identifying who is best positioned to lead these efforts, or predicting potential outcomes based on objective evidence.

Despite including MTSS components in educational policy and law for nearly two decades, research on MTSS in secondary settings remains limited (Bouck & Cosby, 2019). High schools offer unique structural and logistical challenges, such as larger student populations, more diverse academic needs, and departmentalized teaching structures, making MTSS implementation particularly complex (Thomas et al., 2020). Consequently, time, resources, and student achievement are at stake, underscoring the urgency of addressing these gaps. However, measuring the effectiveness of MTSS interventions, particularly Response to Intervention (RTI) within the model, requires significant refinement (Schiller et al., 2020). At the time of this study, there was still insufficient research on MTSS at the high school level to guide school leaders in effective practices.

One critical area for further exploration is the effect of MTSS on post-secondary readiness. High school educators face a challenging dilemma: balancing the need to remediate academic deficits required for graduation while addressing foundational skill gaps at the individual level (Savitz et al., 2022). The ultimate goal of K-12 education is to ensure that students graduate prepared for life beyond high school. However, failure to adequately support students can have devastating consequences. High school dropouts face significantly higher risks of poverty, welfare dependency, incarceration, and even early mortality (Buffum et al., 2010).

To ensure the success of MTSS at Tier I, professional development for teachers is essential. Zepeda (2019) emphasized that learning to teach is a lifelong endeavor. Nevertheless, many secondary educators lack the specialized training to effectively support students with diverse academic challenges and those at risk (Kressler & Cavendish, 2020). The research underscores the benefits of ongoing teacher professional development and job-embedded coaching in strengthening problem-solving abilities within an RTI/MTSS framework (Sabnis et al., 2020). As MTSS research continues to evolve, addressing the practical challenges of implementation must accompany a commitment to sustained, context-specific professional learning for educators. This ensures that findings from research can be effectively translated into actionable strategies that enhance teacher capacity and student outcomes.

To address these limitations of this study, a multi-year, mixed-methods study tracking students throughout their high school journey would provide valuable insights into the long-term impact of MTSS on graduation rates and post-secondary readiness. Such a study could explore subgroup-specific outcomes, investigate systemic inequities, and evaluate the effectiveness of comprehensive MTSS models. Expanding the participant pool to include representatives from all branches of the MTSS framework would also enhance depth and applicability.

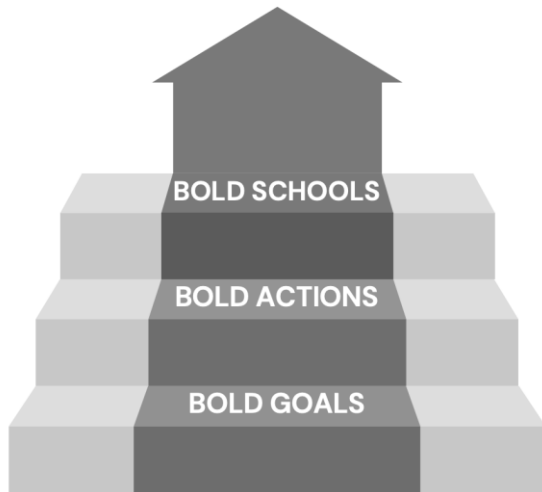
To summarize, future research on MTSS must address several critical gaps. These include understanding its impact on post-secondary readiness, identifying effective practices for secondary schools, and developing robust systems to measure intervention effectiveness. Additionally, the importance of professional development cannot be overstated. A comprehensive approach that prioritizes teacher learning and school improvement will ensure that MTSS fulfills its potential to support all students equitably, preparing them for success in school and beyond.

Concluding Thoughts

Chapter 6 provided a comprehensive summary of the findings, linking them to the research questions and existing literature while addressing the limitations and offering implications for practitioners, policymakers, and researchers. Central to the findings of this research is the understanding that MTSS served as a foundational framework for ensuring equitable educational practices. When implemented with fidelity, MTSS empowers educators to identify effective strategies for student success, provide targeted resources to help students achieve their highest potential, and ensure that these interventions yield meaningful outcomes.

At Magnolia High School (a pseudonym for the research site), the commitment to live up to its motto, “The Standard of Excellence,” underscores the belief that every student matters. This philosophy drives efforts to equip all students with the tools and skills to achieve their hopes, dreams, and aspirations for post-secondary success. Through this lens, MTSS emerges as an intervention framework and a transformative school improvement model. MTSS is never finished; it is an ongoing, iterative process of reflection, adaptation, and progress.

MTSS integrates with the Connected Learning logic model (Figure 6.4), the foundation of research by Dr. Gene Bottoms that focused on preparing students for post-secondary careers. Bottoms (2022) challenged schools to set bold, ambitious goals while ensuring frequent and accurate measurements of progress. Similarly, the MTSS framework depends on data-based decision-making and a commitment to continuous improvement, creating a structure that strengthens teaching and learning (Burns et al., 2016). The interventions and strategies implemented in this study were guided by these principles, aiming not only to support students in graduating on time but also to equip them with the skills necessary for life after high school.

Figure 6.4*Connected Learning Framework*

Adapted from Bottoms (2022) Connected Learning Framework

In this action research study, specific actions paralleled the case study Bottoms (2022) presented, particularly the establishment of bold goals designed to inspire educators to prepare all students for their next steps. For this study, the bold goals centered on cohort members supporting all students identified as off-track to graduate on time, integrating elements of post-secondary readiness and career planning. Key bold actions included implementing co-teaching opportunities where teacher mentors and counselors collaborated to deliver targeted interventions and advisement lessons. This approach demolished the unintentional, problematic departmental silos often present in large high schools by fostering cross-departmental collaboration to address academic needs comprehensively.

Bottoms (2022) found the four stages of continuous quality improvement, plan, do, check, and act, foundational to creating transformative plans to achieve bold goals. The cyclical nature of action research aligns seamlessly with this framework, reinforcing its utility in fostering self-improvement and sustained progress. Furthermore, Bottoms (2022) emphasized the

increasing importance of post-secondary planning, noting that eight out of ten good jobs now require some education beyond K-12. By 2025, a high school diploma will be the minimum requirement for one in three jobs, underscoring the urgency of preparing students for success beyond graduation (Bottoms, 2022).

The action research team demonstrated a deep dedication to honestly know each student and their unique strengths, challenges, and needs. The research team displayed resilience in ensuring their success. The guiding question, "What else can we do to support students?" was a constant reminder of the importance of continuous quality improvement and self-reflection. This proactive mindset drove the ARDT and ARIT efforts to refine interventions and remain adaptive to the dynamic needs of students.

While all research has specific limitations, the researcher aspires to use the key elements of this action research study to serve as a replicable model for other high schools across the United States. The findings provide valuable insights for supporting students at risk of not graduating on time and enhancing post-secondary readiness. MTSS, as demonstrated in this study, is an enduring commitment to equity, excellence, and the belief that every student has the potential to thrive with the right support systems in place.

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Appendix A:

Empirical Findings Table

Response to Interventions	
Despite RTI components having been in policy and law for nearly two decades, very little studies have been conducted in the secondary setting.	Bouck, E. C., & Cosby, M. D. (2019). Response to intervention in high school mathematics: One school's implementation. <i>Preventing School Failure</i> , 63(1), 32-42.
RTI can be a challenge due to the unique infrastructural challenges faced by secondary schools	Thomas, E. R., Conoyer, S. J., & Lembke, E. S. (2020b). Districtwide evaluation of RTI implementation: Success, challenges, and Self-Efficacy. <i>Learning Disabilities Research & Practice (Wiley-Blackwell)</i> , 35(3), 118-125. https://10.1111/ldrp.12226
Many secondary teachers need to gain professional knowledge to support students with various academic challenges and are at risk	Kressler, B., & Cavendish, W. (2020). High school teachers' sense-making of response to intervention: A critical practice analysis. <i>Education and Urban Society</i> , 52(3), 433–458. doi:10.1177/0013124519848032
Time, resources, and student achievement are on the line; however, the ability to measure the effectiveness of RTI still needs to be improved	Schiller, E., Chow, K., Thayer, S., Nakamura, J., Wilkerson, S. B., & Puma, M. (2020). What tools have states developed or adapted to assess schools' implementation of a multi-tiered system of supports/response to intervention framework? REL 2020-017. Regional Educational Laboratory Appalachia.
High School Multi-Level Prevention System	
Early identification, structural reorganization to meet the needs of students, and innovative instructional practices are critical for intervention reform efforts	Balfanz, R., Legters, N., & Jordan, W. (2004). Catching up: Effect of the talent development ninth-grade instructional interventions in reading and mathematics in high-poverty high schools. <i>NASSP Bulletin</i> , 88(641), 3-30. https://10.1177/019263650408864102

Educators in the high school setting have a complex dilemma-educate to remediate graduation required courses or intervene at the skill deficit level	Savitz, R. S., Allen, A. A., & Brown, C. (2022). Variations in RTI literacy implementation in grades 6-12: A national study. <i>Literacy Research and Instruction</i> , 61(1), 18-40. https://10.1080/19388071.2021.1887416
Students who dropout of school are at greater risk of poverty, welfare dependency, incarceration, and early death	Buffum, A., Mattos, M., & Weber, C. (2010). The why behind RTI: A systematic intervention system goes beyond compliance and improves learning for all. ASCD
There should be a focus on emphasizing post-secondary readiness at the high school level which adds an equity dimension to this work by addressing systemic disparities in preparation and access that often leave students from historically underserved groups at a disadvantage.	Bottoms, G. (2022). <i>Tomorrow's high school: Creating student pathways for both college and career</i> (1st ed. ed.). ASCD.

Leadership to Support Multi-Tiered System of Support	
MTSS academic press is a framework for school improvement.	Murphy, J. F., Weil, M., Hallinger, P., & Mitman, A. (1982). Academic press: Translating high expectations into school policies and classroom practices. <i>Educational Leadership</i> , 40(3), 22.
MTSS has three main infrastructural components: data, practices, and systems.	Freeman, R., Miller, D., & Newcomer, L. (2015). Integration of academic and behavioral MTSS at the district level using implementation science. <i>Learning Disabilities: A Contemporary Journal</i> , 13(1), 59-72.
MTSS program at Secondary Schools established six stages: (1) Exploration and Adoption, (2) Program Installation, (3) Initial Implementation, (4) Full Operation, (5) Innovation, and finally (6) Sustainability	Bohanon, H. S., Wu, M., Kushki, A., LeVesseur, C., Harms, A., Vera, E., Carlson-Sanei, J., & Shriberg, D. (2021a). The role of school improvement planning in the implementation of MTSS in secondary schools. <i>Preventing School Failure</i> , 65(3), 230-242. https://10.1080/1045988X.2021.1908215
MTSS is necessary because schools need to promote accountability, engage in continuous improvement, and foster improved student outcomes	Bahr, M. W., Edwin, M., & Long, K. A. (2023a). Development of a brief measure for multi-tiered systems of support sustainability. <i>Assessment for Effective Intervention</i> , 48(2), 90-99. https://10.1177/15345084221119418

Two critical leadership characteristics to support an MTSS infrastructure are looking at the system's interconnectedness and making data-based decisions	Howley, A., Allan, D. M., Howley, N. L., & Furst, T. (2023). All means all...maybe: MTSS policy and practice across states in the united states. <i>Mid-Western Educational Researcher</i> , 35(1), 4-35.
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Organizational Learning to Support a Multi-Tiered System of Support Structure	
Learning to teach is a lifelong pursuit	Zepeda, S.J. (2019). <i>Professional development: What works</i> (3rd ed.). Routledge.
Research shows the benefits of ongoing professional development and job-embedded coaching to improve problem-solving within an RTI/MTSS model	Sabnis, S., Castillo, J. M., & Wolgemuth, J. R. (2020). RTI, equity, and the return to the status quo: Implications for consultants. <i>Journal of Educational & Psychological Consultation</i> , 30(3), 285-313. https://10.1080/10474412.2019.1674152
Organizations need to reflect critically on their behavior, identify ways they often unintentionally contribute to the organization's problems, and change the behaviors within the organization to improve.	Argyris, C., & Schön, D. A. (1996). <i>Organizational learning II: Theory, method, and practice</i> . Addison-Wesley.
Leaders look outside for solutions to problems when the answer is in the people within the organization and the people it serves	Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). <i>Learning to improve: How America's schools can get better at getting better</i> . Harvard Education Press.
Core organizational learning components uses a three-legged stool as a visual representation for learning teams, including personal mastery, shared mental models, and system thinking.	Senge, P. M. (1990) <i>The Fifth Discipline: The Art and Practice of the Learning Organization</i> (New York: Doubleday Currency)
Interventions are not a repeat of unsuccessful teaching but are systematic, intensive individual or small group instruction.	DuFour, R., & Reeves, D. (2016). The futility of PLC lite. <i>The Phi Delta Kappan</i> , 97(6), 69-71

Appendix B

IRB: UNIVERSITY OF GEORGIA CONSENT FORM

MULTI-TIERED SYSTEM OF SUPPORTS: A COLLABORATIVE APPROACH TO ACADEMIC INTERVENTIONS AND POST-SECONDARY READINESS WITHIN A LARGE SUBURBAN HIGH SCHOOL

You are being asked to take part in a research study. The information in this form will help you decide if you want to be in the study. Please ask the researcher(s) below if there is anything that is not clear or if you need more information.

Principal Investigator:

*Dr. Jami Royal Berry
University of Georgia*

Co-Investigator:

*Jamario Antoine Shade
University of Georgia*

We are doing this research study to learn more about exploring the academic programs and the people who support those programs to increase the four-year graduation rate at a large suburban high school. The following is the purpose of the study:

The purpose of this study is to analyze leadership strategies and reflective practices that support the enhancement of a large suburban high school's Multi-Tiered Systems of Support (MTSS) infrastructure that closes the credit deficiencies gap of students while increasing the number of students on track for graduation within the students' four-year cohort.

You are being invited to be in this research study because of your voluntary involvement within the MTSS committee or school leadership influence.

If you agree to participate in this study:

- We will collect information about teacher and instructional leadership development, academic intervention programs, and MTSS program evaluation.
- We will ask you to conduct your normal job duties and voluntary work within the MTSS committee. Additionally, you will participate in interviews, focus groups, and surveys on the impact of MTSS on the graduation rate. There will be three 4.5-week cycles. It will take about 90 minutes per cycle outside your normal duties and responsibilities;
- We will have an initial study orientation meeting in July 2024, follow up within the three 4.5-week cycles, and close with reflections by December 2024.

Focus Groups or Other Group Activities

Even though the investigator will emphasize to all participants that comments made during the focus group session should be kept confidential, it is possible that participants may repeat comments outside of the group at some time in the future.

Audio/Video Recording/Photographs

Please provide initials below if you agree to have this interview and focus group (audio and video) recorded or not. You may still participate in this study even if you are not willing to have the interview recorded.

_____ I do not want to have this interview and focus group recorded.

_____ I am willing to have this interview and focus group recorded.

Relationship to Researchers

Participation is voluntary. You can refuse to take part or stop at any time without penalty. Your decision to participate will have no impact on your involvement in the MTSS committee, normal job functions, or job evaluations. The decision to take part or not to take part in the research will not affect your employment or employee evaluations.

There are questions that may make you uncomfortable. You can skip these questions if you do not wish to answer them.

Your responses may help us understand how to improve the academic programs the MTSS committee offers to support the four-year graduation rate.

We will take steps to protect your privacy, but there is a small risk that your information could be accidentally disclosed to people not connected to the research. To reduce this risk, we will mask your identity using a coding system (ex., Teacher 1) and/or pseudonyms (false names). We will only keep information that could identify you on the researcher's password-protected private computer, and identifying information will be removed/destroyed a year after publication.

The information that you provide as a participant will not be used or distributed for future research.

Please feel free to ask questions about this research at any time. You can contact the Principal Investigator, Dr. Jami Royal Berry, at 404-668-5106, jamiberry@uga.edu or Co-Investigator, Jamarion Antoine Shade, at 770-880-1079, antoineshade@uga.edu. If you have any complaints or questions about your rights as a research volunteer, contact the IRB at 706-542-3199 or by email at IRB@uga.edu.

If you agree to participate in this research study, please sign below:

Name of Researcher

Signature

Date

Name of Participant

Signature

Date

Please keep one copy and return the signed copy to the researcher.

Appendix C

Semi-Structured Individual Interview Prompts

ARIT Initial Individual Interview Questions

1. Based on the current infrastructure, do you see the work of the MTSS committee being preventative or reactionary this school year?
2. What excites you most as we start our first intervention cycle with off-track students?
What are components of the intervention plan that you are apprehensive about?
3. Based on the current intervention plan, do you feel it will benefit students with the current structure?

ARIT Cycle 1 Individual Interview Questions

1. How can cohort mentors and administrators enhance their collaboration to support off-track students?
2. How effective do you believe the intervention structure is working for off-track students?
And how can you tell?
3. Based on the current intervention plan, what improvements can be made?

ARIT Cycle 2 Individual Interview Questions

1. Based on your experience during these first nine weeks, what intervention lesson was most effective for students, and why?
2. How can cohort mentors in the administration team increase their collaboration to support off-track students?
3. What have you learned about students and yourself throughout the intervention cycles?

ARDT Cycle 2 Individual Interview Questions

1. With your knowledge of our current infrastructure to support off-track students, how can we better support off-track students as leaders?
2. How can cohort mentors in the administration team increase their collaboration to support off-track students?
3. What have you learned about students and yourself throughout the intervention cycles?

Appendix D

Focus Group Interview Prompts

ARDT Focus Group 1 Questions

1. As a leadership team, what steps have we taken to ensure students who are off track for graduation have the necessary tools to graduate on time, and how can we approve those tools?
2. How can we enhance our current MTSS Infrastructure to support students off track for graduation?
3. How can we effectively monitor school-wide MTSS infrastructure changes that impact students graduating on time?

ARIT Focus Group 1 Questions

1. As we completed the first cycle, what in the current intervention plan went well for students, and what adjustments need to be made?
2. What tools and strategies do you need as an interventionist to best support students moving forward?
3. How can you evaluate as an interventionist that you have made an impact on student engagement and movement towards on-time graduation?

ARDT Focus Group 1 Questions

1. As the intervention cycle concludes, how can we enhance our current MTSS Infrastructure to support students off track for graduation?
2. What skills, and tools of knowledge do you believe we as a MTSS team to gain to best support our off-track students?
3. What opportunities exist for our leadership team to expand the process of collaborating with stakeholders to strengthen our current MTSS infrastructure?

ARIT Focus Group 2 Questions

1. How do you see the intervention plan evolving for Quarter 2, and what improvements need to be made?
2. What skills, tools of knowledge do you believe we as a MTSS team to gain to best support our off-track students?
3. What opportunities exist to expand the process of collaborating with stakeholders to strengthen our current MTSS infrastructure?

Appendix F

Tier I Checklist

<u>Tier 1 (Academic Safety Nets)</u> <u>PLC QUESTION #3: What Do We Do When A Student Has Not Mastered the AKS?</u>
Identify students and develop small groups needing specific instructional support based on pertinent data and the belief that all students are capable of grade-level learning with adequate support.
Implement QPTS aligned with your AKS. This includes flexible grouping and differentiated learning activities. Use quick and impactful feedback to students as they progress towards mastery of the AKS.
Administer various consistent, AKS-aligned common formative/summative assessments; analyze data; and select attainable goals. Match student deficits with the appropriate Tier 1 strategy to drive instruction.
If students do not show mastery, reteach and reassess. Use data from formative/summative assessments to plan instruction and flexible groups within the classroom. How will I respond when some students have not mastered the AKS? How will I extend the learning opportunities for students who have already demonstrated mastery?
Communicate regularly with parents. (i.e. emails, phone calls, progress reports, Synergy Parent Log, eCLASS, etc.). Two-way communication is fundamental in building positive relationships with families.
Consult with the Office of Student Support and Interventions for guidance if a student is suspected to need Tier 2 or Tier 3 support.

Appendix G

Adapted MTSS AIR Rubric

MTSS Infrastructure Rubric

(Adapted from the American Institute of Research Center on Multi-Tiered System of Supports)			
Indicator	Beginning Level (1 Point)	Developing Level (3 Points)	Proficient Level (5 Points)
Prevention	Staff generally perceive MTSS as a program that solely supports the prereferral process for special education.	Staff understands that MTSS is a framework to support all students, once students are not successful, there is a plan to support them. There are limited supports for prevention.	Staff understands that MTSS is a framework to support all students, once students are not successful, there is a plan to support them. There are three or more structures in place to prevent course failures.
Leadership Personnel	Decisions and actions by school leaders undermine the effectiveness of the essential components of the MTSS framework at the school.	Decisions and actions by school leaders are inconsistent and only somewhat supportive of the essential components of the MTSS framework at the school; support for MTSS implementation is not consistent.	Decisions and actions by school leaders proactively support the essential components of the MTSS framework at the school and help make the framework more effective; support for MTSS implementation is a high priority.
School-Based Professional Development	The school has no well-defined, school-based professional development mechanism to support continuous improvement of instructional practice, data-based decision making, and delivery of interventions and supports.	Some forms of school-based professional development are available, but most are not consistent, or job embedded to ensure continuous improvement in instructional practice, data-based decision making, and delivery of interventions and supports.	School-based professional development is institutionalized and structured so that all teachers continuously examine, reflect upon, and improve instructional practice, data-based decision making, and delivery of interventions and supports.
Resources	Resources (e.g., funds, programs, staffing) are not allocated to support MTSS implementation.	Resources (e.g., funds, programs, staffing) are partially allocated to support MTSS implementation.	Resources (e.g., funds, programs, staffing) are adequately allocated to support MTSS implementation.
Communication With and Involvement of All Staff	One or none of the following conditions is met: (1) a description of the school's essential components of MTSS and data-based decision-making process is shared with staff; (2) a system is in place to keep staff informed; and (3) teacher teams collaborate frequently.	At least two of the following conditions are met: (1) a description of the school's essential components of MTSS and data-based decision-making process is shared with staff; (2) a system is in place to keep staff informed; and (3) teacher teams collaborate frequently.	All of the following conditions are met: (1) a description of the school's essential components of MTSS and data-based decision-making process is shared with staff; (2) a system is in place to keep staff informed; and (3) teacher teams collaborate frequently.
MTSS Team	Only one of the following conditions is met: (1) the MTSS team is representative of all key stakeholders; (2) structures and clear processes are in place to guide decision-making; and (3) time is set aside for the team to meet regularly.	At least two of the following conditions is met: (1) the MTSS team is representative of all key stakeholders; (2) structures and clear processes are in place to guide decision making; and (3) time is set aside for the team to meet regularly.	All of the following conditions is met: (1) the MTSS team is representative of all key stakeholders; (2) structures and clear processes are in place to guide decision making; and (3) time is set aside for the team to meet regularly.
Program Evaluation	None of the following conditions are met: (1) an evaluation plan is in place to monitor short- and long-term goals for MTSS implementation; (2) student data are reviewed for all students and subgroups of students across the essential components to evaluate effectiveness of the MTSS framework (i.e., core curriculum is effective, interventions are effective, screening process is effective); and (3) implementation data (e.g., walk-throughs) are reviewed to monitor fidelity and efficiency across all components of the MTSS framework.	One or two of the following conditions is met: (1) an evaluation plan is in place to monitor short- and long-term goals for MTSS implementation ; (2) student data are reviewed for all students and subgroups of students across the essential components to evaluate effectiveness of the MTSS framework (i.e., core curriculum is effective, interventions are effective, screening process is effective); and (3) implementation data (e.g., walk-throughs) are reviewed to monitor fidelity and efficiency across all components of the MTSS framework.	All of the following conditions are met: (1) an evaluation plan is in place to monitor short- and long-term goals for MTSS implementation; (2) student data are reviewed for all students and subgroups of students across the essential components to evaluate effectiveness of the MTSS framework (i.e., core curriculum is effective, interventions are effective, screening process is effective); and (3) implementation data (e.g., walk-throughs) are reviewed to monitor fidelity and efficiency across all components of the MTSS framework.

Total Score:

Date:

American Institutes for Research. (2021). Essential components of MTSS. Center on Multi-Tiered System of Supports. Retrieved March 4, 2024, from <https://mtss4success.org/>

Appendix H

Coding to Themes Process

