Impact of Tier 2 Intervention Program on Student Achievement and Self-Efficacy

Barbara L. Georges
National Louis University

Follow this and additional works at: https://digitalcommons.nl.edu/diss

Part of the Curriculum and Instruction Commons, Disability and Equity in Education Commons, Secondary Education Commons, and the Special Education and Teaching Commons

Recommended Citation
Georges, Barbara L., "Impact of Tier 2 Intervention Program on Student Achievement and Self-Efficacy" (2020). Dissertations. 540. https://digitalcommons.nl.edu/diss/540

This Dissertation - Public Access is brought to you for free and open access by Digital Commons@NLU. It has been accepted for inclusion in Dissertations by an authorized administrator of Digital Commons@NLU. For more information, please contact digitalcommons@nl.edu.
IMPACT OF TIER 2 INTERVENTION PROGRAM ON STUDENT ACHIEVEMENT AND SELF-EFFICACY

Barbara Georges

Educational Leadership Doctoral Program

Submitted in partial fulfillment
Of the requirements of
Doctor of Education in Educational Leadership

National College of Education
National Louis University
December 2020
IMPACT OF TIER 2 INTERVENTION PROGRAM ON STUDENT ACHIEVEMENT AND
SELF-EFFICACY

Dissertation Hearing
Submitted in partial fulfillment
Of the requirements of
Doctor of Education in Educational Leadership

Barbara Georges
Educational Leadership Doctoral Program

Approved:

Elizabeth Minor
Chair, Dissertation Committee

Hanover Alsop
Program Director

Jack Barry
Member, Dissertation Committee

Dean, National College of Education

Dean's Representative

Date Approved
ABSTRACT

To address the challenges of drop-out rate and achievement gap, high schools have begun to implement intervention programs. Schools bear responsibility in addressing factors such as poor academic performance, lack of course credit, and low motivation to encourage post-secondary success. Intervention programs show promise in mitigating these factors despite variation due to lack of state or federal requirements. The most common frameworks used to address the skill gaps and deficiencies that prevent graduation are Response to Intervention (RtI) or Multi-Tiered Systems of Support (MTSS). The purpose of this study was to determine the impact of academic interventions on student achievement and self-efficacy for below average and failing high school students. Due to limited research of RtI/MTSS interventions at the secondary level, this quantitative analysis is important as it reinforced that Tier 2 interventions do have impact on standardized test measures, completion of grade-level core coursework and increase self-efficacy inventory scores for students receiving intervention. Every outcome of this study indicated a statistically significant impact on the students receiving intervention. These results are noteworthy as they can inform design of secondary intervention models.
PREFACE

Two decades of my career as an educator and administrator have been devoted to serving at-risk students. My life’s work has been to remove barriers to learning opportunities, improve access to rigorous instruction and create systems to support the many facets of academic and social-emotional skills required for all students to be successful. Over the course of this journey, I have experienced the best and the worst that public education can provide. These experiences have inspired my vision for school improvement, solidified the commitment to challenging the status-quo, and catalyzed my passion for dismantling archaic methods of segregation and remedial coursework as a means of “supporting” at-risk populations.

Each day is approached with the conviction that every student and adult who enters a school has the capacity to grow and learn. While they come from varied journeys of triumphs and failures, all are worthy of rigorous and meaningful pursuits that lead to equal opportunities for success as individually defined and measured for them. This belief is not universally embraced. Historical paradigms formed by perennial failure have contributed to a stereotypical assumption that some students are incapable of achieving to the same degree as others. In the classroom, I frequently observed this sorting and biased selection based on previous performance or demographic characteristics as students were relegated into remedial coursework. Often touted as the way to “save” these at-risk and often minority students, I found that it reinforced societal inequities by banishing “those kids” to academic experiences of lower rigor due to a belief that they were incapable of rising to the challenges of grade-level experiences or performance.

In many interactions with other remedial teachers, the professionals tasked with closing achievement gaps and instilling a passion for learning would often doubt the capacity of every
student to succeed. Worse, at times they were unwilling to change their own practice to apply the abundant research available for improving academic outcomes in at-risk students. For both the system and faculty, it was easier and more palatable to community cultural norms to move “those kids” away from courses with students deemed more capable and cite all of the social-emotional or socio-economic reasons why academic achievement was beyond their grasp. In turn, these students responded predictably based on a self-fulfilling prophecy, by having no engagement in school or belief in the teachers who had abandoned them to mediocrity and failure.

My growth philosophy and alternate practices were frequently seen as outliers from convention and rejected when suggested to many teams and organizations. A relentless belief in the ability of students to rise to realistic and achievable challenges if supported appropriately, a preference for non-traditional methods of curricular design, and vocal distain for the remedial programs in which I taught, were often flash points of conflict with administrators and at times, with peer educators.

The journey of unfulfilled promise and regret over opportunity lost for every poor performing student who failed to soar over the years has laid the foundation for this work. Once out of the classroom and into school leadership, I passionately pursued the dismantling of ineffective tracking models, increased support and mentoring for students, and most recently constructed viable methods of intervention to ensure academic coupled with social and emotional growth and success. Even armed with the weapons of data, evidence-based research, best practice models, and proven superior outcomes; the battle for access, equitable opportunities to learn and creating seismic shifts in educator philosophies is still daunting if not raging and far more challenging to win than expected.
This research and program evaluation represent only one segment of my professional journey. While it shares the larger purpose, it is only a glimpse into the daily leadership challenges to bring these principles to fruition. My hope in sharing these challenges and outcomes is to be a beacon of hope for other professionals who are courageously vanquishing barriers to learning, changing the hearts and minds of tradition-bound peers, and reinventing the educational system to believe in and nurture all students rather than discarding those perceived to be unequipped or incapable of success.
ACKNOWLEDGEMENTS

As I come to the final stages of my doctoral work, I reflect on the journey of my life and career that has led me to this point. This achievement is not one accomplished alone or that was limited to the past three years of research. Rather, it was originally forged by the unconditional love, guidance and encouragement provided by my parents over the course of my lifetime. Their unwavering support through every aspect of my life and education has made my achievements possible and crafted me into the person I am today. Over the years they have removed every barrier for me to receive quality education and supported my pursuit of the most challenging aspirations. Through their sacrifice of time, financial resources, emotional support and unwavering belief in my capacity, they have inspired me to reach for and achieve the loftiest of goals. I am forever grateful for their pillars of strength, beacons of guidance, and for setting the foundational cornerstone of my life and this work.

However, I would be remiss if I also did not acknowledge the sacrifices of all my loved ones during this journey. They have also given much in order for me to complete this work. I have been fortunate enough to have their unwavering support, uplifting encouragement, patience, belief, efforts, and compassion as I have missed much and required them to take on additional burdens to provide me the opportunity to pursue this goal. This achievement is also theirs and my gratitude is unending.
Table of Contents

ABSTRACT ............................................................................................................... iii
PREFACE ................................................................................................................. iv
ACKNOWLEDGEMENTS ........................................................................................... vii
Table of Contents .................................................................................................... viii
List of Tables ........................................................................................................... x
List of Figures .......................................................................................................... xi
Chapter One: Introduction ......................................................................................... 1
  Purpose .................................................................................................................. 3
  Rationale ............................................................................................................... 7
  Goals ..................................................................................................................... 9
  Research Questions ............................................................................................. 10
  Conclusion ........................................................................................................... 11
Chapter Two: Literature Review .............................................................................. 13
  Introduction .......................................................................................................... 13
    Academic Achievement Freshmen Year and Impact on Graduation Rate .......... 14
    Response to Intervention (RtI) Models ............................................................... 17
    Impact of Program Design and Staff Influence on Student Outcomes ............ 21
    Impact of Intervention, Model and Mastery on Self-Efficacy ......................... 28
  Take Away .......................................................................................................... 31
  Conclusion ........................................................................................................... 32
Chapter Three: Methodology .................................................................................... 33
  Research Design Overview ................................................................................... 33
  Participants ........................................................................................................... 36
  Data Gathering and Analysis .............................................................................. 37
  Ethical Considerations ......................................................................................... 40
  Conclusion ........................................................................................................... 41
Chapter Four: Results ................................................................................................ 42
  Assessing the 4 C’s (As Is) ................................................................................... 43
    Context ............................................................................................................... 43
    Culture .............................................................................................................. 44
    Conditions ......................................................................................................... 48
    Competencies ..................................................................................................... 50
  Findings ............................................................................................................... 52
    Research Question 1: ....................................................................................... 54
    Research Question 2: ....................................................................................... 62
    Research Question 3: ....................................................................................... 64
  Interpretations, Judgements and Recommendations ......................................... 71
  Conclusion ........................................................................................................... 72
Chapter Five: A Vision of Success .......................................................................... 73
  Introduction .......................................................................................................... 73
  Envisioning the Success: To Be .......................................................................... 74
    Context .............................................................................................................. 74
    Culture .............................................................................................................. 75
    Conditions ......................................................................................................... 78
List of Tables

Table 1: AIM Program Participant Demographic Distribution ........................................ 53
Table 2: AIM Program Growth Summary ........................................................................ 54
Table 3: T-Test Results for PSAT ERW Growth Comparing AIM to Control .............. 55
Table 4: T-Test Results for PSAT Math Growth Comparing AIM to Control .......... 57
Table 5: T-Test Results for STAR Reading Growth Pre-Test to Post-Test ................. 58
Table 6: T-Test Results for STAR Math Growth Pre-Test to Post-Test ....................... 59
Table 7: T-Test Results for GPA of Core Coursework: Remedial vs. AIM Placement .. 63
Table 8: T-Test Results for Math Self-Efficacy and Anxiety: Pre-Test vs. Post-Test .... 66
Table 9: T-Test Results for Reading Self-Concept and Value: Pre-Test vs. Post-Test .... 68
List of Figures

Figure 1: Timeline of Implementation for Intervention Support ........................................... 3
Figure 2: RtI Pyramid (Kovaleski et al., 2013) .................................................................... 18
Figure 3: Comparison of Means for PSAT Assessment Growth ............................................. 61
Figure 4: Comparison of STAR Assessment Score Growth Pre-Test to Post-Test .......... 61
Figure 5: Comparison of Grade Point Average ................................................................. 64
Figure 6: Comparison of Mathematics Questionnaire Pre-Test to Post-Test ................. 67
Figure 7: Comparison of Motivation to Read Profile Pre-Test to Post-Test ............... 70
Figure 8: Strategy and Action Chart ............................................................................... 83
Chapter One: Introduction

Creating an educated workforce that is capable of adapting in the 21st century global marketplace is a goal of educational systems in the United States and Fairview District. This vision is laudable, yet as a country we still grapple with unacceptable high school dropout and graduation rates in some areas despite incremental improvement in global measures of academic achievement. While the national dropout rate has decreased from 9.7 percent in 2006 to 5.3 percent in 2018 and the graduation rate increased from 79 percent in 2011 to 85 percent in 2018, many urban areas show outcomes far worse than these averages (Hussar et al., 2020). Regrettably, when student outcomes are longitudinally below average, or a student fails coursework at the secondary level, it is more likely that they will drop out or graduate with minimal competencies (Dupéré et al., 2015). Either of these scenarios destines a student to encounter difficulties succeeding in college or career (Alliance for Excellent Education, 2011). Gaps in academic achievement result in adults entering the workplace who are unskilled in areas needed by employers today and therefore we fail to reach the goal of creating citizens prepared to meet the demands of the 21st century workforce.

The federal government has enacted recent educational reforms focused on improving post-secondary outcomes. For example, Individuals with Disabilities Education Act (Individuals with Disability Education Act, 2001) and the No Child Left Behind Act of 2001 (No Child Left Behind (NCLB), 2001), required greater accountability from teachers, students, schools, and districts. The common goal was to provide additional support for students who are struggling in order to ensure academic, and eventually, post-secondary success (Gerzel-Short & Wilkins, 2009). In the reauthorization of IDEA in 2004, the Response to Intervention (RtI) model emerged to proactively prevent Special Education placement by intervening earlier. Most
recently, the Every Student Succeeds ACT (ESSA) required support for all students rather than specifically focusing on those with special needs.

With the implementation of NCLB, and further reinforcement in ESSA, each state was required to test and document students’ academic progress at public schools. In Illinois, high school students are now required to take the SAT Exam, whereas individual student progress was previously tracked using the ACT. These standardized tests are intended to measure college and career readiness in order to guarantee that students have acquired the necessary skills for their post-secondary endeavors. They can also be used as a method to identify student strengths and weaknesses leading to recommendations for additional support where needed. However, regardless of these recent efforts, schools continue to struggle in closing the achievement gap. This ongoing challenge at the state and national level spurred creation of programs geared toward targeting and improving academic outcomes for at-risk students (Burns et al., 2008).

As shown in Figure 1 below, the framework of accountability in NCLB led to Response to Intervention (RtI) models in the reauthorization of IDEA in 2004 (Individuals with Disability Education Act, 2004). However, this work had a single focus on the academic aspects of intervention. At the local level, these supports were typically provided in combination with a Positive Behavioral Intervention and Supports (PBIS) model (Turse & Albrecht, 2015). However, when ESSA referenced a “a multi-tier system of supports” (Every Student Succeeds Act, 2015) it transitioned into a holistic framework to encompass “whole child” data such as academic growth, attendance, and behavior, essentially combining the previously separate PBIS and RtI processes. Therefore, many districts have updated their program models or terminology to combine all RtI and PBIS work under the single title of Multi-Tiered System of Supports (MTSS), and this is the terminology used in Fairview District. This program evaluation
specifically focuses on the academic intervention aspect and will therefore concentrate on the RtI framework of intervention. However, as expected by ESSA, the program being evaluated is inclusive of all students, rather than specifically supporting only those with special needs (IEP).

**Figure 1: Timeline of Implementation for Intervention Support**

![Timeline of Implementation for Intervention Support](image)

*Figure 1 represents the timeline of different aspects of intervention support appearing in legal documents and federal acts.*

These models have become important reform measures used by schools. The RtI component of an MTSS system requires differentiated instruction and interventions based on incremental progress monitoring that matches individual student needs (Batsche et al., 2006).

**Purpose**

The purpose of this study is to investigate the impact of early intervention strategies at Fairview High School in Illinois, and their effect on student academic achievement. My career has been dedicated to helping students that struggle academically, socially and/or emotionally. Much of my time in the classroom was spent teaching remedial or co-taught courses so I personally experienced the inadvertent educational segregation that occurs from separating the
lowest achieving students from their general peer group. As an administrator, I have worked to remove remedial coursework and improve the instructional and curricular quality of co-taught learning environments in our organization. In recent experience, an essential component of detracked student success in the regular grade-level coursework has stemmed from the implementation of appropriate academic interventions and supports.

In the Fairview District, the Prep course work level was used previously to separate low achieving students from the core population, therefore limiting their exposure to grade-level peers and rigorous curriculum. By all accounts, it was a remedial level typically rostered with students of color, those with limited English proficiency or those with special needs (IEP/504). In reality, the reason the remedial coursework existed was to create an environment for extremely low-performing students with IEPs to participate in a co-taught course with general-education peers. This prevented a special education self-contained placement for severe students by having some general education students in this remedial level of instruction. While the course was identified as a general education class, in reality, the level of curriculum and rigor never met grade level standards or requirements. Rather, it placed general education students into a special education environment without IEPs.

At the request of school administrators and the Board of Education, an RtI model has been implemented in an effort to detrack these students, support their success in regular grade-level coursework and close academic gaps. This program is a targeted academic student intervention system that allows for individualized or small group instruction. The students who receive support from the Academic Intervention and Mentoring Program (AIM) are selected by a combination of three academic indicators, including grade performance in current coursework,
performance on a standardized universal screening instrument (STAR Test in Literacy and Numeracy) and annual standardized assessment benchmarks (PSAT 8/9 and STAR).

Educational researchers have studied tracking for over three decades, concluding that the educational inequality of leveled course placements and resistance to detracking in schools, reveals an educational injustice (Oakes, 2005). A variety of empirical studies have found that tracking tends to be inequitable and ineffective as it provides fewer learning opportunities, lower rigor levels and is discriminatory towards minority students (Hallinan, 1994). Research shows that tracking can no longer be seen as an instructional method that delivers an equal educational opportunity to all students (Hallinan, 1994; Oakes, 2005). Tracked courses limit the opportunities to learn related to content coverage that occurs as part of planned instructional activities at grade level.

Beyond content exposure, there are also significant limitations in the coherence of how topics are arranged and the number of topics focused upon in each level of a course. Tracking, or placing students in different groups, further increases the variability of American students’ opportunity when “the topics covered are different across groups” (Schmidt & McKnight, 2012 p.100). Therefore, current tracking models for the general education population need to be dismantled so all students have equitable opportunities to learn and the same access to high quality educational environments that meet their individual needs while offering exposure to rigorous curriculum.

Clearly, detracked students will require additional supports beyond the regular grade-level classroom. Special education programming must provide parallel learning opportunities and partnerships with general education coursework rather than drawing students without disabilities into tracked learning environments that reduces their opportunities for learning,
disrupts coherence or limits the focus of the general education population. The AIM program and intervention model was developed to support these struggling students. It has a direct impact on their learning as intervention support is a viable method to allow students to engage with rigorous grade level coursework that often moves through content at a faster pace or requires skills these students typically have not yet developed following years of placement in lower-level tracks. The AIM program focuses on filling academic gaps while simultaneously supporting current grade level coursework progress.

The greatest body of RtI/MTSS research has studied implementation at elementary grade levels (D. Fuchs & Fuchs, 2006). However, with the ongoing concern with graduation and dropout rates and the detracking shifts in high schools, more research on implementing quality RtI/MTSS models at the high school level is required (Mellard & Johnson, 2008). More importantly, there has not been research on initiatives relating the effects on student achievement when intervention programs have been implemented (Harris & Princiotta, 2009).

The purpose of this evaluation is to determine the effectiveness of a high school RtI model on students’ academic achievement. The AIM program is an academic intervention program constructed to routinely identify and support struggling students by including supplemental instruction beyond the general curriculum, and provide support services to address academic and executive functioning barriers to academic success. Each student receives services based on their individual needs. Any increase in frequency, duration and intensity is determined by progress monitoring and student responses to support.

RtI, the academic segment of an MTSS model, is traditionally presented in a three-tier intervention support pyramid. The largest is the foundational bottom of the pyramid, Tier 1 and it addresses curriculum-based instruction for all students (Buffum et al., 2008 p. 82). The
instruction should be designed to provide all students with the support they need to be successful and to provide individual reinforcement as needed (Denton et al., 2006). The second Tier is designed for students who are unable to experience academic success and require additional support beyond the classroom. This Tier is applied when students are incapable of mastering the intended core competencies without additional 1:1 or small group support that supplement or review curriculum and address academic gaps. Tier 3 serves only a small number of students who are severely struggling to meet course expectations or have disabilities that impact their learning. The goal of Tier 3 support is to remediate learning gaps and mitigate future potential problems by targeting a student’s individual weaknesses (Buffum et al., 2008). The traditional pyramid tiered approach is a viable method for academic intervention. However, the steps are not systemic requirements and ensuring the system has the correct type and quantities of instructional stages is important to the success of the intervention process (Brown-Chidsey & Steege, 2005).

**Rationale**

I selected this program for evaluation based on my personal experience as a remedial coursework teacher, my ongoing work supervising the dismantling of remedial level coursework and improvement of co-taught courses, and due to the limited research available on the RtI model at the secondary level. One of the most critical issues in supporting academic success of detracked students is the identification of their learning gaps and providing individualized interventions that meet their needs in order to transfer into a regular grade-level classroom. Detracked students are often lacking significant skills and knowledge from years of basic or remedial level curriculum. Interventions appear to be the best means to bridge the learning gaps.
In addition, the lack of academic success leaves students with low self-esteem and self-efficacy that further impacts their confidence, personal view of their capacity for success and persistence when addressing hard problems (Usher & Pajares, 2008). The MTSS/RtI methodology is the foundation of most school-based intervention processes. This model typically requires a universal screener, quality differentiated classroom instruction, and specific 1:1 or small group intervention prior to using the top tier resources such as Special Education programming.

A fundamental requirement at the secondary level for academic intervention is use of a quality universal screening tool to determine which intervention placement a student may require. In the high school setting, universal assessments are challenging to acquire as products are not readily available that measure incremental growth spanning elementary through secondary literacy and numeracy skills. Therefore, high schools typically use course grades as one of their universal screening tools. This presents major challenges as grades do not always measure mastery of skills, but rather completion of assignments or executive functioning skills. The lack of successful universal screening tools and the incorrect use of course grades in lieu of skills assessment, prevents many students from obtaining the academic intervention support they require to be successful (Canter et al., 2008). Fairview High School uses the PSAT 8/9 and STAR tests as universal screeners to measure if a student falls below Benchmark (grade level) and only uses grade data as a supplemental indicator for current grade level success.

Tier 1 in the RtI model specifically requires methodologies for all students to learn. This is achieved by differentiated instructional methods provided in the regular grade-level coursework. In Fairview District, this philosophy is either not a commonly embraced belief among teachers or there is a lack of the required foundational knowledge. Therefore, implementation of differentiated instruction and other common Tier 1, 2 or 3 supports and
accommodations are not always provided with fidelity or in a timely manner. The implementation of the AIM program will require teachers to prepare differentiated lessons to meet the needs of every student (D. Fuchs et al., 2003). As differentiated instruction requires faculty professional development to ensure that teachers are capable of meeting expectations, the AIM program will coordinate and provide professional development and systemic standards for teachers in collaboration with Instructional Coaches, Literacy and Numeracy teams.

Ensuring that all students succeed academically is in the best interest of all schools. Our desired outcome is to create students who become active and productive citizens in a global society. Therefore, it is incumbent upon high schools in particular, to ensure that any deficiencies are resolved and achievement gaps closed prior to graduation. This requires that we intervene on behalf of our at-risk students to help them overcome the challenges preventing their academic success. Intervention structures such as those suggested, require stakeholders and organizations to change from traditional methods and structures to new practices that focus on student learning (Muhammad, 2009).

**Goals**

The goal of the program evaluation is to determine if students can be academically successful as a result of the intervention supports provided for their Literacy and Numeracy needs. More specifically, can students identified as needing intervention obtain grade level competency in math and literacy while achieving course credit in regular grade-level coursework by transferring the skills and knowledge acquired during intervention. To achieve these goals, as an organization we will need to:
• ensure that the majority of students’ academic needs will be met through Tier 1 instruction;

• provide all students a universal screening assessment process prior to beginning intervention practices (Glover & Albers, 2007);

• have the results of the universal screening assessment dictate students’ specific intervention;

• build a team of professionals that is tasked with specific outcomes for student success in literacy and numeracy;

• ensure that academic interventions are required for all identified students; and

• create a concise description of each intervention type, tier and method (Buffum et al., 2008).

More specifically, the goal is for the students in this cohort group to earn a grade of D or higher in regular grade-level coursework in order to obtain credit so they may graduate on time and prevent potential drop out. In addition, student’s skill level in the areas of literacy and numeracy as measured by results on formative STAR assessments and summative PSAT standardized measures will be developed towards grade-level proficiency in response to the interventions provided. Finally, an important component of academic success stems from a student’s self-confidence and self-efficacy. Therefore, a goal of this program is to ensure that student self-assessment of their confidence and efficacy improves with program participation.

**Research Questions**

This research will focus on the Tier 2 implementation of the MTSS program at Fairview High School. Other aspects at the Tier 1 and Tier 3 levels of the program are in development
and have varied implementation and oversight disconnected from the detracking initiative. Therefore, we are specifically focusing on the Tier 2, small group and individual intervention provided to determine the impact on students’ success. The research questions guiding this study include:

- To what extent does Tier 2 intervention impact student growth on standardized and grade-level assessments?
- To what extent does Tier 2 intervention impact student outcomes in regular grade-level courses?
- To what extent does Tier 2 intervention impact student’s self-efficacy?

It is hypothesized that Tier 2 intervention support will allow students previously placed in remedial coursework to obtain credit in regular grade-level coursework; that they will show increased performance in standardized assessments; and increased academic success will reinforce a growth mindset in the students catalyzing confidence in their ability to learn and to be successful.

**Conclusion**

In this section, the relationship between detracking students from low-level coursework and RtI supports is explored. The limited research available at the secondary level for RtI methods suggests that high quality instructional practices, differentiation, and progress monitoring serve to gauge student growth and instructional effectiveness. In the current paradigm, high school students face a variety of challenges such as proper preparation for college admission and career readiness while experiencing an ever-changing technologically-based global economy. In addition to these challenges, low socio-economic levels, increasing
pressure to drop out of school, credit deficiency that results in not graduating on time, and a lack of college and career preparedness prevent successful post-secondary outcomes for struggling learners. One of the greatest responsibilities of intervention support is to close learning gaps in order to ensure that students can successfully engage in the grade level appropriate coursework and thereby obtain credit for courses and graduate on time.

Throughout my educational career, educational inequality has persisted for students who struggle academically. While there has been an increase in the support and structures created to ensure that all students have access to quality educational experiences over the last few decades, we are still far from the ultimate goal of educational equity for all students. At the secondary level, students are often separated based on academic capacity into different course tracks. While the intent of this model is to provide appropriate challenge, pacing and environment; it often inadvertently causes segregation of students within a school. This research will explore if Tier 2 intervention support can allow at-risk students to be academically successful in regular classroom environments at the high school level.
Chapter Two: Literature Review

Overall, there is a lack of research, data and literature regarding outcomes of intervention programs at the secondary level (Moore, 2014). Therefore, while many districts are implementing intervention programming, it is challenging to know whether or not these programs are meeting the intended goals. In an effort to identify successful program structures and implementation of multi-tiered intervention models, this literature review provides an overview of issues causing low student performance, such as remedial placement or failure in regular grade-level coursework that would trigger intervention placement, the origin of Response to Intervention (RtI), and the impact of intervention on student self-efficacy.

Introduction

Over the last 37 years, the American educational system has been responding to the achievement crisis identified in the Nation at Risk Report that outlined the decline in the academic performance of American students. Specific areas were identified and addressed such as low literacy rates, increase in students entering college requiring remedial coursework and the decline in students graduating high school (United States, 1983). However, from 1983 to 2001 the lack of improvement catalyzed creation of the No Child Left Behind (NCLB) Act by President George W. Bush. This law focused priority on addressing the needs of all students to improve their academic outcomes.

While controversial, NCLB caused important educational equity and quality issues to move to the forefront of national dialog and required that schools work to narrow the achievement gap for all students regardless of socio-economic status, ethnicity, special education status, or gender. In response to NCLB, Response to Intervention (RtI) was added to the
Individuals with Disabilities Education Act in 2004 as an alternative evaluation procedure and required schools to adopt specific intervention methods to close achievement gaps. These new intervention processes provided opportunities for students to receive additional instruction and assistance (Paige, 2002). By 2006, tangible improvement was made in reducing the national dropout rate and graduation crisis, in part due to new intervention models (Bridgeland et al., 2009). The positive trend in drop out and graduation metrics continued for the next decade. However by 2014, the achievement gap persisted, particularly in urban areas, for students of color and English language learners (Kena et al., 2014). Therefore, the Every Student Succeeds Act (ESSA) was signed into law that requires multi-tier systems of supports for all students, particularly for specific groups such as at-risk, disengaged, unmotivated, unresponsive, underperforming, or consistently unsuccessful students (Every Student Succeeds Act, 2015).

To date there is a limited quantity of research on secondary education multi-tiered intervention models to determine why these programs are successful and to validate their overall educational impact (Kennelly & Monrad, 2007). What we do know is that intervention processes are valuable tools that can be implemented to enhance students’ educational experiences (Bradley et al., 2007). Therefore, in order to build a schema of a secondary level intervention model, schools must have a clear understanding of the factors related to low student performance and how to support or prevent those factors.

**Academic Achievement Freshmen Year and Impact on Graduation Rate**

Low graduation rates and failure at the secondary level were primary concerns intended to be addressed by the NCLB Act (Bridgeland et al., 2006). However, almost a decade later, there continues to be concerns addressed by ESSA and many schools are using early warning
systems in conjunction with interventions to get students on track to graduate (Faria et al., 2017). The three primary areas that have been identified to cause students difficulty in being successful after high school are low socio-economic levels, dropping out of school, and an overall lack of career preparedness (Jensen, 2009; Roderick & Camburn, 1999). In 2006, The Silent Epidemic report was released and the extent of the drop out problem in the United States was revealed along with some student perspectives on their self-identified causes for quitting school (Bridgeland et al., 2006). Sadly, most dropouts believed they could have been successful if provided adequate support. The students in the report shared that school was not interesting and they were not motivated or supported by the system. In addition, they indicated that the accumulated failure of too many classes or the fact that they started high school behind their peers, contributed to their decision to drop out of high school (Bridgeland et al., 2006).

These are academic examples of characteristics that contribute to a larger impact of cumulative advantage. Cumulative advantage (CA) is referring to the concept that certain groups have a variety of advantages that can lead to inequalities over time. Cumulative advantage processes, particularly disadvantages early in life, can magnify small differences over a period of time that eventually makes it difficult for the group that is behind to catch up (DiPrete & Eirich, 2006). In the educational arena, progression across each grade is often dependent on satisfactory completion of previous skills and therefore indicates characteristics of being a CA process. Further, there is a variety of research on the CA impact of tracking students and how particular tracks (remedial), at critical points of development, have a long-term disadvantage on the future outcomes for students in those tracks (Gamoran & Mare, 1989; Kerckhoff, 1993; Kerckhoff & Glennie, 1999; Lucas, 2001).
Due to the significance on early disadvantage impacting long-term success, research has indicated that Freshman year is critical and has shown that improving Freshman student course performance leads to substantial improvements in graduation rates (Roderick et al., 2014). The reasons for failure are varied but most often are due to being absent, not completing required work and failing courses. These factors bear greater influence on outcomes at critical transitions such as freshmen year of high school as students often get lost in larger schools, have a greater number of teachers and are required to engage in more rigorous coursework (Roderick & Camburn, 1999). Lessons learned from a variety of high school reforms indicate that in order to increase the graduation rate of below grade-level freshman, interventions must be provided that address foundational skills and close knowledge gaps (Murnane, 2013).

Recent data shows that the United States experienced a decrease in the dropout rate between 2011 and 2018, therefore increasing the average of the national graduation rate (DePaoli et al., 2018). In part, this growth was possible due to a greater understanding of why and when students typically drop out of school and how support at critical transitions can improve outcomes. Researchers from the University of Chicago, University of Pennsylvania and John Hopkins University identified that students typically drop out of school when they receive poor grades in core subjects, have low attendance rates, fail to be promoted to the next grade, and are not engaged in their classes (Kennelly & Monrad, 2007).

Research also identified that most often students drop out of school if they are credit deficient in ninth grade. Therefore, schools can mitigate a lack of preparation for high school that may lead to poor outcomes freshman year in a variety of ways (Kennelly & Monrad, 2007). School leaders and policy makers must understand the importance of integrated data monitoring systems to diagnose issues, rapidly addressing the instructional needs of unprepared students,
working to personalize learning environments, and building the capacity of their faculty and leadership teams to create connections with the community, employers, and institutes of higher education for their students (Herlihy, 2007). Many of these needs are supported or met through intervention programs at the secondary level that are designed to support students at risk of dropping out of school.

**Response to Intervention (RtI) Models**

All Multi-Tiered Student Support (MTSS) intervention programs have roots in Response to Intervention (RtI) models that meet the academic needs of all students using a hierarchy of interventions. An RtI model of support is a research-based approach to decision-making that can influence the nature of instruction to provide early intervention (Duffy, 2007). While popular at the elementary level, it has more recently also been used at the secondary level. RtI involves a tiered approach to providing the most appropriate instruction, services and scientifically based interventions to struggling students (Turse & Albrecht, 2015). This approach supports struggling learners by providing intervention strategies to students who are at risk for academic failure (D. Fuchs & Fuchs, 2006). The process of RtI uses high-quality, research-based instructional practices that includes progress monitoring and adjusting instruction based on student’s response (Bender & Shores, 2007).

Typically, the largest number of graphical representations of RtI show the increasing degree of intervention intensity applied and the declining number of students represented in the shape of a pyramid. The pyramid shown in figure 2 represents intensive support for a small number of students on the top and less support for the majority of students as the foundation of the pyramid structure (Kovaleski et al., 2013). The nature of the interventions is augmented at
each upward level, becoming more intensive as the student moves up the tiers (D. Fuchs & Fuchs, 2006).

**Figure 2: RtI Pyramid (Kovaleski et al., 2013)**

*Figure 2 represents a common design for an RtI intervention triangle. This model shows three tiers of intervention support and the characteristics of intervention at each level.*
**Tier 1: High-Quality Classroom Instruction and Screening.** Tier 1 is the foundational level of support and establishes an expectation that all students receive high-quality, research-based instruction from qualified personnel. If students begin to struggle, they would receive more specific and specialized support within the general education environment (Duffy, 2007). This tier typically refers to quality classroom instruction that would ensure the majority of students could be successful (Gilbert et al., 2012). The National Center on Response to Intervention, (2010a) indicates that Tier 1 should include a research based core curriculum, differentiated learning activities, culturally and linguistically responsive instructional practices and that a universal screener is used on a periodic basis to establish a baseline in order to identify struggling learners who need additional support (National Center for Learning Disabilities, 2014). Universal screening of all students should assess their current level of performance. Students identified as being “at risk” through universal screenings and/or results on state assessments should receive supplemental instruction during the school day in the regular classroom. The length of time for this support can vary, but it generally should not exceed eight weeks (Johnson, 2007). Through quality instruction, effective prevention and differentiated support, 80% of students should remain in Tier 1, with less than 20% of the remaining population requiring more intensive levels of support (Bernhardt & Hébert, 2011).

**Tier 2: Targeted Interventions.** Students making insufficient progress in the regular Tier 1 classroom should be given increasingly intensive instruction that is provided with greater frequency and progress monitoring (National Center for Learning Disabilities, 2014). Tier 2 provides specific instructional procedures that are determined by student needs based on their levels of performance and rate of progress. This includes a more systematic structure, defined
duration and frequency of support (National Center on Response to Intervention, 2010). While Tier 2 intervention structures will vary; they should include small groups that receive instruction that supplements the general curriculum. Typically these interventions are in the areas of literacy and math and should not exceed a grading period (Johnson, 2007). Frequent progress monitoring of students’ skills will determine whether or not they are responding to the more intensive interventions at Tier 2 or require more specific supports. Students who show insufficient progress at this level should be considered for Tier 3.

**Tier 3: Intensive Intervention and Evaluation.** Tier 3 is the most rigorous level of intervention and is only intended for those who were unable to respond to Tiers 1 and 2. If appropriate systems are in place, only approximately 5% of a schools population should require Tier 3 (National Center on Response to Intervention, 2010). This level will provide instruction or support to students individually while addressing their specific needs. Progress monitoring should occur on a weekly or biweekly basis and students should be provided an individualized instructional program. According to The National Center for Disabilities (2014), when a student progresses through all tiers of intervention, but is not able to achieve the desired outcomes, the evidence would suggest that the student requires more support and they should be referred for a comprehensive evaluation to determine eligibility for special education services under the Individuals with Disabilities Education Improvement Act of 2004 (Individuals with Disability Education Act, 2004). The data collected during Tiers 1, 2, and 3 should be included in that evaluation and used to make the eligibility decision (Johnson, 2007).

Each level of the RtI system has a specific focus and population it supports. The descriptions for Tier 1, 2 and 3 provided above align to the most common designs available in
the research. Generally, the intent of RtI programs is to gradually increase the level of support students receive over time. Despite differences in distribution, methods or labels, that is a common practice across most intervention programs. However, every organization develops slight modifications or individualizes to needs during implementation. Due to local variances, there are different levels of success in implementation and program outcomes.

**Impact of Program Design and Staff Influence on Student Outcomes**

While most schools implement aspects of each tier in their programs, the research includes a variety of systemic and implementation variances that impact the outcomes of the intervention programs. Fisher and Frey (2013) analyzed RtI Implementation in one building over the course of two years. The qualitative study included a research team that recorded field notes detailing classroom observations, faculty meetings, and IEP meetings over the course of two years. In addition, during the second year of the study, the research team interviewed all staff members. The focus of the interviews was to collect data on the components of the emerging RtI system, implementation efforts and the successes or challenges experienced.

The main finding from the analysis of observations, interviews and student achievement data was organized into five conclusion themes. The first theme was the importance of focusing on quality instruction. The instructional framework method of gradual release of responsibility theory was important to the implementation of RtI in these schools. The second theme was the use of course competencies to monitor progress. The teachers and curricular model shifted to a competency-based system where students were assessed and graded based on state standards. The third theme was for the organization to schedule intervention to supplement, not supplant, core instruction. The fourth theme was to dedicate resources to support intervention methods. In
the second year of the study the school hired a full-time reading specialist to coordinate all of the literacy supplemental and intensive intervention methods. The last theme was the importance of adopting a school wide approach to RtI to maximize intervention impact. Early in the study the school was only providing intensive support to Tier 3, Special Education students. However, over time more intense intervention was provided to a wider variety of students.

The quantitative measures all showed improvement over the two years of the study. The school outperformed similar schools in the state assessment by 11%. The improvements held consistently for all the subgroups of African American, Hispanic and students of poverty. Grade point averages increased from 2.89 to 3.36 and attendance rates improved from 90.4% to 95.6%. Finally, Special Education referrals also decreased.

The last theme of the Fisher and Frey research reinforced the importance of implementing intervention programs “school-wide” or systemically. In order to achieve that program design, it relies heavily upon faculty and staff participation and buy-in. However, as with most change initiatives, there is significant stress and anxiety on behalf of the teachers tasked with program implementation and participation. In one study, teacher comfort and use of RtI methods and models were evaluated four years into program implementation (Isbell & Szabo, 2014). The theoretical framework used was the Concerns Based Adoption Model (CBAM) which contains diagnostic tools that deal with Change Theory (Hall, 1979) and Concern Theory (Fuller, 1969). The diagnostic tools used in the CBAM included self-concerns about teacher adequacy, teaching methods, performance and impact on student’s needs. Change Theory is grounded in the idea that teachers can change their instructional behaviors or their perception of their capacity over time. Concerns Theory concentrates on the types of communications with self and others about concerns with teaching.
The authors were basing the Change Theory and Concern Theory of teachers on the framework of RtI implementation in their schools and the change to the general classroom teacher’s role with struggling learners. They specifically explored the following:

1. What concerns did secondary teachers have about RtI?
2. What levels of RtI usage did secondary teachers implement?
3. What were secondary teachers’ attitudes, and feeling about RtI?

This constructivist – interpretive program evaluation studied the concerns, feelings, attitudes and level of implementation of teachers in an RtI school. While much of the methodology engaged the participants in the research process, they did so by using a variety of measures in order to construct the view of the teachers in this school and how their experiences shaped the implementation of the RtI framework. While some of the measures were quantitative in nature, their purpose was to qualitatively identify the experiences, behaviors and perceptions of the teachers. Therefore, this mixed methods research was conducted in a High School and the study lasted for 5 months.

At the time of implementation, teachers were more concerned about how RtI was affecting them personally, rather than how RtI was impacting a student’s learning. The themes from the research indicated that teachers were aware of how RtI helped their students, tutoring was important for student growth, questioning was an important instructional method for identification of struggling students and repetition is important for students to be successful. However, when asked about their concerns, they identified themes that included the need for collaboration, additional time to implement RtI correctly, the teacher’s role in the RtI process, and the amount of documentation required. Finally, the participants were asked to identify their goals moving forward with RtI. They expressed the need to acquire effective strategies, to be
organized, and able to communicate well with other teachers. Others thought they would just keep things the same.

Even after four years of implementation the teacher’s level of using the RtI framework increased only slightly. Changing to the philosophy and methodology of RtI was difficult for these teachers and this organization. Learning points from this study reveal that change can produce stress and anxiety in those tasks with implementing the change. Insufficiently supported change agents can lead to lack of achieving outcome targets. Therefore, administrators need to stay actively involved in providing sustained information and support to teachers to help them adapt. Equally, the lack of consistent collaboration time for Professional Learning Community (PLC) meetings with teachers involved in RtI implementation was an issue. This was a major obstacle to implementation. Either due to scheduling conflicts or extra duties, there was not enough common planning or collaborative time. The results of this study indicate the importance of administrators communicating effectively about the change, planning for appropriate training, developing PLC collaboration structures and providing the resources needed for teachers to be comfortable with the change process of RtI implementation.

Teacher comfort and capacity for intervention implementation is only one aspect where faculty members have a significant impact on the outcomes of intervention programming. Overall, the local culture, systemic processes and perception about implementation can also impact program success. One study explored the promise of RtI and the potential it holds for addressing injustices in the distribution of special education placement and student achievement for minority students (King Thorius et al., 2014 p. 24). Through a critical practice approach, they studied the impact of RtI implementation on an urban elementary school. A critical practice approach to analysis uses perceptions as constituted through interdependent socio-
cultural processes connecting policy with cultural, historical, individual, and contextual factors (Levinson et al., 2009).

Critical practice views implementation of models based on how interdependent socio-cultural processes join with policy due to the cultural, historical, individual and contextual factors of the environment. Critical practice theory contends that policy is not merely implemented at the local level. Rather, it undergoes the interpretation of the implementing party, it is negotiated within local capacities and is typically implemented with a new version constructed by the local environment.

These authors suggest that each school operates in their own “zone of mediation” (ZOM) that applies local cultural and historical context to the macro-level education and political system policies. In their study they used ZOM as a theoretical tool to analyze how local implementation of an equity focused policy may actually lead to inequitable practice due to the ZOM context of power, privilege, status, class or race. Welner (2001) theorized that there are four forces that shape local school ZOM: Inertial forces are the local cultural practices of the school that have been developed over a long period of time; technical forces are the operational functions and limitations of resource distribution, allocation and management; normative forces are the deep rooted beliefs about people in the organization, including prejudices; and political forces are the impacts of power imbalance across the educational system.

This case study researched the RtI framework through the lens of addressing injustices in the distribution of educational opportunities and achievement for underserved students. Interpretation of the experiences was framed against the cultural and political impacts of a zone of mediation (ZOM) in an urban school.
The inertial forces that impacted RtI implementation was the pre-existing processes by which a student qualified for special education services. This process was the local interpretation of RtI, which was not representative of the intended framework. In this school, RtI was created to replicate rather than displace the inertial special education eligibility processes.

The technical forces that impacted the RtI implementation were significant. The largest was the allocation of time for the RtI process to be analyzed, monitored and evaluated. In addition, the knowledgebase of the RtI team about research-based interventions was very limited. Often interventions were created by the teachers based on their instinct with limited knowledge or access to research-based methodology.

The normative forces had a large impact on the RtI implementation. Overwhelming evidence demonstrated that teacher beliefs about students and their families shaped the RtI implementation. In numerous formats, discussions and methods, the teachers demonstrated a belief that the families and home life of their students were the culprit for poor academic achievement. The ZOM of this particular school had a tremendous impact on the methods of how RtI was implemented and the fidelity of implementation in comparison to the research framework.

This research is significant in identifying the impact of change theory and local culture (ZOM) on the quality and implementation of an intervention program. Often, the students served by an MTSS/RtI/PBIS program are perceived as challenging and implementation of such programs requires significant change in practice, school structures and curriculum to support these learners. Therefore, the impact on student outcomes is influenced by these cultural and organizational factors. While it is difficult to measure the impact of culture on student achievement, it can be argued that student growth is due to both academic and cultural
experiences which would indicate that the organizational health and teacher implementation was sufficient enough to meet student needs. Therefore, this research is also looking at the growth of student self-efficacy as it is most often the outcome of experiencing success, growth and positive modeling.

Throughout the research on RtI/MTSS program designs, a variety of themes have emerged to shape the future of intervention models. One particular synthesis analyzed state and federal RtI/MTSS models, frameworks and guidebooks to determine the following flaws in previous models that need to be avoided as districts update their RtI/MTSS plans moving forward (Knoff et al., 2020).

- Missing interdependency between academics and behavior
- Missing a continuum of instruction / courses
- Avoiding diagnostic or assessment until too late in the learning process
- Not linking intervention to assessment outcomes
- Focus on progress monitoring rather than strategic instruction
- Establishing rigid requirements for access to more intensive services
- Limiting when students are discussed by Student Assistance Team

These flaws contribute to much of the research that does not show positive outcomes for RtI/MTSS programs. Redesigning local implementation to avoid these pitfalls is crucial and it is suggested that State level RtI/MTSS guidebooks need to provide blueprints, guidance, and procedures that are (a) supported by sound research, and (b) based on effective and diverse field tests; and that (c) result in demonstrable student outcomes that are sustained over time (Knoff et al., 2020).
Impact of Intervention, Model and Mastery on Self-Efficacy

In an idealized state, intervention programs should be able to resolve learning gaps and provide support for students to become successful in grade-level coursework. Many intervention programs have also established a positive culture and interventionists have built influential relationships with students. Both of these attributes contribute to another potential outcome of intervention, growth in self-efficacy. Self-efficacy is commonly defined as individuals’ beliefs or perceptions regarding their abilities and according to Bandura (1993), self-efficacy is developed by four factors that include mastery experiences, vicarious experiences, social persuasion, and physiological states. However, Bandura (1986) indicated that students mostly base their self-perception about their ability to achieve based on their mastery experiences. He then proposed that if students have higher levels of self-efficacy, they will be more motivated to learn and therefore, more likely to persist through challenging tasks (Bandura, 1997). Therefore, intervention programs that foster development in mastery by closing achievement gaps, reinforcing weak skill sets and supporting success in grade level curriculum should have a significant impact on self-efficacy.

Overall poor self-efficacy can decrease a student’s motivation to learn and can ultimately contribute to lower academic achievement and conversely students with high self-efficacy tend to have a greater motivation to learn in addition to persisting through difficult problems more than their peers. There is a variety of research on the relationship between self-efficacy and academic achievement that suggests what methods or experiences can support development of this critical attribute (Judge et al., 2007; Rittmayer & Beier, 2009).

Research has shown that students who performed well on their math tests and earned good grades in math classes were more likely to have self confidence in their ability to do well in
math class. This sense of self-efficacy ensured that students enrolled in subsequent math classes and approached math problem solving without anxiety and with perseverance in solving problems (Usher & Pajares, 2009). Based on the four factors that develop self-efficacy, modeling is most easily experienced by observing mastery in another person. Often a student’s self-efficacy tends to increase when mastery is experienced, but decreases when failure occurs (Bandura, 1993). The modeling process, is most effective when students are able to see similarities between themselves and the exemplar observed. Therefore, when a trusted teacher or peer models excellence in an academic endeavor or activity, students are more likely develop the belief that “I can do that” (Usher & Pajares, 2009).

Based on this research, a variety of subject specific inventories have been created over the years to measure the specific characteristics that model self-efficacy in certain subject matter. The foundation for this work in mathematics was from early efforts at the collegiate level to determine the relationship between self-efficacy expectations and performance of mathematics-related behaviors (Hackett & Betz, 1982). Hackett and Betz initially constructed the Mathematics self-efficacy Scale (MSES) based on the Mathematical Confidence Scale (Dowling, 1978) and the Mathematics Anxiety Scale (MAS) (Betz, 1978). The foundation of mathematical self-efficacy was categorized into three domains of skill; solving mathematical problems, using math in everyday tasks and earning good grades in math courses. This work was further honed by Pajares and Miller in the MSES-R (Pajares & Miller, 1994) and that tool was proven to be able to predict mathematical problem-solving ability and math self-efficacy (Krantzer & Pajares, 1997).

The use of these inventories to measure mathematical self-efficacy is important as this attribute is closely related to academic achievement and post-secondary pursuit in the subject
matter (Hackett & Betz, 1989). In addition, students who are confident in their academic abilities monitor their work time more effectively, are better problem solvers, work harder, self-evaluate progress, engage self-regulatory strategies and show greater persistence at difficult tasks than peers (Elliot & Dweck, 2005). Determining if students are developing or possess these attributes of motivation and self-confidence can also influence literacy growth and development. A variety of research connects the self-perceived confidence of a student as a major contributor to motivation and engagement. Further, it has been demonstrated that high school course selection has been associated with their motivation for learning that particular subject matter during their elementary school experience. For example, elementary measurements for students’ self-efficacy predicted the selection of their high school English course (Durik et al., 2006).

Therefore, measuring the motivation and confidence to read are important factors in the development of self-efficacy in literacy. The Motivation to Read Profile (MRP) was developed by Gambrell, Palmer, Codling and Mazzoni to “provide teachers with an efficient and reliable way to quantitatively and qualitatively assess reading motivation by evaluating students self-concept as readers and the value they place on reading” (Gambrell et al., 1996 p. 519). While the Motivation to Read Profile consists of two components, the Reading Survey and the Conversational Interview, the survey focuses specifically on assessing the reading motivation, self-concept as a reader and value of reading while the interview is more focused upon the individual students’ books, authors and genres of interest.

Over the years the MRP has been widely used in literacy research as a measure of student motivation for reading (Applegate & Applegate, 2010; Marinak & Gambrell, 2010; Quirk et al., 2009; Shaaban, 2006). However, the original MRP was constructed prior to the impact of digital print and literacy skills. Therefore, the MRP was recently updated to the Motivation to Read
Profile – Revised (MRP-R) to include revisions of terminology and motivational aspects tied to digital sources and literacy skills on digital platforms (Malloy et al., 2013). The connection between reading motivation and self-efficacy was evaluated in a case study that determined an individuals’ self-assessment of ability to accomplish literacy tasks, recent performance on similar tasks, and encouragement received. It was determined that all of the characterizes increased student self-efficacy and therefore motivation for reading. These were critical attributes in making the transition from novice to expert reader. Each of the inventories developed in the research have a direct impact on the long-range goal of intervention to develop students’ ability and self-confidence in subject matter of previous challenge.

**Take Away**

In summary, much of this research was used to frame and design the AIM program at Fairview District. In addition, similar to the pitfalls experienced in the research with teacher implementation and cultural ramifications on change, Fairview District experienced similar opposition in the systemic change required for MTSS implementation and cultural norm disruption that results in ongoing disruption to date. However, using the research to identify important factors of prevention, the influence of negative stakeholders is purposely controlled. Their participation in program feedback and design is still desired, but not at the cost of the negative ZOM impacting the quality of the AIM program or the culture of learning crafted for students. Due to this work, the AIM team gives significant focus on building and preserving positive culture in the program. A top program focus is building trusting and supportive relationships with students by interventionists who have been intentionally selected based on their ability to be good role models for struggling learners. The intent is that quality modeling,
positive culture, and functional systems for improving mastery will allow students to increase their self-efficacy in literacy and math. This growth in academic achievement and self-efficacy has shown to have impact on student achievement and graduation rate and is therefore a significant focus of the AIM program.

**Conclusion**

There continues to be a need for intervention programs to help prevent students from dropping out of high school. However, the research on such programs needs to provide more detail as to the specific program designs or structures that are achieving the intended goal of student achievement and high school completion. While RtI was originally theorized as a means to address the misidentification of students with learning disabilities, application in schools has now expanded its purpose into a preventative tool to meet the needs of all students (McDaniel et al., 2013). Further, by providing RtI services to students early can close the skill performance gap between at-risk students and their peers (Wright, 2007). This will limit the impact of cumulative advantage over time and improve long-term goal acquisition.

Student achievement data and improvement are a foundational principle of the RtI model. However, in much of the available current research, there are issues between the theory and the implementation quality. While the literature identifies methods of promise, they can be limited by poor implementation, use of tiers, quality of personnel and systemic designs. Many themes arise in the research that influence student achievement as it is impacted by RtI program implementation such as the importance of leadership, quality of teacher support, professional development, and the impact of predisposed ideas or culture.
Chapter Three: Methodology

Research Design Overview

The purpose of this research is to evaluate the impact of Tier 2 interventions on the achievement, failure rate and self-efficacy of students receiving support. One of the most significant concerns in the literature is that the majority of RtI research is from program evaluations in elementary schools. There is limited information about secondary education intervention impact. Therefore, this study is focused on how interventions in a high school setting allow students to be academically successful. The implementation of a new Academic Intervention and Mentoring (AIM) program in a high school setting will be evaluated for impact on student achievement, failure rate and self-efficacy.

A focus for this research is for the members of the AIM team that include the program Coordinator, Reading Interventionist, Numeracy Interventionist and Instructional Coach to participate in the evaluation process in order to have a greater understanding of their influence, success and needs for improvement. In addition, this evaluation will include the participation of the students in the program to ensure that AIM is having an impact on their self-efficacy and academic performance.

The inclusion of intended users of the AIM program in the evaluation will result in a greater likelihood that they will use the results of the evaluation as they will understand and feel ownership of the evaluation process and findings because they’ve been actively involved (Patton, 2008 p. 173). The design of this program evaluation will use a variety of methods from Michael Patton’s Utilization Focused Evaluation (UFE) model. This framework is based upon the belief that program evaluation should be designed in such a way to become useful to the intended users of the results. Therefore, this method requires the structure and plan of the evaluation to
encourage the likelihood of findings use and that participation in the evaluation process by stakeholders allows them to inform decisions and improve performance using the results (Patton, 2008). This evaluation model requires that the primary intended users of the evaluation be identified and engaged from the beginning to the end of the process in addition to ensuring they guide much of the decision making through the evaluation process.

This research will be a quantitative analysis of a variety of outcomes related to Tier 2 interventions. The purpose of this evaluation is to determine the impact the AIM program has on student achievement, failure rate and self-efficacy. In order to measure the impact of these Tier 2 interventions on students in the AIM program, we will measure the growth in student achievement on the PSAT 9 from their initial measurement on the PSAT 8 exam. The PSAT 8 exam is the universal screener initially used to identify students for intervention. Therefore, my first research question will be measured by comparing the growth from PSAT 8 to PSAT 9 for the students that received interventions compared to the students that did not receive interventions via the AIM program. Due to the COVID-19 pandemic, there is only data available for analysis from the 2018-2019 school year as PSAT assessments did not take place in April 2020 due to school closures for the COVID-19 pandemic.

In addition to PSAT standardized tests, the growth of intervention students will also be assessed using the STAR assessment. These progress monitoring assessments will be analyzed to identify how significantly students enrolled in the AIM program grew over time. Again, due to the COVID-19 pandemic, complete STAR data is available only for the 2018-2019 school year with partial data from the fall of 2019-2020. Sadly, due to the school closures associated with COVID-19, STAR tests were not completed for the Spring semester during the 2019-2020 school year.
One of the greatest indicators of academic success at the high school level is student performance in their grade level coursework. Whether or not students can pass their coursework to obtain credit, or obtain good grades to positively impact their Grade Point Average (GPA) are both critical attributes to high school completion and reducing the potential of school dropout. Most important is the performance in core coursework, therefore the GPA performance of the Class of 2022 that was supported by the AIM program will be compared to the GPA of core coursework of other students that would have previously been enrolled in remedial coursework. The purpose of this analysis is to determine which method of student support was more significant in increasing student achievement as defined by GPA.

Finally, the students in the AIM program are the most important stakeholder. We want to ensure that regardless of the conclusions drawn on student achievement, that the students themselves feel as though the program is worth their time and is having a positive impact on their self-efficacy. Therefore, Fairview District established the use of two inventories to measure the mathematics and reading growth in self-efficacy and the reduction in student anxiety associated with those subjects. These inventories were created by adapting existing inventories to align with the program purpose and high school level. The Mathematics Self-Efficacy and Anxiety Questionnaire (Appendix A) was adapted from a collegiate inventory (May, 2009) and each question was classified for its relation to a student’s self-efficacy or level of anxiety associated with mathematics. The Motivation to Read Profile (Appendix B) assesses students self-concepts as readers in addition to the value they see in reading (Gambrell et al., 1996). The students participating in AIM interventions will take the Mathematics Self-Efficacy and Anxiety Questionnaire and/or the Motivation to Read Profile prior to interventions starting with our
interventionists. Upon program conclusion or exit, students will take the survey again to identify if there is any growth in their inventory score.

**Participants**

This study took place in a suburban High School in Fairview, Illinois. The High School serves 1363 students, of which 364 are in the Freshmen class. The target population of this study was a sample of ninth grade students that had been initially identified by scoring below benchmark on the PSAT 8 assessment which serves as the universal screener for the district. In addition, to triangulate placement, all Freshmen students were given an additional universal screener of the STAR assessment that measures grade-level specific content and skills. Based on these assessments initial placement occurred if both assessments indicated values below benchmark or grade level. However, as the first semester of freshmen year transpired, students who showed failure in a core course in addition to one of the universal screener assessments being below benchmark or grade-level was also be added to the AIM program. Essentially, program placement depended upon meeting two of the three criteria below:

- Below benchmark on the PSAT 8 English Reading Writing (ERW) and/or Math Score
- Below grade-level on the STAR assessment in Reading and/or Math
- Failures of one or more core-courses in progress.

There were 93 students scheduled to receive interventions. They were provided instruction by either a certified math teacher for numeracy interventions, a certified reading teacher for literacy interventions or both. In addition, support in their freshmen coursework was provided by interventionists, the AIM instructional coach or Freshmen course teachers.

The students participating in the AIM program received a minimum of one and a maximum of two intervention blocks per week per subject area. The intervention instruction and
assessment were performed by interventionists that are subject-area specialists in the area of need. Each intervention session ranged from 25 minutes to 50 minutes and included instruction on specific skill gaps identified by the STAR assessment for reading or math. The STAR program provides an instructional report that identified the specific Common Core skills that needed to be remediated at each grade level. Often the interventions were provided individually or in small groups of students that were performing at similar levels.

Interventionists created individualized plans for each student in the AIM program and intermittently assessed progress in the skills and learning targets of focus. In addition, approximately every four weeks, students in the program complete another round of STAR testing to progress monitor their growth on targeted skills and standards. Based on the outcomes of growth on these grade level assessments, students were re-evaluated for program placement based on new PSAT scores and performance in grade level coursework. Students transitioned in or out of the AIM program based on need, growth and particularly grade-level coursework performance which had the greatest impact on fluidity of placement.

Finally, as students entered or exited the AIM program, they completed either or both of the Mathematics Self-Efficacy and Anxiety Questionnaire (Appendix A) or the Motivation to Read Profile (Appendix B). The Pre-Test version of the questionnaire was completed prior to intervention support beginning and the Post-Test was completed as a requirement to program exit or the end of a school year.

**Data Gathering and Analysis**

Data collection for this study included qualitative methods. The researcher began the process by obtaining permission to conduct this study from National Louis University’s Institutional Review Board (IRB), then obtaining Fairview High School District’s
Superintendent’s permission to conduct this study. The quantitative data was obtained from the Fairview District’s student information system, PowerSchool, which provided student specific data such as course schedule, grades, class schedule, and some test scores used in this research study. Additional test score data was obtained directly from the College Board Test Score reporting site for Fairview District and the STAR score results came directly from the Renaissance STAR Test platform. All of this data will be pulled into database form using a SQL query and Navicat software. Each of the research questions explored will be analyzed quantitatively using the methods described. The final database of comprehensive data points will then be uploaded into SPSS for all quantitative analysis.

To analyze the first research question, this study will use a t-test to measure the impact of interventions (AIM program) on student achievement as determined by growth from PSAT 8 to PSAT 9. The use of the t-test as the statistical hypothesis test was appropriate as the data is continuous and the data followed the normal probability. A comparison of the archival data in the form of PSAT 8 and PSAT 9 scores from the district’s fall and spring testing of students enrolled in the AIM program will be conducted. I used the independent samples t-test to determine the statistical significance of the difference in math performance from PSAT 8 to PSAT 9. The t-test allowed me to accept or reject the null hypothesis.

This standardized test data on the PSAT will be collected through placement testing of all students in October of their 8th grade year to April of their 9th grade year. These data points are available from College Board to Fairview High School via the SAT Reports portal. Specifically, we will be looking for growth on the Evidence-based Reading and Writing (ERW) and Math portions of the assessments. A comparison of equal random samples of the 2018-2019 archived
test data served as one of the information sources to answer the first research question. Student files with incomplete data such as those of students who were not present for either the PSAT 8 or PSAT 9 were removed before analysis. The independent variable for research question 1 is the placement in the AIM program while the dependent variable is the growth from PSAT 8 to PSAT 9 or the growth between the pre and post-test of the STAR assessment.

This STAR universal screener reinforces the measurement of grade-level specific skills and knowledge to determines what specific academic gaps require intervention. While the PSAT 8 and PSAT 9 measure a broad scope of academic skills, the STAR test breaks down grade-level specific content and skills as aligned to the Common Core Standards. Individual interventions are tied to the STAR testing instructional report that identifies the specific skill gaps or content in grades 1-8. Therefore, it is this universal screener that will drive the specific intervention plan and curriculum. Therefore, to further answer research question 1, the growth in their STAR grade-level assessment will be compared to an average year of anticipated growth. This study used a paired samples t-test to measure pre-test and post-test differences in STAR Reading and Math scores for students enrolled in the AIM program. The t-test allowed me to accept or reject the null hypothesis.

To answer the second research question, descriptive statistics, correlations, cross-tabulation and T-Test analyses were used to investigate the relationship between AIM Placement and course failure. The final grades earned in core coursework were collected for students in the sample. I conducted cross-tabulation with T-Test to compare the means of the core coursework Grade Point Average (GPA) to explore the relation between AIM Placements and obtaining course credit by passing classes with a grade of D or higher.
Finally, to answer the third research question, this study used a paired samples t-test to measure pre-test and post-test differences in the Mathematics Self-Efficacy and Anxiety Questionnaire (Appendix A) or the Motivation to Read Profile (Appendix B). The t-test allowed me to accept or reject the null hypothesis. As part of placement in the AIM program, all students will partake in an inventory of their self-efficacy and comfort level before and after Tier 2 intervention using the Mathematics Self-Efficacy and Anxiety Questionnaire or the Motivation to Read Profile. Student’s responses will be recorded via an online survey for Fairview District and their overall inventory score will be totaled. The growth on the inventory score from pre to post test will be calculated to determine what impact, if any, intervention had on students’ self-efficacy and confidence level.

**Ethical Considerations**

One of the most important ethical rules is the protection of evaluation participants, particularly children. As this program evaluation is researching the achievement of students, careful considerations should be provided to protect the confidentiality of the students involved in addition to not providing any additional harm to their long-term growth or academic achievement as a result of participating in this study. Participation in this program is a requirement of their school district. This study is a secondary data analysis of the program. The results analyzed will only examine group outcomes without including specific data on individual students.

In addition, all data collection and analysis electronic files will ensure confidentiality by not including student or interventionist names but rather only a numerical identification for each individual. These data sources and analysis documents will be protected by password and file
encryption on Fairview District intranet. Finally, in the event that we become aware during the study that program participation is having a negative impact on student performance, the student will be withdrawn from the program even though it would not allow the study to complete the intended evaluation.

**Conclusion**

This chapter explained the methodology for this research. The purpose of this evaluation is to determine the impact of an early intervention system on the academic achievement of students. Determination of achievement is studied in terms of growth on standardized measures, growth in specific skill and content knowledge, reduction in rate of failure and the achievement of greater self-efficacy as an outcome of the interventions provided. The section above contains detailed information about using Patton’s Utilization Focused Evaluation framework, how the study participants were identified and ethically treated, an overview of methodology, and the means by which this data will be collected and analyzed.
Chapter Four: Results

The problem that requires change in Fairview District is the lack of uniformly structured and sequenced support for struggling learners where strategies are aligned with their specific needs. Traditional practices have left at risk students with academic gaps or struggling learners with limited access to grade level curriculum. These students were placed into a separate track of “prep” level curriculum that was below grade level, had a slower pace, and had lower expectations for rigor and performance, thus perpetuating and widening the achievement gap.

The proposed change is to provide every student with access to rigorous grade level coursework that will require intervention supports so they can be successful in these placements. The assumption is that by opening opportunities to more rigorous learning environments, emphasizing a growth mindset, teaching to the whole learner, providing targeted and individualized support, and by closing learning gaps, student achievement will increase and failure rates will diminish.

This section will provide the findings and data interpretation using the 4 C’s framework of data analysis from Change Leadership (Wagner & Kegan, 2006). This structure allows leaders to be reflective and view their systems against the four critical attributes of context, culture, competencies and conditions. The purpose of using this model is to ensure a fuller understanding of the problem and results as viewed across multiple facets of the organization. By analyzing these aspects of Fairview District, meaningful background is provided to understand the “As Is” current conditions as a baseline for existing organizational practice (Appendix C). In addition, this framework allows leaders to chart a course to move the organization forward towards the goal of equitable access to grade level learning environments for all students.
Assessing the 4 C’s (As Is)

Context

Wagner and Kegan’s framework defines the context in which an organization exists to include the social, historical, and economic parameters that influence the demands and expectations of the system (Wagner & Kegan, 2006 p.104). Each of these characteristics have individual and synergistic influences on how the organization operates and how it can and should change practice. In context, Fairview District is currently undergoing a shift in the demographic and socioeconomic distribution of the population. New student needs are arising that demand new, contemporary, and innovative approaches for meaningful success. Of concern, there has been a decline in student performance. Many believe that this is caused by instability in a variety of factors, such as new limitations on teacher influence on the course recommendation process, a decrease in the executive functioning skills of students, and shifts in public perception regarding the purpose of school. However, seldom is the decline in student performance attributed to teacher performance or system design. In addition to these challenges, even though fewer students are entering the district, the percentage and number of special needs (IEP/504) students is increasing. This shift further exacerbates the level of support and resources required by the student population to be successful.

Fairview District is a public high school district located approximately 50 miles from Chicago. The 2,940 students in the district are currently being served by two schools. In the last century, the district grew from humble rural roots to become a competitive suburban district. As the region was transformed by housing developments and outlet malls, so was the student demographic. Originally, the district served a primarily white population of students. Today Fairview District is comprised of a more diverse student body of White (60.5%), Black (3.9%),
Hispanic (23.4%), Asian (7.6%), American Indian (0.4%), Multiracial (4.1%) and Pacific Islander (0.1%) students. Of these, 12% are classified as low-income households. In practice, we are aware that percentage is far higher than reported due to the volume of families that do not complete the required paperwork for assistance, even though they qualify. Approximately 15% of the students in the district have disabilities, 4% are English Language Learners, and a low percentage of approximately 1% are homeless. With the variety of challenges presented, we still have a very involved student body that maintains good attendance rates in comparison to state averages. We generally have 94% of our students in attendance regularly, 16% has chronic absenteeism, and 6% of our population could be classified as chronically truant.

The context of Fairview district’s changing demographics impacts this research as it is the genesis for the removal of remedial coursework and is a key driver as to why the AIM program was developed to support these new students and their unique needs. In the past, the number of students who qualified for remedial coursework was so low that they were easily hidden in small pockets and did not have a significant impact on the system. However, as the new high-needs population expanded, we found that the district was ill equipped to support them. The simultaneous rising demand for remedial placements coupled with the low performance of these students began to impact district outcomes as a whole. These students are no longer a small minority and meeting their needs have moved to the forefront of the school improvement plan. Fairview district has a deliberate focus on equity and inclusion as a major pillar of the strategic plan, and the elimination of segregation in course placement is important.

Culture
The unique culture of each organization has a significant impact on functionality and trust between stakeholders at all levels. Within Wagner and Kegan’s framework, culture is defined as the shared values, beliefs, assumptions, expectations and behaviors related to instruction, leadership and relationships in a school (Wagner & Kegan, 2006, p.102). At Fairview District, culture had a significant impact on both the causation for change and sparked the impetus for systemic improvement. Years ago, the organization began separating students into different levels or groups based on achievement to provide specific support for those in the lower tiers of performance. This practice stemmed from a belief that struggling students needed school to be less difficult. However, in an attempt to support these students, the primary method used was segregation of struggling and often minority General Education students into a remedial level of coursework. This remedial level often had a curriculum targeted below grade-level, a slower progression through content, and provided a second Special Education licensed teacher into these classrooms to deliver Special Education modifications, often to the whole class.

While the primary purpose of this model was to provide access to General Education peers for students with IEPs, a secondary purpose was to help struggling General Education students as the organization had no other support structures available to them. Under this model, struggling General Education students placed into these remedial courses were denied grade-level curriculum and provided Special Education curricular and instructional modifications without having a documented disability. This inadvertently widened the achievement gap for General Education students pulled into this remedial level coursework. Data shows that the General Education students typically identified for this remedial instruction were often minority, LEP or low-income students.
Sadly, this methodology comes from a culture that believes struggling students are best helped if school is made “easier” for “those kids”. This cultural context of classifying underperforming, often minority or LEP learners into the category of “those kids” was not limited to adults within the organization. It also permeated to families who would insist that their often white; middle-class student was removed from any classes that included “those kids”. The spoken and publicly advocated culture of the organization was one of love and care for all students, with a focus primarily on their feelings, and not their academic outcomes. The desire to help students was limited to the moment of challenge, rather than focusing decisions on helping students develop skills that would have long-term impact. In addition, the culture of the organization had a strong emphasis on student compliance and behavior that was often disconnected from academic capacity or engagement. From the teachers’ perspective, the issue of declining student achievement was more often the result of students not working hard enough and/or lack of parental engagement.

Historically, the district has performed well on school report card measures because of caring, well behaved, hardworking students. Most of the school’s faculty are long-tenured and have only worked in Fairview District. Thus, they are unaccustomed to viewing aspects of their own professional practice or school culture as possible contributing factors to poor student performance. They have attributed the change in student executive functioning and compliance behaviors to the decline in student achievement.

In addition to the culture challenges posed by faculty belief systems, there was a subterranean culture of being disinvested in goals because they were created and operationalized without faculty input or alignment with school priorities. Historically, the district created its strategic plan using a convenience sample of stakeholders selected by leadership. This produced
a document with only short and intermediate-term goals without consensus support from those
tasked with achieving the outcomes. Since there was no formal, long-term plan, goals and
initiatives tended to be limited to those items high on the priority list of a select few. When
administrators changed, new goals or initiatives were brought forward and the old ones
disappeared. This approach to planning contributed to a culture characterized by teachers who
were frustrated by their lack of input into systemic changes. Thus, the decline in student
achievement was viewed as a product of insufficient goals and a limited vision for the future
state.

The simmering lack of trust in goal setting and creating “initiative” programs often
becomes a source of conflict when attempting to usher in changes to improve student outcomes.
Because teachers traditionally had little or no input into changes, they watch from the sidelines
as initiatives come and go. Their locus of control centers on complaint, initial opposition to
proposed school reforms or improvements and a passive aggressive stance that views anything
new like a “flavor of the day” tolerated by the attitude if they “just wait it out, this too shall
pass”. Some oppose change simply because “that is not how we do things here”. Others
advocate for or against a new process using subjective claims unsubstantiated by reliable, peer-
reviewed research or data to support their assertions. Some have grown complacent in the
comfort zone of habits and any attempt to break free from the status quo is met with instant and
open opposition. Thus, these cultural norms within the Fairview district provide insight into the
resistance expressed by stakeholders when asked to dismantle the poorly performing and
inequitable remedial coursework and to implement the AIM program.

As Fairview leadership endeavors to use validated data in decision making and embraces
the use of best practice models as the primary method of implementation, the results and findings
to the posed research questions in this program evaluation will have a significant impact on supporting the culture shift desired. While significant resources have gone into this school improvement plan to remove remedial courses and replace them with a successful RtI model, the future of the AIM program, as with all new strategies, depends on whether it successfully achieves the desired outcomes. In order to shift from a status-quo to a data driven culture, Fairview must only support programs that have yielded proven positive results.

**Conditions**

Each organization has specific local designs that influence the execution of change plans or best practice. For the purpose of this analysis, conditions are defined as “the external architecture surrounding student learning, and the tangible arrangements of time, space and resources” (Wagner & Kegan, 2006, p.101). Prior to the system change measured in this evaluation, Fairview district experienced a variety of conditions that shaped and occasionally limited the change process. The most impactful is the limited financial resources available based on the district’s current tax base. As a mostly residential community with a declining housing market that experienced an escalating number of foreclosures in the last decade, there is not a lot of commercial or retail support in the tax base. While geographically close in proximity to higher funded districts, the organization struggles financially to support the cost of teacher salaries and maintaining the infrastructure of two high schools. Therefore, the resources to support the type of intervention programming required by the change plan was limited.

Besides the financial conditions, the Special Education department has faced a variety of challenges at the district and building levels. While critical to student success, this team grapples with ensuring adequate special education programming, leadership and teacher development,
teacher accountability, continuum of services and intervention support. Most students classified as needing special education are only supported via co-taught classes with no individualized intervention support from licensed subject-area specialists. On limited occasions, typically once a month per goal area, students receive a randomly selected reading, math or writing lesson via a Strategic Studies course that may or may not be related to their specific skill deficiency.

Compounding this challenge, the range of student capacities within co-taught classes spans from 2\textsuperscript{nd} to 9\textsuperscript{th} grade skill-levels.

Because of the concentration of high need students and the span of skill sets, co-taught classes are frequently unable to progress through curriculum or maintain positive instructional environments. This is a known detriment to the general education students randomly selected to participate in the program and leads to repetitive demands from parents to remove their general education students from these sections to preserve the quality of their instruction and education. Further, the students enrolled in remedial co-taught courses were prevented from obtaining opportunities to learn, instructional focus or curricular coherence in their curriculum and instruction. This was due to the high concentration of students with an IEP or 504, students with limited English proficiency, or at-risk general education students.

Besides the concentration of high learning needs altering the instructional environment, there is an additional challenge of creating adequate curriculum design and assessment outcomes. Previously, not all core courses had a viable curriculum that was aligned to standards. Usually, the curriculum was generated by teacher preferences for topics, novels, laboratories or projects. Content was often internally driven by local choices and not vertically aligned due to limited time for teachers or PLCs to collaborate. The decisions of what content or skills to include in the curriculum was often subjective and varied between teachers in the same course.
In addition, the prerequisites for each course were often determined by teacher recommendations, which were also subjective. All of these challenges resulted in a large volume of students being excluded from rigorous coursework. Even if access was acquired, the alignment and cross-walk between their previous remedial level courses and new regular grade-level coursework was nonexistent.

The conditions outlined above have influenced the design of the AIM program. Due to the cumulative impact on students leading up to the inception of intervention support, the program had to quickly close gaps caused by lack of access to grade level curriculum compounded by long term achievement gaps. Viewed through the lens of the conditional and cultural challenges described above, this study will help determine the effectiveness of the program design and whether it is achieving the desired outcomes. These outcomes will shape the future for students at Fairview in terms of course access and the quality of their instructional environments.

**Competencies**

In order to achieve desired change, members of an organization must have proficient mastery or receive professional development to skillfully catalyze modifications in thought, attitude or behaviors. This skills set is defined as the competencies or “repertoire of skills and knowledge that influences student learning” (Wagner & Kegan, 2006 p. 99). Lack of competency can have a significant impact on instructional delivery in the classroom and therefore, the quality of instruction for students. One of the greatest barriers to change at Fairview was the faculty’s limited understanding of differentiated instruction methodology. Many had not yet acquired the mastery learning necessary to differentiate instruction
appropriately for all students. Teachers, Counselors and Case Managers had to gain expertise in accurately comparing and contrasting the concepts of differentiation, accommodation and modification. This steep learning curve related to basic definitions led to ongoing conflicts for the remedial level courses. The curricular changes needed based on IEP requirements were viewed as “accommodation” by Case Managers, but in actuality, the extensive deviation from the required standards or course outcomes were a “modification”. The impact of this confusion was that on paper, transcripts showed students passing “regular grade-level” curriculum, when in actuality they passed a remedial curriculum that had been significantly modified below the existing lower rigor and standards level. This resulted in students and families not understanding the consequences of low competency and how that would impact future courses, test score performance, college admission, and remedial placements at post-secondary institutions.

For true differentiation to be provided, faculty need to be competent in curriculum design, purpose and anticipated outcomes. Some struggle to synthesize the difference between curriculum and lesson planning and lack competencies in data driven instructional methods. This remains a significant barrier to successfully implement differentiated education. It is understandable that teachers who perceive themselves as proficient become angry or defensive when presented with data that suggests gaps in their performance and argue that they did not believe the data or feedback to be a valid measure of their practice. Initially, limited faculty competency in these concepts with less-than-optimal alterations to curricular design or standards alignment based on student outcomes hindered spectacular gains. Change can be difficult and gentle persistence and meaningful support will yield desired results.

During the 2018-2019 school year, Fairview School District embarked on a few major systemic shifts to implement a MTSS/RtI system to support the dismantling of remedial
coursework placement. First, all remedial level course work was removed from the organization. As a result, all students were scheduled into rigorous regular grade-level curriculum. To provide proper support and intervention, the district invested in a new program called the Academic Intervention and Mentoring Program (AIM). There was significant cost to provide the proper supervision and specialists to execute the program. Each school in the district was provided a Coordinator, Numeracy Specialist, Literacy Specialist and Instructional Coach to interact with specifically Freshmen students in the first year. These experts were intentionally hired due to their extensive competency in the subject areas of intervention and leadership capacity. In addition, there was specific focus of bringing an Instructional Coach to this team to not only continue to expand the practice of the Interventionists, but to have a systemic impact on the Tier 1 instruction and professional development of classroom teachers.

This research is focused on the outcomes of the AIM program to determine if the design, implementation and outcomes have a positive impact on student achievement, course performance and self-efficacy. In part, these program goals can only be achieved if current organizational competencies are enhanced or developed and the faculty and staff involved with the Tier 1, 2 and 3 interventions are using commonly understood themes and evidence-based best practices.

**Findings**

This research had its genesis in 2015 as the leadership at Fairview District completed a meta-analysis of the average growth for students in each level of coursework across all subjects. The outcomes of that analysis were heartbreaking as it showed that regardless of intent, the remedial program was failing students across all subjects by limiting them to an average of 2
years of growth over a 4-year time frame. Those initial findings became the impetus for the systemic changes described in this study.

The AIM program supported 93 students during the 2018-2019 school year. The demographic distribution of program participants is provided in table 1. In addition, 21.3% qualified for free or reduced lunch.

Table 1: AIM Program Participant Demographic Distribution

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>*</td>
<td>2%</td>
</tr>
<tr>
<td>Black</td>
<td>9</td>
<td>10%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>38</td>
<td>41%</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>*</td>
<td>1%</td>
</tr>
<tr>
<td>White</td>
<td>43</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>93</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Sample size too small to report

These students were assigned to either a Literacy or Numeracy Intervention. In the event students required support in both areas, they would alternate the subject scheduled to ensure students were not overloaded with interventions. In addition, if students experienced failure in core courses, specific supports were provided to help them pass those classes while closing historical achievement gaps.

The results in the first year were incredibly positive. Students grew in a variety of areas, such as failure rate in Math and English courses as shown in table 2, and increased PSAT ERW and Math growth rate. Students also closed major learning gaps. Using STAR assessments as a universal screener, students increased their performance in reading from the 20<sup>th</sup> percentile upon starting the program to the 36<sup>th</sup> percentile at the end of the program in Literacy and from the 40<sup>th</sup>
percentile in Math to the 55th percentile by program completion. Finally, beyond academic measures, students improved their self-efficacy. Based on the results of the Mathematics Self-Efficacy and Anxiety Questionnaire and Motivation to Read Profile, students showed growth in self-efficacy, reduced their anxiety and improved their viewpoint on the value of reading.

Table 2: AIM Program Growth Summary

Course Failure Rate Comparison

<table>
<thead>
<tr>
<th></th>
<th>2017-2018 (Remedial Coursework)</th>
<th>2018-2019 (AIM Intervention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra</td>
<td>21%</td>
<td>10%</td>
</tr>
<tr>
<td>Freshmen English</td>
<td>12%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Research Question 1:

This study used a t-test to measure the impact of interventions on student achievement as determined by growth from PSAT 8 to PSAT 9 and growth on the Pre and Post Test of the STAR assessment. An independent t-test, assuming equal variance, run on the PSAT 8 to PSAT 9 growth scores of both student groups, those enrolled in the AIM program and those students not receiving intervention, determined if the characteristics of the two groups were equal. These groups were comprised of a random sample of 78 students in each group. Since homogeneity was established, the individual differences between PSAT 8 and PSAT 9 scores for each student in each group were calculated after which an independent sample t-test determined the statistical significance of the scores between groups. The results from the t-tests fell below the .05 level, thereby rejecting the null hypothesis of no difference between the groups.
**T-Test PSAT ERW Growth: AIM v Peers**

The results of the analysis on PSAT ERW Growth indicated that students enrolled in the AIM program grew on average 44.615 points from PSAT 8 to PSAT 9. In comparison, peers not enrolled in the AIM program, the control group, only grew 31.538 points on average. This is significant as the students enrolled in the AIM program are placed due to PSAT scores being below benchmark. Therefore, this represents a significant gain that contributes to closing the achievement gap between AIM students and their peers (control). This study followed a null hypothesis of there being no difference in PSAT ERW score gain from PSAT 8 to PSAT 9 between students enrolled in the AIM program and students not enrolled in the AIM program. As shown in table 3, based on the independent 2-tailed t-test p value of 0.047, the analysis will reject the null hypothesis. These results are statistically significant as the T value of 2.0 is larger than the 0.05 critical value on the Students T-Test table of 1.645. In addition, the P value of 0.047 is less than 0.05 and the 95% confidence interval is between -25.98 and -0.16.

**Table 3: T-Test Results for PSAT ERW Growth Comparing AIM to Control**

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERW Growth</td>
<td>78</td>
<td>31.538</td>
<td>35.75083</td>
<td>4.04798</td>
</tr>
<tr>
<td>Control</td>
<td>78</td>
<td>44.615</td>
<td>45.31828</td>
<td>5.13128</td>
</tr>
<tr>
<td>AIM</td>
<td>78</td>
<td>44.615</td>
<td>45.31828</td>
<td>5.13128</td>
</tr>
</tbody>
</table>
Similar to the analysis above, the analysis of PSAT Math Growth indicated that students enrolled in the AIM program grew on average 47.94 points from PSAT 8 to PSAT 9. In comparison, peers not enrolled in the AIM program only grew 30.64 points on average. This is again significant as the students enrolled in the AIM program are placed due to PSAT scores being below benchmark, and in math are often significantly below grade level. This further contributes to closing the achievement gap between AIM students and their peers (control). This study followed a null hypothesis of there being no difference in PSAT Math score gain from PSAT 8 to PSAT 9 between students enrolled in the AIM program and students not enrolled in the AIM program. As shown in table 4, based on the independent 2-tailed t-test p value of 0.044, the analysis will reject the null hypothesis. These results are statistically significant as the T value of 2.033 is larger than the 0.05 critical value on the Students T-Test table of 1.645. In addition, the P value of 0.044 is less than 0.05 and the 95% confidence interval is between -34.12 and -0.48.

### T-Test PSAT Math Growth: AIM v Peers

<table>
<thead>
<tr>
<th>ERW Growth</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig</td>
<td>t</td>
</tr>
</tbody>
</table>

| Independent Samples Test |
In addition to measuring the standardized growth on the PSAT assessment from 8th grade to Freshmen year, this study also analyzed the growth in specific grade-level skills in Reading and Math using the STAR test. In this study a paired sample t-test was used to determine if there was a statistically significant difference in the pre-test and post-test score means of students receiving interventions (AIM program). Student development in grade-level skills was measured by growth from the STAR Reading and Math tests at the start of the intervention (Pre-Test) to the conclusion of the intervention (Post-Test).

**T-Test STAR Reading Scores of AIM Pre-Test v Post Test**

The paired t-test, run on the STAR Reading Pre-Test to Post-Test growth scores of each student determined a pre-test mean of 631.50 and post-test mean of 893.39 which indicates significant growth. This resulted in an average growth of 261.89 points which translates into developing from a 6th grade to 8th grade skill competency. This analysis tested a null hypothesis
of there being no difference in STAR Reading score gain from pre-test to post-test. Based on the paired t-test p value of <0.001, the analysis will reject the null hypothesis. These results shown in table 5 are statistically significant as the T value of 16.748 is significantly larger than the 0.005 critical value on the Student’s T-Test Table of 2.674. In addition, the P value of 0 is less than 0.005 and the 95% confidence interval does not cross 0, rather falls between -293.26 and -230.50. The results from this t-tests fell below the 0.005 level, thus rejecting the null hypothesis of no difference between the STAR Reading Pre-Test and Post-Test.

Table 5: T-Test Results for STAR Reading Growth Pre-Test to Post-Test

Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>STAR Reading PreTest</td>
<td>631.5094</td>
<td>53</td>
<td>157.06057</td>
</tr>
<tr>
<td></td>
<td>STAR Reading Post Test</td>
<td>893.3962</td>
<td>53</td>
<td>133.24722</td>
</tr>
</tbody>
</table>

Paired Samples Correlations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>STAR Reading PreTest &amp; STAR Reading Post Test</td>
<td>53</td>
<td>.704</td>
</tr>
</tbody>
</table>

Paired Samples Test

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>Sig (C-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>STAR Reading PreTest - STAR Reading Post Test</td>
<td>Mean</td>
<td>Std Deviation</td>
</tr>
<tr>
<td></td>
<td>-261.88679</td>
<td>113.84143</td>
<td>15.63732</td>
</tr>
</tbody>
</table>
T-Test STAR Math Scores of AIM Pre-Test v Post Test

The paired t-test, run on the STAR Math Pre-Test to Post-Test growth scores of each student determined a pre-test mean of 724.89 and post-test mean of 816.79 which represents a growth of 91.9 points which represents students developing from a 6th grade to a 9th grade skill level. This represents significant growth and further demonstrates a reduction in the achievement gap. This analysis researched the null hypothesis that there is no difference in STAR Math score gain from pre-test to post-test. Based on the paired t-test p value, the analysis will reject the null hypothesis. These results as shown in table 6 are statistically significant as the T value of 14.549 is significantly larger than the 0.005 critical value on the Student’s T-Test Table of 2.652. In addition, the P value of 0 is less than 0.005 and the 95% confidence interval does not cross 0, but rather falls between -104.50 and -79.28. The results from this t-tests fell below the 0.005 level, thus rejecting the null hypothesis of no difference between the Pre-Test and Post-Test scores in STAR Math.

Table 6: T-Test Results for STAR Math Growth Pre-Test to Post-Test

<table>
<thead>
<tr>
<th>Paired Samples Statistics</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAR Math PreTest</td>
<td>724.8955</td>
<td>67</td>
<td>69.36184</td>
<td>8.47390</td>
</tr>
<tr>
<td>STAR Math Post Test</td>
<td>816.7910</td>
<td>67</td>
<td>53.43434</td>
<td>6.52804</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Paired Samples Correlations</th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>67</td>
<td>.674</td>
<td>.000</td>
</tr>
</tbody>
</table>
Overall, the analysis of the first research question to determine what extent Tier 2 intervention impacts student growth on standardized and grade-level assessments has shown positive outcomes. In all four measurements, students enrolled in the AIM program grew significantly and that growth contributes to Fairview School closing achievement gaps for at-risk students. As shown in figure 3, the students enrolled in the AIM program experienced greater growth in their standardized PSAT Exams than their peers not receiving intervention.

In figure 4, the impact of individual growth is seen on the pre-test assessment to the post-test assessment growth on the STAR exam. This showed that on average, each student was able to increase their performance in grade-level skills regardless of which intervention subject was supported. These results have broader implementation implications and demonstrate that this Tier 2 intervention program has not only increased successful course placement into general education grade-level course work, but also provided simultaneous instruction to areas of deficiency. The combination of these two critical attributes of students supports and engagement resulted in significant gains in academic performance.
Figure 3: Comparison of Means for PSAT Assessment Growth

Figure 3 shows the growth on the PSAT 8 to PSAT 9 exam for students in the AIM program compared to those not enrolled in the intervention program (control). The ERW represents the Evidenced-based Reading and Writing Score and Math represents the Mathematics score. Error bars represent one standard error around the mean.

Figure 4: Comparison of STAR Assessment Score Growth Pre-Test to Post-Test

Figure 4 represents the growth in the STAR Reading and Math assessments from the Pre-Test to the Post-Test of students enrolled in the AIM program receiving interventions. Error bars represent one standard error around the mean.
Research Question 2:

In order to determine what extent Tier 2 interventions impact student outcomes in regular grade-level courses, this study used a t-test to measure the impact of interventions (AIM program placement) on student achievement as determined by the Grade Point Average (GPA) of core coursework in English, Math, Science and Social Studies. An independent t-test, assuming equal variance, run comparing the GPA of both student groups, those enrolled in remedial coursework during their Freshmen Year 2017-2018 (Class of 2021), and those students enrolled in regular grade-level core coursework receiving intervention support from the AIM program during their Freshmen Year 2018-2019 (Class of 2022), to determine if the characteristics of the two groups were equal. Since homogeneity was established, the individual differences between GPA for each student in each group were calculated after which an independent sample t-test determined the statistical significance of the GPA’s between groups. The results from the t-tests had a p value below the 0.05 level, thereby rejecting the null hypothesis of no difference between the groups.

T-Test Grade Point Average of Core Coursework: Remedial Students in 17-18 Freshmen Cohort to AIM Students in 18-19 Freshmen Cohort

This analysis is important to determining if the Tier 2 intervention program is able to support students in being successful in more rigorous grade level coursework. The null hypothesis was established as there being is no difference in Grade Point Average between Class of 2021 during their Freshmen year in remedial coursework and the Class of 2022 during their Freshmen year in regular grade-level coursework while receiving AIM support. Based on the independent, two-tailed t-test p value of 0.001, the analysis will reject the null hypothesis. These
results shown in table 7 are statistically significant as the T value of 3.494 is larger than the 0.005 critical value on the Students T-Test table of 2.576. In addition, the P value of 0.001 is less than 0.005 and the 95% confidence interval is between -0.65417 and -0.18206.

Table 7: T-Test Results for GPA of Core Coursework: Remedial vs. AIM Placement

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>Grad Year</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>2021</td>
<td>74</td>
<td>1.8923</td>
<td>.79184</td>
<td>.09205</td>
</tr>
<tr>
<td></td>
<td>2022</td>
<td>120</td>
<td>2.3104</td>
<td>.82046</td>
<td>.07490</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Samples Test</th>
<th>t-test for Equality of Means</th>
<th>Levene’s Test for Equality of Variances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig</td>
</tr>
<tr>
<td>GPA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.916</td>
<td>.340</td>
</tr>
<tr>
<td>Equal variances not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>assumed</td>
<td>-3.523</td>
<td>158.924</td>
</tr>
</tbody>
</table>
Figure 5 represents the Grade Point Average (GPA) of the Class of 2021 who received remedial level coursework (control) compared to the Class of 2022 who received intervention and grade level coursework. Error bars represent one standard error around the mean.

Research Question 3:

This study was designed to determine what extent Tier 2 intervention impacted a student’s self-efficacy. This analysis used a t-test to measure the impact of interventions (AIM program) on the growth of self-efficacy as determined by growth from pre-test to post-test on the Mathematics Self-Efficacy and Anxiety Questionnaire and the Motivation to Read Profile. This study used a paired samples t-test to determine if there was a statically significant difference in the pre-test and post-test score means of students receiving interventions (AIM program). Student growth in self-efficacy was measured by growth on each inventory from the start of the intervention (Pre-Test) to the conclusion of the intervention (Post-Test). The results from all the
t-tests fell below the 0.005 level, thereby rejecting the null hypothesis of no difference between the pre-test and post-test.

**T-Test Mathematics Inventory Pre-Test v Post-Test**

Self-Efficacy:

The Mathematics Inventory assessed two factors, the amount of anxiety experienced by a student and their self-efficacy in the subject of Math. This study analyzed the self-efficacy score using a null hypothesis that there was no difference in the self-efficacy score from the pre-test to post-test. However, based on the p value shown in table 8, the analysis will reject the null hypothesis. These results are statistically significant as the T value of 3.143 is larger than the 0.05 critical value on the Students T-Test table of 1.675. In addition, the P value of 0.001 is less than 0.005 and the 95% confidence internal does not cross 0, rather falls between -0.354 and -0.093.

Overall, the students in the AIM program grew in their self-efficacy over the course of program participation. At their entry to intervention support in math they scored an average pre-test score of 3.2042. However, upon program exit, their confidence in their ability to perform in mathematics increased to an average score of 3.4283. This shows that by closing achievement gaps, and supporting students in grade-level courses with their peers, they become more confident in their ability to be successful in mathematics.

Anxiety:

Conversely, as also shown in table 8, a similar analysis measuring the amount of anxiety students experience while doing math was analyzed using a null hypothesis that there is no
difference in the Anxiety score from the pre-test to post-test. Based on the p value, the analysis will reject the null hypothesis. These results are statistically significant as the T value of 2.508 is larger than the 0.05 critical value on the Students T-Test table of 1.675. In addition, the p value of 0.014 is less than 0.005 and the 95% confidence internal does not cross 0, rather falls between 0.35034 and 2.508.

Table 8: T-Test Results for Math Self-Efficacy and Anxiety: Pre-Test vs. Post-Test

**Paired Samples Statistics**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Math Self Efficacy Pre Test</td>
<td>32042</td>
<td>106</td>
<td>.81202</td>
</tr>
<tr>
<td></td>
<td>Math Self Efficacy Post Test</td>
<td>34283</td>
<td>106</td>
<td>.79794</td>
</tr>
<tr>
<td>Pair 2</td>
<td>Math Anxiety Pre Test</td>
<td>29619</td>
<td>106</td>
<td>.86991</td>
</tr>
<tr>
<td></td>
<td>Math Anxiety Post Test</td>
<td>27663</td>
<td>106</td>
<td>.88771</td>
</tr>
</tbody>
</table>

**Paired Samples Correlations**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Correlation</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Math Self Efficacy Pre Test &amp; Math Self Efficacy Post Test</td>
<td>106</td>
<td>.648</td>
</tr>
<tr>
<td>Pair 2</td>
<td>Math Anxiety Pre Test &amp; Math Anxiety Post Test</td>
<td>106</td>
<td>.582</td>
</tr>
</tbody>
</table>

**Paired Samples Test**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Math Self Efficacy Pre Test - Math Self Efficacy Post Test</td>
<td>-22407</td>
<td>67585</td>
<td>.06564</td>
<td>-.35423</td>
<td>-.09391</td>
<td>-3.413</td>
</tr>
<tr>
<td>Pair 2</td>
<td>Math Anxiety Pre Test - Math Anxiety Post Test</td>
<td>19565</td>
<td>80324</td>
<td>.07802</td>
<td>.04095</td>
<td>.85034</td>
<td>2.508</td>
</tr>
</tbody>
</table>
Unlike self-efficacy that is seeking a growth in student score, the anxiety sub score shows that the level declined due to student participation in the AIM program. When enrolled in the AIM program students experienced an average score of 2.9619 on the questions associated with mathematical anxiety. However, by program exit, on average student’s anxiety scores decreased to 2.7663. As shown in figure 6, this growth in confidence and efficacy and decline in feelings of anxiety show the Tier 2 interventions are having an impact on how student feel and respond to mathematics work.

**Figure 6: Comparison of Mathematics Questionnaire Pre-Test to Post-Test**

![Bar chart showing change in Mathematics Self-Efficacy and Anxiety scores from Pre-Test to Post-Test for the students enrolled in the AIM program. Error bars represent one standard error around the mean.](image)

*Figure 6 shows the change in Mathematics Self-Efficacy and Anxiety scores from Pre-Test to Post-Test for the students enrolled in the AIM program. Error bars represent one standard error around the mean.*

**T-Test Reading Inventory Pre-Test v Post Test**

The Motivation to Read Profile measures two aspects of student self-perceptions related to reading. First, the profile measures a student’s self-concept in reading and secondarily
measures how they view the value of reading in their lives. Both of these components are critical to the development of literacy skills and their self-efficacy in literacy-based coursework.

Self-Concept:

In table 9, the outcomes of the measurements of student’s growth in self-concept are noted. This analysis was focused on the null hypothesis that there is no difference in the Motivation to Read Profile Self-Concept score from the pre-test to post-test. Based on the paired t-test p value, the analysis will reject the null hypothesis. These results are statistically significant as the T value of 13.312 is larger than the 0.005 critical value on the Students T-Test table of 2.674. In addition, the p value of 0.00 is less than 0.005 and the 95% confidence internal does not cross 0, rather falls between –4.317 and -3.197.

**Table 9: T-Test Results for Reading Self-Concept and Value: Pre-Test vs. Post-Test**

<table>
<thead>
<tr>
<th>Paired Samples Statistics</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading Self Concept Pre-Test</td>
<td>31.4369</td>
<td>103</td>
<td>4.81759</td>
<td>.47469</td>
</tr>
<tr>
<td>Reading Self Concept Post Test</td>
<td>35.1942</td>
<td>103</td>
<td>4.48758</td>
<td>.44217</td>
</tr>
<tr>
<td>Pair 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading Value Pre-Test</td>
<td>26.6505</td>
<td>103</td>
<td>5.61983</td>
<td>.55374</td>
</tr>
<tr>
<td>Reading Value Post Test</td>
<td>30.6990</td>
<td>103</td>
<td>5.09870</td>
<td>.50239</td>
</tr>
</tbody>
</table>

**Paired Samples Correlations**

<table>
<thead>
<tr>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>103</td>
<td>.813</td>
<td>.000</td>
</tr>
</tbody>
</table>
Pair 2  Reading Value Pre-Test  103  .868  .000
& Reading Value Post Test

---

**Paired Samples Test**

<table>
<thead>
<tr>
<th>Pair</th>
<th>Comparison</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Std Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Reading Self Concept Pre Test - Reading Self Concept Post Test</td>
<td>3.757</td>
<td>2.864</td>
<td>2.82</td>
<td>-4.317 to -1.197</td>
<td>-14.664</td>
<td>102</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 2</td>
<td>Reading Value Pre Test - Reading Value Post Test</td>
<td>-4.049</td>
<td>2.802</td>
<td>2.76</td>
<td>-4.596 to -3.501</td>
<td>14.664</td>
<td>102</td>
<td>.000</td>
</tr>
</tbody>
</table>

As shown in figure 7, upon entry in the AIM program, students measured an average of 31.43 on their self-concept of reading skill. However, upon exit from the Tier 2 intervention, students grew to 35.19 on average in their self-concept of their ability to engage with reading and use reading strategies. This is important, as often student achievement is dependent on whether or not they perceive themselves as having the potential for success.

Reading Value:

In addition, another important component of reading self-efficacy is whether or not a student values reading as being important. In this analysis, the null hypothesis stated that there was no difference in the Motivation to Read Profile Reading Value score from the pre-test to post-test. Again, based on the paired t-test p value, the analysis will reject the null hypothesis. These results shown in table 9 are statistically significant as the T value of 14.664 is larger than the 0.005 critical value on the Students T-Test table of 2.674. In addition, the P value of 0.00 is less than 0.005 and the 95% confidence interval does not cross 0, but rather falls between -4.596 and -3.501.
In terms of reading value, when students entered the AIM program on average, they scored 26.65 and upon program exit they scored 30.69 on average. This growth shows that the Tier 2 interventions allowed students to increase in their perception of the importance of reading in their lives and more importantly, academic coursework. This is an important indicator of self-efficacy as students who believe in the value of the skills and knowledge, they are learning will often perform better in those subjects. As shown in figure 7, in both areas of measurement, student showed growth on the Motivation to Read Profile. This development in their internal feelings about reading contribute to their overall improvement in academic outcomes.

**Figure 7: Comparison of Motivation to Read Profile Pre-Test to Post-Test**

*Figure 7 shows the change in Motivation to Read Profile Self-Concept and Reading Value scores from Pre-Test to Post-Test for the students enrolled in the AIM program. Error bars represent one standard error around the mean.*
**Interpretations, Judgements and Recommendations**

The findings of this research indicate that every measure compared showed statistically significant growth for students participating in the AIM program. These outcomes are significant in establishing that Tier 2 intervention programs have the ability to close achievement gaps on standardized and grade-level assessments, improve student outcomes in core coursework, and improve the self-efficacy of students. Each of the characteristics evaluated are tied to critical attributes for high school drop-out rates and low post-secondary performance. Therefore, the intervention model is able to provide a concrete structure for ensuring academic success for struggling high school students classified as “at-risk”.

In addition, both the standardized test growth analysis and the core coursework analysis tied to research questions 1 and 2, made a direct comparison between the intervention model and a remedial coursework model by comparing student groups participating in each program. These results affirm that the district’s decision to remove remedial level course work was in the best interest of the students measured. Given that this decision has been the focus of much debate, these outcomes suggest that the decision was sound and that the growth and performance of students in the AIM program was far greater than the outcomes experienced by students enrolled in remedial coursework. As schools around the country consider the value of removing remedial coursework for all general education students to provide equitable access to rigorous grade level curriculum, the outcomes of this research support such efforts and reinforce the capacity of all students to be successful when intervention supports are adequately provided.

More important than student achievement measures, is the growth in self-efficacy as a result of program participation. Student self-perception and motivation are often not the focus of academic improvement programs; however, the AIM program was designed to also increase the
broader skills of self-confidence, grit, and perseverance through difficult tasks while improving skills and knowledge. This has allowed the program to have a significant impact on student self-perception which contributes to better performance in coursework and amplifies their confidence to engage in more difficult courses in the future. This outcome, more than any other, has far reaching effects in other subjects and coursework beyond the mathematics and literacy specifically supported in Tier 2 intervention.

Therefore, based on these results, it is recommended that intervention programs are expanded at the secondary level as they show successful outcomes in improving student achievement and therefore closing the achievement gap often experienced by minority, at-risk or low-income students. Schools should no longer support the practice of segregating general education students into remedial coursework tracks, but rather should invest in a tiered intervention program that can specifically target the subject specific skills in literacy and numeracy that require development.

**Conclusion**

This section explained the current results available for this research. The purpose of this evaluation is to determine the impact of an early intervention system of RtI Tier 2 interventions on the academic achievement of students. Determination of achievement is studied in terms of overall long-term growth on standardized measures, specific growth in skill and content knowledge, improved performance in grade-level level core coursework and the achievement of greater self-efficacy on behalf of the students as an outcome of the interventions provided. The AIM program being evaluated was able to show statically significant improvement in all of these facets of student achievement.
Chapter Five: A Vision of Success

Introduction

The problem that requires change in Fairview District is the lack of support for struggling learners. The systematic change in progress is to provide every student with access to rigorous regular grade-level coursework by creating appropriate interventions and supports in lieu of remedial coursework. The assumption is that by opening opportunities to more rigorous learning environments, and by closing learning gaps, student achievement will increase, failure rates will decline and student self-efficacy will increase.

The goal of this change plan will be to address a variety of systemic shifts required to achieve the final outcome of students being successful in grade level curriculum. The first goal of the change plan was to remove barriers preventing students from accessing rigorous coursework. Therefore, the course sequence and course recommendation process must be addressed. Remedial coursework has been eliminated and students have been purposefully placed into grade level coursework in all core subjects. In order to support students in these more challenging classes, the second goal of the change plan is to ensure the establishment of a functional intervention program to close achievement gaps in numeracy and literacy, provide support to pass and obtain credit in grade-level academic coursework, and support students in achieving benchmarks on national assessment measures. Finally, in order for both of the previously mentioned changes to occur, teachers will require significant growth in their practice. Professional development must be provided to faculty to support their work with these challenging populations. In part, this will require skill improvements in curricular development, instructional differentiation and student classroom interventions.
Envisioning the Success: To Be

In order to move the organization towards the desired state where all students have access to and support through rigorous grade level curriculum with successful outcomes, leaders must envision the markers of success. Earlier, the framework of Wagner and Kegan’s arenas of change was used to illustrate the current status of Fairview District and that analysis was presented in Appendix C. In this section, the contextual changes, cultural development, conditions, and competencies that are critical to moving forward are presented. This section will present a vision of what is “to be” due to the impact of the AIM program outcomes measured by this study and is presented in visual form in Appendix D.

Context

The overall context of the district will not change significantly, but some key changes are yet anticipated. Shifts in the population demographics will continue. After these changes occur, teachers must be aware that new populations may require new methods of support and nurturing in ways not previously part of practice. Adaptive changes in system design and support structures will empower the organization to maintain or improve student performance. In the new post change paradigm, the teacher recommendation process will be based on quantitative measures such as test scores or be removed completely. Subjective preference and student executive functioning will no longer be the standard of measure for placement. While the percentage and number of special needs (IEP/504) students will most likely continue to increase, the district will be better suited to support the needs of those learners due to improvements in curricular design, instructional methods, differentiated approaches and intervention systems. These shifts will allow all populations to be more successful as at-risk student groups are
provided the necessary support to engage and succeed in regular grade-level learning environments.

**Culture**

The new culture shall be focused on integration, equity and access to rigorous learning environments. Segregation into remedial coursework for general education students will no longer be acceptable or available practice. This will require transitions in the Special Education department to provide viable learning environments for students with IEPs previously placed in the co-taught remedial environments. This will require significant curricular development and interdepartmental partnerships to build opportunities for classes to have purposeful instructional connections. The goal is to provide access to grade-level peers for socialization while simultaneously providing instruction and curriculum aligned to an appropriate instructional level based on their needs. While this presents a significant challenge, the previous remedial level of curriculum and instruction will become a self-contained “instructional” environment for Special Education students that are functioning significantly below grade-level. This will stop the racial and socio-economic segregation of struggling learners into remedial and Special Education environments without an evaluated disability. These placements for Special Education students should also be used in the rarest of circumstances for students that require significant support.

The co-taught grade-level course would not be accessible with accommodations, but rather require significant modification of the required course skills and content required for credit. In an idealized state, the instructional (Special Education) version of a course would be taught by the same Special Education teacher who participates in the regular grade-level course so they are aware of the standards, pacing, rigor, coherence and focus expected for these students
to eventually transition to regular grade-level coursework. In addition, courses should be strategically scheduled to allow course partnerships between instructional level courses and regular grade-level courses to collaborate on differentiated projects, participate in discussions and interact on a variety of instructional activities. Each placement decision will be carefully reviewed with the Special Education Department Chair and in the event a social or emotional goal can only be achieved by placement in the more rigorous grade-level environment, that placement will be supported by an Independent Learning Plan. All of these changes will have a massive impact on culture as they challenge convention. Systemically, the culture has accepted the overt segregation and removal of grade-level access to students who are often from minority, EL and low-income General Education groups under the fixed false belief that it is more important to provide “peers” to the more severely challenged Special Education population. The access to grade level curriculum and intervention support to remediate below grade level skills will assist the district in closing the achievement gap typically experienced these at-risk students.

In the desired state, teachers will support and maintain a growth mindset and just culture that believes all students are capable of learning and achieving academic success based on their potential. The culture will continue to extend love and care for all students. However, while student social and emotional needs and well-being are important drivers of self-efficacy, motivation and success, they will not be the primary focus. Rather, academic outcomes will become an integral part of the value set for student achievement. This will be achieved by supporting teachers in shifting their focus from a culture of compliance to a culture of student engagement and learning. With these new understandings, teachers will no longer perceive student achievement to be the result of individual work ethic, but rather embrace the power of their impact as educators. This cultural shift will further allow students to be successful in
grade-level curriculum when proper supports in the classroom and interventions are provided in unison with a systemic belief in a student’s capacity for success.

In addition to the culture challenges presented by faculty belief systems and viewpoints, a goal-oriented culture must be created and nurtured. The district will create a strategic plan with input from all stakeholders in the design and implementation process. The goals pursued under this plan will be the work of large shared governance committees that include a variety of disciplines and team members. This new model will allow teachers, parents and students to be invested in and share ownership of organizational change and growth. This will result in empowered faculty and a student body and community members that understand decision making and participation in the change process. New cultural norms will be critical to the expansion of the AIM program. The work of stakeholder committees will craft the vision of services provided as the program expands to support all grade levels, include IEP students and introduce additional intervention in Executive Functioning skills.

The combination of access to grade-level curriculum, reorganization of Special Education, changes in faculty perceptions and participation in decision-making will underpin the development and impact of the AIM program. For the greatest success to occur, the organization’s culture must adapt to supporting programming that works for students based on solid science and the analysis provided in this research. While inherently stressful to some during the upward and sometimes steep learning curve, all suggested changes are intended to promote student welfare through the conceptual framework of MTSS/RtI as executed by the AIM program.
Conditions

Many of the conditions may stay the same after the change process as this particular model cannot or does not directly impact them. For example, the district’s limited financial resources will continue to be a challenge. However, if additional funding sources are received (grants, fees), an FTE approved by the Board of Education and reallocated to provide for a substantial expansion of the AIM program would be welcome. By rebalancing course offerings and class minimums for gifted programming, additional staff can be redistributed in the staffing plan towards the intervention program. The influx of subject-area and special education teachers into the program will help support the expansion of intervention services to all students rather than only select general education freshmen.

As a result of the change plan and evaluation of the Special Education department, there will be improved oversight and leadership of special education services from the district and building level. Due to a program evaluation completed by outside consultants, additional support for the creation of a Special Education continuum of services will be provided to replace the previous remedial level placements, properly staff the Special Education department based on student needs, and clarify expectations of practice. Due to the values and expectations set forth by the strategic plan and Special Education program evaluation, intervention support will be provided to all IEP, 504, LEP and at-risk students.

While co-teaching courses may continue in some redesigned capacity, students will be provided co-taught options only in regular grade-level curriculum. This will significantly increase access to least restrictive environments for the majority of Special Education students by ensuring access to the grade-level curriculum they deserve. However, for rare and severe needs, if a student is unable to engage in the coursework without significant modification of
course standards, skills and outcomes, instructional level programming will be provided to achieve the IEP goals. In such instances, appropriate courses will be designed to ensure students are taught in a high support environment that will parallel the grade level curriculum with intervention. Any Special Education teacher who will instruct the small class size instructional version of a course will also be the co-teacher in the grade-level course to ensure continuity of curriculum, coherence, focus, instruction and opportunities to learn. This will allow students to transition into regular grade-level co-taught coursework as soon as possible. Due to the shift away from remedial coursework, students with IEP’s, 504’s, LEP or at-risk populations will be distributed across larger numbers of sections to dilute their concentration, thereby improving instructional environments.

After the change plan is enacted, all core courses will have a viable curriculum that is aligned to standards. Curriculum will be determined based on state or national standards and aligned vertically, horizontally and diagonally to ensure students can move through different levels of coursework without penalty for changing between the instructional (Special Education self-contained), regular, honors, and AP tracks. As mentioned previously, the prerequisites for each course will be determined by metrics that are objective, based on an analysis of performance, and transparently communicated. Students will have access to rigorous coursework, and regardless of when they transition between instructional, regular, honors or AP levels, their experienced curriculum will be designed and aligned for them to be successful.

**Competencies**

Many competencies will be addressed in the professional development provided during the change process. Upon completion, teachers will be confident and capable of Tier 1
differentiated instruction for a wide range of students. They will compare and contrast differentiation, accommodation and modification at the classroom level and will be able to implement such adjustments. This will be possible because the curriculum design, purpose and anticipated outcomes for each course will be determined and aligned to standards and they will have a framework available to scaffold their instruction. In order to bring about this change plan, three instructional coaches have been procured to support teachers in this work. Two of the instructional coaches will specifically work on the quality of curricular organization and design. Using the Understanding by Design (Wiggins & McTighe, 2005) framework, all courses will be required to create curricular maps and unit templates that are backwards designed, aligned to standards and publicly posted. In addition, the third instructional coach will be assigned specifically to the AIM program to support the work of the growing team of interventionists and to lead the Tier 1 Literacy and Numeracy teams for the school. Finally, teachers will be avid users of data to inform their daily instruction. Using a variety of formative and summative assessments, teachers will work together to measure their outcomes and have collegial debate and inquiry. This work will be led and modeled by the instructional coaches during professional development (PLC) time each week.

In closing, in order for all of these improvements to become possible, the change process must first address the competency and quality of the leadership team. Besides an improvement in the leadership and instructional capacity of the Department Chairs, the Building and District leadership will have a clear and defined set of expectations, roles and skills that are focused on instructional leadership. The reorganization of a flat leadership structure and weekly communication and collaboration by all team members will ensure all leaders participate in and are aware of decision-making and organizational goals.
Conclusion

In conclusion, as Fairview School District transitions from the current state to the vision outlined in this “to be” framework, many factors will be required in the change plan to ensure the initial results continue to show positive outcomes. While some conditions such as the district financial resources are fixed, other aspects such as the capacities of teachers and administrators will be addressed with quality professional development to impact the broader Tier 1 aspects of interventions in classrooms. For the upcoming 2020-2021 school year, despite the COVID pandemic, the district is expanding the AIM program supports to upperclassmen and students with IEP’s in order to build upon the positive results already demonstrated. In the next section, more details of the strategies and action plans that are intended for this school year and beyond are outlined.
Chapter Six: Strategies and Actions

Introduction

As Fairview District moves forward in implementing the new strategic plan, there are many goals that are aligned with this research. First, from the perspective of context, as our population continues to shift, we need to continue our focus on student outcomes. The RtI/MTSS program needs to continue to expand and improve to meet the needs of the ever-changing population. In order to achieve that outcome, conditions must be modified to allow for expansion of intervention support during the school day for an increasing number of students. Beyond the direct intervention and time provided within the AIM program, the quality of curriculum and instruction must also further develop in the Tier 1 general education classroom and there must be a distinct shift in the district culture to believe that all students are capable of learning with adequate support and differentiated instruction. Moving forward, sub goals include specific strategies to bring about the change desired for our students.

Strategies and Action

Without a clear path guiding the transition from research to practical implementation, the lessons learned from program evaluations rarely impact actual classroom practice. Therefore, it is imperative that the results of this research meaningfully impact systemic change in the organization. A major advocate and expert in change leadership, Tony Wagner, cites three distinct phases of systemic change: preparation, envisioning and enacting (Wagner & Kegan, 2006 p. 134). Each step represents aspects of systemic change that require different focus and attention. While preparing for major change, educational leaders need to use research, such as this evaluation, to understand the urgency for change and establish a needs assessment particular
to their organization. Once well established in purpose, educational leaders must envision how the desired change will impact their organization and craft such a vision for their stakeholders. This vision and action plan were crafted by the predictions offered in the “to be” analysis in Appendix D. The hopes and aspirations of that analysis are the primary focus and components of the strategies and actions to bring such vision to fruition. Finally, the plan envisioned must be executed and the desired outcomes should have a direct impact on instruction and student growth. The strategies for systemic change and the action steps to achieve the desired outcomes should be crafted to align with known strategies for successful change implementation. Kotter’s (1996) original framework was highly recognized for its guidance for leading organizational change. Recently his updated framework has identified eight accelerators to ensure purposeful, coordinated execution of organizational change. These accelerators include (1) Create a sense of urgency, (2) Build a guiding coalition, (3) Form a strategic vision and initiatives, (4) Enlist a volunteer army, (5) Enable action by removing barriers, (6) Generate short-term wins, (7) Sustain acceleration, and (8) Institute change (J. P. Kotter, 2014). The table below summarizes the strategies for implementation based on the results from this study and the action steps, or accelerators, pursued to achieve the desired organizational change.

**Figure 8: Strategy and Action Chart**

<table>
<thead>
<tr>
<th>Strategy: Create a Sense of Urgency / Sustain Acceleration</th>
<th>Action Steps:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Expand the AIM Program and Service</td>
<td>• Expand AIM program services to all grade-levels.</td>
</tr>
<tr>
<td></td>
<td>• Expand AIM services to students with IEP’s.</td>
</tr>
<tr>
<td></td>
<td>• Increase Staff in the AIM program to serve an increased number of students.</td>
</tr>
<tr>
<td>Models due to increasing population of at-risk students.</td>
<td>Expand AIM services to include an AIM Resource course that will provide additional support for Executive Functioning and other skills related to passing coursework and improving self-efficacy.</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Establish a Guiding Coalition</td>
<td>Build a strong relationship with Special Education leadership to support servicing students with IEP’s.</td>
</tr>
<tr>
<td>• Design program services with a broad team of stakeholders.</td>
<td>Use program evaluation data to build strategies to provide interventions.</td>
</tr>
<tr>
<td>• Improve and Support Special Education Programming and Placement.</td>
<td>Further develop the course placement process to ensure students are placed in the most rigorous learning environments in which they can be successful.</td>
</tr>
<tr>
<td></td>
<td>• Nurture opportunities for collaboration between instructional level and regular level coursework to ensure students have access to grade-level peers and that instructional curriculum builds towards regular placement only by Senior year.</td>
</tr>
<tr>
<td></td>
<td>• Create a team of stakeholders that will design the criteria for placement, curricular focus and intervention exit methods for the new AIM Resource program.</td>
</tr>
<tr>
<td></td>
<td>• Work directly with the co-teaching teams in core subjects to ensure they have the support they need to</td>
</tr>
</tbody>
</table>
Ensure student success in grade-level skills and knowledge.

<table>
<thead>
<tr>
<th>Remove Barriers and Institute Change (Build Organizational Capacity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Improve Tier 1 Classroom Instruction and Intervention.</td>
</tr>
<tr>
<td>• Assign one instructional coach to the AIM program to ensure a cohesive curriculum ranging grades 1-9 across a variety of interventionists.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ensure knowledge and skills for our case managers in terms of writing IEP/504 goals, and determining proper course placement.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Have AIM instructional coach lead the Tier 1 Literacy and Numeracy Teams to improve the quality of Tier 1 instruction and intervention.</td>
</tr>
<tr>
<td>• Partner with all instructional coaches to expand the basic skills of differentiation and accommodation.</td>
</tr>
<tr>
<td>• Begin to require use of Tier 1 intervention and progress monitoring.</td>
</tr>
<tr>
<td>• Ensure quality Tier 1 curriculum with required Course Map using the tenants of Understanding by Design that is posted on the district website.</td>
</tr>
<tr>
<td>• Provide professional development, at the district-level for all case managers from an outside expert provider to improve the quality of IEP/504 design, writing and goal setting.</td>
</tr>
<tr>
<td>• Ensure appropriate course placement and expectations of differentiation, accommodation, modification by providing systemic norms of term usage and training.</td>
</tr>
</tbody>
</table>
on implementation expectations of each type of support.

Strategy 1: Establish Urgency and Sustain Acceleration

In order to propel movement from the status-quo, it is important for leaders to reduce complacency and increase a sense of urgency for change. This is one of the initials stages of change leadership by John Kotter (1996). Often leaders attempt to push forward with initiatives or school improvement plans without first establishing the reason for the work or the urgency of the change among stakeholders (Kotter, 1996, p. 4). This urgency should be modeled in the speed of decision-making, commitment of systemic communication, and redistribution of resources to reinforce the importance of the work. Without such commitment and urgent shift, organizations and stakeholders can ruminate in fear or discomfort that can stagnate change and reinforce status-quo.

The first strategy is to establish a systemic focus on the expansion of the AIM program to align with the goal of ensuring an equitable and successful environment for all students. The positive outcomes of the program evaluation indicate that every aspect of student growth measured had statistically significant growth, therefore it is imperative that all students have access to this resource as quickly as possible. Therefore, Fairview should provide all students this proven support by expanding the AIM program to all periods of the day. This will require reinforcement of the importance of this change by making sacrifices to adequately staff the program with interventionists to serve the increased population.

In addition, based on the results of core coursework performance of AIM program students, it is important to continue the elimination of remedial coursework and focus on Tier 2
intervention as an alternative, as the outcomes of the AIM program outperformed the previous remedial options. Finally, the AIM program should expand to include a course, AIM Resource, that will be available each period of the day to provide students supports in a variety of skills related to success in grade-level coursework, expanding time available for intervention and increase executive functioning support to further nurture the growth in self-efficacy.

The goal of the AIM Resource program will be to further improve core course outcomes and nurture skills in executive functioning such as time-management, self-regulation, attendance, organization, and managing stress. Students in need of significant intervention in a variety of subjects will participate in this hour-long guided study hall with a variety of intervention appointments. During their AIM Resource period, students will receive their Literacy and Numeracy interventions in longer blocks of time than the normal model of half their lunch period. In addition, more supports in executive functioning skills and scheduled connection points with their Counselors, Deans and Social Workers will become possible through the AIM Resource program.

Besides systemic urgency, programs such as AIM resources and the Tier 1 classrooms must also establish a sense of urgency in the classroom that begins with a mindset and accompanying practices that convey to students high expectations of academic performance (Kelleher, 2015). This and other action steps in this strategy are focused on an urgent response that is reinforced with leadership actions. Beyond the steps of implementation described, there is a need to build consensus around the change desired. A driving force of sustained and lasting change is the establishment of such a sense of urgency in the building and classroom levels. This is achieved, in part, by school leaders who actively listen and have open communication with their faculty. These leaders are able to identify shared feelings, ideas and goals that align to the
desired change to build the sense of urgency around shared ideals in order to establish the commitment required of all stakeholders to facilitate the change for students. Beyond this, the inclusion and empowerment of teachers in the implementation process will provide them a sense of ownership over the outcomes and they will be more compelled to bring the vision to fruition successfully.

**Strategy 2: Establish a Guiding Coalition**

The second stage of Kotter’s change leadership framework, creating the guiding coalition, involves forming a group of individuals with the “right composition, level of trust, and shared objectives” (J. Kotter, 2012 p. 92). It is encouraged to establish such a team of stakeholders early in the change process. A guiding coalition should be representative of each department or level in the organization and must include a team with a broad repertoire of skills and viewpoints. On this team, all members are equal in status and contribution as to not limit exchange of ideas or information due to hierarchy (J. Kotter, 2012).

A long-range systemic goal will be to build a guiding coalition of stakeholders to increase input on and support for the AIM program. By developing this coalition across departments, subject matter, and organizational roles, we bring a variety of expertise and experience together to make decisions on how to further expand the success of the AIM program. This work, in part, will help address many of the cultural challenges experienced by Fairview District as previously shared, particularly conflict with other stakeholders tasked with supporting struggling learners. Some of the greatest barriers to providing intervention for all students is the cultural disconnect between the Special Education department and other aspects of school improvement. Therefore, it will be important when establishing this guiding coalition to build rapport and involvement
with the Special Education department, as AIM program expansion will now ensure students with IEP’s obtain the same access to intervention support as general education students.

To begin, time must be spent with the district Director of Special Education and the Department Chair of Special Education to create a solid mutually supportive partnership. This coalition will speak with one voice. This should stop past educator behaviors of shopping for allies and answers among different administrators, hoping to find one that would give their desired answers or direction. It is foundational to positive staff engagement that they know the leadership team is cohesive and consistent in decision-making.

As the team of teachers, case managers, counselors, deans, interventionists and leaders are identified and recruited for action, the first step in building understanding and rapport will be to share the data on the outcomes of the AIM Program and the needs assessment for school improvement. This will prepare a good foundation upon which the new team can craft a vision and design needed supports required for all departments to support each other and the students through the change process. In addition, this coalition will ensure that there is shared expertise across systems and varied needs, concerns and ideas can be discussed openly and put into practice.

One of the greatest tasks of the guiding coalition will be to develop the placement and recommendation process for course selection. Due to the removal of remedial coursework, and the ability of students to have successful outcomes in grade-level coursework due to AIM support, the organization needs to reevaluate placement norms. The work of this coalition, in combination with the work of co-teaching course teams, will help to develop the Special Education course placement process to ensure students are placed in the most rigorous learning environments in which they can experience success with accommodation. The goal of this team-
work will be to define the skills required for each level along the continuum of services available in grade level coursework. This will allow student placement into instructional, co-taught, regular, aide, honors or AP courses to be less subjective so case managers no longer feel the need to protect students, but rather to push them to new heights of success.

In order for the instructional level to be viewed as a valid and respected part of the continuum of services, there must be collaborative connections between instructional level and regular level teachers. This allows students to have access to grade-level peers and to participate in instructional curriculum that builds towards regular placement only by Senior year. General education and special education teachers will need to work together on curricular alignment and instructional practices so that placement in instructional coursework is only a temporary portion of a student’s 4-year plan.

As referenced above, the partnership between Special Education, General Education, Student Services, Administration and the AIM program will be critical to creating systemic and student success. The coalition will design the criteria for placement, curricular focus and exit methods for the new AIM Resource program. This team will need to learn about current outcomes of the AIM program, review research in the field and professionally contribute their needs and concerns to the discourse in order to build the AIM program expansion. This shared experience and broad expertise will allow the AIM program to be more comprehensive in supporting SEL needs and offering systemic awareness of academic intervention challenges.

Finally, the services provided in co-teaching environments must be developed with an expanded partnership of general education and special education co-teaching teams. Rather than continuing the conflict relative to desired methodologies, impressions of hierarchical rankings, and disagreements on rigor levels, these teams must broker consensus in their understanding of
standards driven grade-level skills and the accommodations required to ensure students have the support they need to achieve the required grade-level skills and knowledge.

**Strategy 3: Remove Barriers and Institute Change (Build Organizational Capacity)**

Besides Kotter’s work (2012) to remove barriers to systemic improvement in order to institute organizational change, there are educational leadership models that extend this conceptual framework to building the organizational capacity of schools or universities. In an educational context, organizational capacity is the evolving range of capacities, skills, knowledge and resources for schools to be successful (Toma, 2010). Building organizational capacity depends on a variety of factors ranging from purpose to policy and procedure, but one of the most influential aspects is infrastructure. Specifically the human, physical, technological and financial assets of an institution of learning and how they are developed or grown (Toma, 2010 p. 172). This is the focus for this strategy and action steps, to be able to grow the capacity of the organization by removing barriers to program implementation and instituting the change needed for every tier or the AIM model to be fully functional.

While much of this research has focused on Tier 2 intervention, throughout the work it has become increasingly apparent that many students would not require the Tier 2 level of support if interventions, differentiation, and accommodation were more consistency applied at the Tier 1 level. In addition, there are ongoing issues of curricular consistency, focus and opportunities to learn that should be addressed by requiring a comprehensive course maps for all classes. To achieve this systemic change, it will require a variety of barriers to be eliminated and growth in the organizational capacity in order to implement institutional change.
To lead, instruct and monitor growth in all of these areas, the AIM program should be provided an Instructional Coach specifically tasked with monitoring the quality of the intervention instruction across a broad set of grade-levels and to lead the development of Tier 1 instructional capacity across the organization. Within the AIM program, intervention methods and models must continue to be evaluated and explored with the support of the instructional coach. While the AIM program will continue to include a teacher generated curriculum based on the STAR instructional reports, the materials and models of instruction will expand to include the Fountas & Pinnell Leveled Literacy Intervention program, manipulative mathematical modeling, and Concrete Representational Abstract (CRA) approach to numeracy skill development.

The foundation of any quality intervention program is a solid core classroom experience for all students. This requires teachers to have a positive outlook relative to the potential for all students to learn and an expansive tool kit of instructional methods ready to go that are steeped in differentiation. Moving forward into this school year, one of the main strategies will be the implementation of freshmen team grade level meetings in addition to continuing the school Literacy and Numeracy Teams to provide Tier 1 supports, professional development and to obtain feedback on student needs. These teams will meet quarterly and inform the monthly professional development offered to all teachers during building level late starts.

Beyond the capacity growth of AIM Interventionists and General Education Tier 1 Teachers, the Special Education department also requires professional development in a variety of arenas impacted by this change. Unlike the AIM Interventionists and General Education teachers, the Instructional Coach will not lead this work. As Special Education is a unique and complex subsection of this work, it will require an outside expert to come in to provide
professional development in how case managers construct quality IEP (and 504) plans, write appropriate goals, and ensure proper course placement in the least restrictive environment in which a student can experience success.

There is a need for proper course placement applied to all students regardless of their status or designation. Therefore, a coalition will need to be formed from representatives spanning all departments and subject areas, in conjunction with leadership and the School Counseling team, to reinvent our course placement methods. Historically there has been a significant focus on subjective teacher recommendations for placement. These recommendations have led to bi-polar challenges of students not being able to obtain recommendations to rigorous coursework (honors / AP) or being purposely restricted to high support placements to ensure connection with Special Education teachers (co-taught). A critical component of instituting this change will be to remove barriers to students created by adult preferences, fears or self-serving choices. As an organization, removing the subjective aspect of teacher recommendation and placement and increasing reliance on performance data and student driven choice will eliminate a lot of the adult issues impacting student placement.

**Conclusion**

In conclusion, the strategies and actions currently planned will help move Fairview District from the current state (As-Is: Appendix C) into the idealized state (To-Be: Appendix D) over the next few years. This work is directly tied to the research in this study as many aspects of the strategic plan are directly aligned to the intervention supports provided students to ensure they are successful. While the specific strategies may be broader than the research questions explored in this study, they bear great influence to the outcomes.
Chapter Seven: Implications and Policy

School Districts across the United States continue to face unacceptable high school dropout and graduation rates in some schools. A variety of federal educational reform efforts have been focused on improving student outcomes. However, schools continue to struggle in closing academic achievement gaps. These challenges contributed to the creation of Multi-Tiered System of Supports (MTSS) or Response to Intervention (RtI) programs to support students as they overcome content or skill gaps while simultaneously providing support in grade-level curriculum.

In the current design of public education, we face unique challenges that impact our practice and student achievement. We are facing unprecedented times with increasing numbers of students with high needs, transient populations, and students with significant learning gaps. Due to these challenges, and increased accountability, school districts are examining and implementing Response to Intervention (RtI) and Multi-Tiered Systems of Support (MTSS), that are now part of federal, state and local education agencies (LEA) policy (Glover & Vaughn, 2010). Unlike other states, Illinois has had weak policy and guidance in the State RtI plan from 2008. Since then, regardless of major shifts based on research and the transition to MTSS, there has not been major changes to state policy. Rather, the Illinois State Board of Education (ISBE) has only released a variety of update memos to address changes in federal law and have approached RtI/MTSS support by providing funding via grants to external organizations.

Organizations such as Illinois MTSS Network provide consulting and professional development support in order for Illinois school districts to create their own plans. The state is currently and has always left program structure to the discretion of individual districts. In the absence of state level policy and guidance, each district has simultaneously created and
implemented their own individual plans and methods. While this autonomy is sometimes appreciated, in the absence of state-wide expectations, definitions, and implementation requirements; districts struggle to properly intervene with large transient populations.

This lack of state policy impacts the program evaluation of the Academic Intervention and Mentoring (AIM) program in this research. While the AIM program being analyzed has created a variety of internal procedures, placement guidelines and service mechanisms to implement MTSS, it is disconnected from the larger scope of practice throughout our region and the state. Therefore, as students transfer into the district, the AIM program is unable to resolve conflicts in tiered placement, understand services formerly received, and provide continuity of support when transferable documentation on progress monitoring or previously identified areas of intervention are missing. Unlike IEP or 504 documentation that has longitudinal information, placement criteria and academic/social history; students receiving intervention support have no documentation that is consistent or transferred between districts.

Policy Statement

Based on these issues, and the impact RtI/MTSS systems have on student achievement, course completion and self-efficacy as shown in this research, I am recommending that the Illinois State Board of Education update and expand the state RtI/MTSS policy. This new iteration should require all districts to update and re-file RtI/MTSS plans created in 2008 against new requirements such as a) updated language and guidance to align with current terminology and best practice; b) documentation of students receiving RtI/MTSS supports at any tier that will transfer with all other required student records when students move schools; c) placement criteria and minimal service delivery requirements that ensure as students move through their local K-12
districts, or transfer between communities, they will receive similar support across LEA’s; and d) consistent assessments, data points and cut offs for each intervention tier to be used consistently rather than estimated percentages of student quantities for each tier.

These policy recommendations would have a direct impact on the AIM program and the ability for all RtI/MTSS programs across the state to properly support our ever-increasing transient populations. By sharing the criteria for placement, interventions received and having a systemic placement criterion for intervention tiers, the State of Illinois could improve the academic outcomes of the 6% of students who switched schools each year (Illinois State Board of Education, 2020). The information transfer would be the most essential to allow immediate placement into the intervention programming of a new school in the same tier and area of focus as their previous school. Currently, as transfer students come into our organization it can take months to obtain test scores, or notice academic struggles not tied to the hardship of transferring mid-year. These students are often missed in universal screeners and have their failure attributed to missed content rather than a potential learning gap that requires intervention. Such a policy change would create a strong and supportive transition for students across districts to enter comparable models of intervention support.

**Analysis of Needs**

Since the 2004 Individuals with Disabilities Education Act (IDEA), the Department of Education has addressed some of these concerns related to lack of guidance from state boards and disparities between states on implementation. In 2011, the Department of Education said that RtI strategies could not be used to delay or deny an initial evaluation for learning disabilities (OSEP, 2011). However, the update was still lacking specifics about criteria for intervention,
methods of progress monitoring, or documentation of interventions received. Further, the Every Student Succeeds Act (ESSA) from 2015 does not clarify or even include language about RtI. Rather it only mentions "multi-tiered systems of supports," a newer term that includes RtI and PLC’s. ESSA (2015) only indicates that multi-tiered systems can be used to help students with disabilities and English-language learners’ access to challenging academic standards but still fails to address any of the longitudinal issues related to the lack of guiding policies (ESSA, 2015). In the sections below, the policy suggestion is analyzed against a variety of factors in order to describe the larger systemic impact. As state level policy can be far reaching and have a systemic ripple effect, the sections below will share the educational, economic, social, political, legal, moral and ethical implications of this change.

Educational Analysis

This lack of policy is an educational issue impacting students across the country. The federal expectation from IDEA cannot be locally implemented as most states have created more guidelines than laws to determine RtI practice in their states (Zirkel & Thomas, 2010a). Therefore, the state education department directives, recommendations and guidelines do not have the force of law in terms of being able to be legally upheld by the courts. Therefore, local implementation across a state is inconsistent and parents are unable to legally resolve lack of services nor access support for their students. While RtI has varying forms in each state, most communicate guidance of RtI core characteristics, as a) “high quality, research-based instruction” in general education; b) universal screening for academic and behavior problems; c) continuous progress monitoring; and d) multiple tiers of progressively more intense instruction (OSEP, 2008, 2011). As summarized by Zirkel & Thomas almost every state addresses these
criteria to some extent, but are most often via guidelines rather than policy, and the majority of laws do not go beyond IDEA in terms of a definition of and procedures for RtI (Zirkel & Thomas, 2010b). Therefore, without strong policy and law backing the implementation, schools are left to self-interpret methodology and design programs they are willing to sustain financially with no requirements. This has significant implications for student outcomes as each LEA implements their own interpretation of RtI/MTSS models providing significant variance from the intentions expressed in federal legislation and limiting the ability for students and families to demand supports. The local creativity and diversity of models does not provide a consistent experience for students across all districts and due to the variance afforded with local control, families are hard pressed to push legal challenges for intervention programming not tied to and IEP and 504. Further, the outcomes of this research indicate that particularly Tier 2 programs can have a significant impact on student performance at the secondary level, by not implementing policy that requires viable tiered intervention models consistently across the state, many students are left without intervention support that could have a positive and lasting impact on their achievement, course performance and self-efficacy.

**Economic Analysis**

Often states will establish guidelines rather than policies due to the financial implications of mandating programming they will not financially support with state aid. In Illinois, limited funding provided by the Illinois State Board of Education was dedicated to the professional development organizations listed previously, but very limited direct funding was provided to Local Education Agencies (LEA). Through limited grants, the Illinois State Board of Education made very little financial contribution to the academic intervention support of thousands of
children. According to the research-based RtI criteria, implementing quality RtI and MTSS programs are expensive endeavors. For example, in order for districts to implement the criteria of intervention systems listed above, it requires costly investments into personnel, physical spaces, assessments and instructional material. Much of this is beyond the scope of their traditional instructional expenditures. For example, the intervention program which is the focus of this research, requires six full time teachers, four dedicated instructional spaces and a $10,000 per year budget for only Freshmen level intervention at two high schools. In the upcoming school year, the program is expanding to serve Freshmen through Juniors at the cost of six additional staff members and two additional instructional spaces with all the furniture and equipment required to start up a program. The drain on financial resources is one of the reasons RtI/MTSS implementation is so varied throughout the state and the nation.

To obtain funding for RtI/MTSS programs, districts often need to look beyond their usual funding sources. There are a few formula or entitlement grants that could offer districts opportunities for some limited RtI funding: IDEA Part B (Special Education) and Title III. However, due to the diversity of local implementation plans, there is no clear means to identify whether or not a local RtI/MTSS program can be funded by federal dollars. Therefore, these programs are dependent on local financial means. With the policy update, more financial support from state coffers would be required for districts below competency targets to ensure students are able to receive the support they deserve.

There are components of some RtI/MTSS systems that are inappropriate for funding by any source other than a local district’s general operating budget, such as Tier 1 costs. Tier 1 definitions indicate that all students are to receive high-quality, research-based core instruction in their regular classroom. Because core instruction is provided to all students, it cannot be
funded by federal programs. These limitations also apply to costs incurred for universal screeners that are administered to all students. However, once a universal screener identifies that a student is in need of intervention, opportunities for federal funding support could become available.

In limited cases, federal funding earmarked for the implementation of IDEA could impact some Tier 2 or 3 intervention programming. IDEA funding can only be used to provide supplemental services and supports for students with disabilities. However, it is possible to spend IDEA funding on Early Intervening Services (EIS) which can financially support some general education populations receiving RtI/MTSS intervention. IDEA regulations define EIS as services to students who have not been identified as needing special education or related services, but who need increased academic support to succeed (Individuals with Disability Education Act, 2006). The IDEA restricts a LEA to not use more than 15% of IDEA 2004 Part B funds to develop and implement an EIS and directs how such funds can be expended. However, once students reach a point of being evaluated for Special Education services, their support can no longer fall under EIS expenses (Individuals with Disability Education Act, 2006).

In many RtI/MTSS programs English Language Learners are a portion of the population receiving Tier 2 or Tier 3 intervention. In these cases, Title III funding could be used for interventions that would ensure that ELL students master the English language and meet the same state standards expected of all students. Title III could support RtI/MTSS intervention if funding is specifically directed toward students who are eligible under the program. These funds could not be used to support a full RtI/MTSS program, but only program costs associated with ELL students.
Social Analysis

The greater purpose of all RtI/MTSS programs is to ensure students are able to achieve academic success and complete high school. However, it has been noted repeatedly that a disproportionate number of minority students leave high school before graduating (Kennelly & Monrad, 2007). In part, this is due to strong evidence that mobility or transferring schools during high school poses a risk to graduating (Rumberger, 2002). This research suggests the same impact experienced in the AIM program and across the State of Illinois, that transfer students lose significant time receiving support due to the loss of continuity between schools. Every time a student transfers into a new district there are longitudinal gaps in their skills and knowledge compounded by a lack of curricular alignment.

There have been many attempts at the state and federal level to align education, such as Common Core Standards or required standardized assessments, to no avail. Sadly, our students of greatest need require action to provide access to support that an updated state policy would provide while reinforcing their legal right to intervention. Without an enforced policy or law, districts will continue sporadic and inadequate implementation. Moreover, districts with a large number of students in need of intervention often do not have the financial means to provide adequate RtI/MTSS interventions. In part, this is because best practice guidelines inaccurately identify only about 20% of a school’s population as requiring Tier 2 intervention regardless of the communities being served. Beyond the policy recommendation, we would also encourage the State of Illinois to help fund RtI/MTSS programming in the state by including interventionists in the adequacy targets in the new Evidenced Based Funding formulas.
Political Analysis

The issues of inequality of school funding and limited resources are exacerbated by the lack of policy at the state level. Achievement gaps are glaring between affluent districts with adequate RtI/MTSS intervention programs for a small percentage of their students compared to large high-risk population districts that have no requirement or funding available to intervene on behalf of the majority of their population. There is a political risk for the Illinois State Board of Education if they set clear performance levels that would qualify for intervention. It would further spotlight the great disparity in educational opportunities based on where one lives. In the end, the ethical imperative for Illinois should be to require funding for RtI/MTSS mandated programming as the next component beyond the recommended policy.

There are benefits and disadvantages of the policy recommendations provided. The benefits would clearly provide greater consistency in programming to all students and an increase in communication between LEA’s would ensure that a student can continue their academic growth despite a change in districts. The disadvantage is more malevolent, in that many communities within Illinois use political pressure to maintain local autonomy and control. They do so as a means to perpetuate the educational, and therefore, economic divide. By not requiring equitable and consistent intervention services for all students, it reinforces that children in more affluent areas with quality programs will continue to be better supported and therefore better prepared to be successful in post-secondary education. In addition, there is also the question as to whether families can seek redress for lack of services and support in the courts. By continuing to provide guidance and not policy, the Illinois State Board of Education is less politically injured and less vulnerable to litigation as evidenced by the limited cases being heard on the lack of RtI/MTSS implementation across the state.
Legal Analysis

Strictly speaking, the State of Illinois has met minimum proficiency required from IDEA regulations released in October of 2006 (Individuals with Disability Education Act, 2006). IDEA required states to permit the use of a process based on a child’s response to scientific research-based intervention for the purposes of determining whether or not a child has a specific learning disability (Individuals with Disability Education Act, 2006). The State of Illinois responded to this requirement by implementing policy 226.130 rule for learning disability eligibility and completing the state RtI plan by January 1, 2008 (ISBE, 2008). This is the plan that remains on file to date with limited updates or alterations since 2008. As part of the Illinois State RtI plan it required all districts to complete a plan for transition to use the RtI process as part of the evaluation procedure by January 1, 2009 and districts were required to implement RtI as part of their evaluation procedure by the 2010-2011 academic year (ISBE, 2008).

The Illinois State RtI plan (2008) was created in partnership with a variety of stakeholders and leaned heavily towards local control and interpretation. The plan included the essential components of RtI:

- High quality, research-based instruction and intervention matched to student needs
- Frequent use of data to determine learning rate and student performance level
- Educational decisions based upon the student’s response to instruction and intervention.

However, the language is incredibly vague. It does not identify what research-based instruction methods should be used, the type of data required is not defined and educational decisions are not outlined. In addition, the plan requires a multi-tier model but suggested that 80% of students should fall into Tier 1, 20% in Tier 2 and 5% in Tier 3 (ISBE, 2008). Based on
the lack of implementation consistency and ongoing issues, ISBE later released an FAQ
document with further guidance for RtI implementation. As mentioned previously this is only
guidance from the state and not required policy or law. Therefore, families that are not receiving
RtI supports or cannot use lack of response to intervention as criteria for declaring a learning
disability evaluation, have no legal standing.

**Moral and Ethical Analysis**

This poses a moral and ethical dilemma. Public education has the moral imperative to
ensure all of our students have the standards and skills needed to achieve successful post-
secondary outcomes. However, when students academically perform below grade-level, without
a learning disability that would qualify for Special Education services, RtI interventions are the
only current programs that could fill learning gaps. In many school districts there continues to
be a significant divide within the general education student population. On one end of the
spectrum there are students who have maintained grade level performance consistently in the
same school for their entire academic careers. These students are traditionally supported at home
by educated parents that can help with academic assignments or have the financial means to find
outside support such as tutors or supplemental education programs, if the need arises. On the
opposite end are students with no known disabilities that have transferred through a variety of
school systems, do not have parents that are available nor able to support education at home or
their families do not have access to additional disposable income to supplement public education
if needed. This great divide is why public schools have an obligation to provide intervention
systems. RtI/MTSS programs provide similar individual or small group instruction or
encouragement that other students get through their home environments. Transient populations
need greater consistency in their academic support when they transfer schools or districts. These policy recommendations would alleviate the communication and continuity challenges experienced in schools by requiring documentation that would transfer with a student’s permanent record.

As described above, the influence of updating the Illinois State Board of Education policy on RtI/MTSS program requirements would have a significant impact for students in Illinois. While leaving an open and ambiguous policy that is self-controlled offers political safety and economic exoneration, the educational, moral and ethical obligations to our often-disenfranchised youth cannot be overlooked. By changing placement criteria, documentation requirements and bringing state expectations and language up to date, more students would receive the help they desperately need and school staff and communities would be better equipped with the knowledge and systemic structures to support students.

**Implications for Staff and Community Relationships**

The policy recommendations provided would have significant impacts on community relationships and the staff within school districts. First and foremost, a direct requirement from the Illinois State Board of Education to intervene with any segment of your population at a certain threshold, for example below PSAT grade level benchmark or failing core coursework at the secondary level, would have significant community impact for some districts. In severe cases it could indicate that a majority of students within a community need intervention. This would be particularly concerning if it applies to students who have been consistently educated in one district their entire academic careers.
Communities would have a more accurate depiction of academic progress for their students from a district if a school’s measures were tied specifically to grade level standards and assessment outcomes. Currently there are a variety of factors in Illinois that determine the rating or quality level of a school. Academic measures are not the only component, so communities may be unsure as to whether their district is preparing their students academically. If there were clear guidance of academic competencies that could not be overlooked or ignored, and if students could receive support without parents pushing for Special Education evaluation, then more students could be academically successful. Such an outcome would achieve the greater calling of public education, but would also have significant political and economic fallout.

Locally, a significant challenge with RtI/MTSS programming is the conflict that can exist between the Special Education and General Education staff within a district. There is a balance required at the secondary level to provide appropriate grade level intervention but also have the additional training and experience to intervene. At the elementary level, RtI services are easily delivered by both Special Education and General Education teachers due to much of the intervention instruction being focused on basic skills. However, at the secondary level, it is challenging for broad spectrum Special Education teachers to be experts in more advanced content skills, particularly in mathematics (Feuerborn et al., 2011). This requires compromise between General Education and Special Education teachers at the Secondary level to resolve disagreements in methodology and standard of performance.

**Conclusion**

In many regards the debate, conflict and challenges associated with staff in schools about RtI implementation is much of the disagreement in philosophy and process that led to the Illinois
State Board of Education allowing local control of RtI/MTSS implementation. In an idealized condition, with all groups aspiring for the intended goal, lack of policy is not an issue. However, as shared, there are many economic, political, legal and ethical implications to the RtI/MTSS framework that often distort implementation measures when state policy is weak.

Since 2008 the State of Illinois has seen varying degrees of implementation and compliance of RtI/MTSS programs. The range of compliance is significant, from districts with no plans in place, to others that are exemplars to the nation on quality intervention systems. Such disparities continue to expand the achievement gap and leave many students, or in some cases whole communities, at an educational and economic disadvantage. While the political and economic impact to the Illinois State Board of Education would be significant, the potential growth and development of our students and the increased collaboration and communication across districts, could bring their vision of ensuring “each and every child is equipped to make meaningful contributions to society and live life to its fullest potential” to fruition (ISBE, 2020).
Chapter Eight: Conclusion

Introduction

This dissertation served the following purposes: (a) to determine whether the academic achievement, defined as growth on PSAT and STAR assessments, of students receiving Tier 2 interventions differed from the performance of students not enrolled in the AIM program, (b) to examine whether students receiving interventions in regular grade level curriculum were more successful in their coursework than students previously placed in remedial courses with no intervention support, and (c) to explore the impact of intervention support on students self-efficacy associated with Reading and Math.

Discussion

The reason I selected this topic for study is due to poor-performing students not being properly supported to grow and close their achievement gaps. Rather, they continue to be underserved and have their learning gaps reinforced and widened by placement policies and programs that further segregate and prevent access to grade-level curriculum. My teaching experience was within classrooms such as these, overpopulated with a concentration of minority, low-income, IEP, 504, LEP and at-risk learners. These students have often been cast aside into remedial courses because their presence is too disruptive in other learning environments or the system does not believe in their ability to meet the challenge of grade-level coursework.

Moving forward, it will be important for Fairview High School to ensure at-risk students are offered the opportunity to pursue grade level curriculum and receive intervention to close the skill gaps that will prevent them from being successful post-secondarily. In addition, even though the guidelines have changed from NLCB to ESSA there is still an expectation that
schools are preparing students to be college or career ready. This is a large-scale issue in American education. Across the country if students fall behind, there is limited opportunity for them to catch up. This achievement gap can rarely be overcome, and contributes to cumulative and lifelong disadvantage. If these students graduate at all, they will continue to fall behind post-secondarily as they often will require additional remedial coursework at the community college level or will not be prepared for most career fields.

In this program evaluation, it was made evident that a functional, well-invested RtI/MTSS model had a significant impact on the academic achievement of the students in this study sample. Moreover, the impact spans from large scale achievement comparisons such as standardized test performance, grade-level skill performance, successful completion of grade-level core coursework to an improvement in student self-efficacy. In every aspect of this study, the growth experienced by AIM students in comparison to grade-level peers or similar students receiving remedial coursework was statistically significant.

Beyond the scope of data and statistical analysis, there is another aspect of growth not quantified or analyzed in this study. It is the positive behaviors, connections to staff members, and belief AIM students have in their ability to succeed, that speaks to the larger impact of Tier 2 intervention support. In time, as each year progresses of improved performance on standardized measures and more core coursework is accumulated, these students move closer and closer to graduation. Enabling students to complete high school and achieve their post-secondary goals is the larger purpose of this intervention work. To achieve this goal, interventions at the secondary level must overcome accumulated deficiencies in academic skills while simultaneously supporting access and success in grade-level coursework. It is the synergistic combination of
both areas of intervention provided by the AIM program that allowed participants to achieve the outcomes critical to reaching graduation.

**Leadership Lessons**

The implications and lessons from this research are significant. This study supports that RtI/MTSS models at the secondary level have the potential to improve the academic achievement of students. The results of PSAT growth and core course work outcomes affirm that AIM students, receiving Tier 2 interventions, were able to make significant gains over the span of intervention while engaging in more rigorous grade-level curriculum. However, achieving these outcomes has been difficult as the criteria for applying an RtI/MTSS model at the secondary level requires a host of foundational concerns not experienced by elementary schools (Fuchs et al., 2010).

Based on these outcomes, leadership is ethically obligated to put into practice the intervention models and structures that have proven to be so effective in supporting student learning and achievement. The AIM program provided the extra time and individualized support required for at-risk students to understand and gain mastery in literacy and numeracy skills. Students were then able to apply and transfer those skills to standardized measures and coursework. However, this work did not come without challenge. Implementing such a program is an expensive enterprise that can be challenging based on the culture, context, conditions or competencies of an organization. It can be difficult to change the practices of an organization when some faculty and staff are threatened by the student outcomes achieved by their peers. From this program evaluation three leadership lessons have been learned to implement successful RtI/MTSS structures.
**Importance of a Guiding Coalition of Stakeholders.** To proactively address concerns and recruit support from stakeholders, it is important to include them in program design and development in addition to being respectful in showcasing outcomes that could be perceived as critical of their practice. The action steps suggested by Kotter (2014) to bring about organizational change recommend the important of building a guiding coalition. Of all the strategies for change implementation, this is one of the greatest lessons learned in this program implementation. As more stakeholders, some critical for program success, were brought to the table, the consensus and support for the AIM program grew.

Over time, as the program expanded, it became essential to bring in stakeholders from other teams or departments who were often at odds with the AIM program. Through strategic hiring and purposeful collaboration, the AIM team was expanded to include departments or faculty who brought missing skill sets or access to departments that needed stronger connections to the program. Of all the steps key to implementation, program development and systemic change, the coalition of stakeholders was most critical to the achievement of all other strategies and program success.

**Build Organizational Competency.** Throughout this process, one of the greatest limiting factors was the lack of foundational knowledge and organizational competency surrounding elemental tenets of the program. While the focus of this research was specifically the outcomes of Tier 2 intervention, the larger program analysis was a holistic implementation of a multi-tiered structure. The foundational Tier 1 requires classroom teachers to be able to manage a variety of differentiated curricular designs, implement best practice of instructional methodologies and coordinate a complex combination of accommodations for students with
special needs. In addition, there are expected requirements of being skilled in creating curriculum tied to standards with rigorous learning targets that allow for the vertical, horizontal and diagonal movement through coursework. Under normal circumstances this can be incredibly grueling. However, it can be more daunting when the carefully crafted curriculum is destroyed or diminished by poor placement or expectations of such severe modification of skills that the instructional plan for some students does not resemble any part of course requirements. Therefore, in an effort to achieve parity and a quality Tier 1 program, tremendous amounts of professional development are required for classroom teachers, aides, case managers and school counselors to ensure the entire organization understands quality curricular design, proper assessment techniques, and is trained on using data to determine proper course placement.

Beyond the Tier 1 classroom, the outcomes experienced in the AIM program were not possible without extensive professional development for the Interventionists. Throughout program design and implementation, the interventionists were able to regularly analyze student performance. Using regular feedback from students and assessments, they experienced a significant growth curve in the specific nuances of teaching and motivating students without gradebooks or course credit. The interventionists and the AIM team created a learning and working environment based on trust that is open to suggestions, feedback, and constructive criticism. It was through the mechanisms of dissecting students’ performance, evaluating outcomes, testing research methods and continual progress monitoring that new methods, models and curriculum came into being. As part of their work, they were able to see critical flaws in our organizational and coursework design and their continual success lead more and more students into the program.
Everyone is capable of rising to challenges. Often the critical flaw that leads to poor student outcomes is that over time adults lose faith in their ability to succeed and worse, students lose faith in the adults tasked in nurturing their growth. Due to a variety of tragedies, disappointments, lack of effort and poor performance, a cycle of failure begins. This erosion represents a simultaneous failure of students to perform juxtaposed against the failure of the system to meet the needs of at-risk students. In time, the poor outcomes are blamed on the shortcomings of the other party and are rarely viewed as personal failures or imperfections in performance. However, if this cycle can be broken and systems built anew, students are able to achieve far beyond our expectations and teachers have a greater capacity to impact student outcomes than previously dreamed. When conditions are purposely crafted, relationships are given top priority, data guides practice and students receive the resources and support needed, success is not only possible but spectacular in scope. With every small victory, newly built confidence grows and in time the cycle of failure is a forgotten relic of the past replaced by a new order of growth mindset and person-centric achievement.

Conclusion

In summary, the AIM program has shown a positive impact on at-risk high school students. RtI/MTSS frameworks were used in program design to provide at-risk students individual and small group Tier 2 interventions. The program participants showed significant growth across measures of standardized test performance, completion of grade-level core coursework and growth in their self-efficacy. The interpretation of the quantitative data collected in this study required the rejection of all null hypotheses. Therefore, we can conclude that the differences in test scores, grade point averages and inventory results were all impacted
by the AIM program participation. The outcomes of this study suggest that the Tier 2 interventions provided were an effective means of improving student outcomes in a variety of measures.

While the research has shown programs such as these have a positive impact on graduation rate, there is still a significant implementation gap of RtI/MTSS programs at the secondary level. Therefore, intervention programs should be created to meet the needs of at-risk learners rather than segregating them to remedial coursework that contributes to the cumulative disadvantage of these often, minority, special needs or low-income populations. The effectiveness of providing at-risk students with Tier 2 interventions means that they are able to experience success in critical attributes to high school completion and post-secondary success. This journey shows promise to provide opportunity to every poor performing student so they can achieve any goal desired. The results of this work cast a vision for a new educational model that believes in and nurtures all students, regardless of the cumulative disadvantage, failures or challenges that could diminish their potential for success.
References


Bernhardt, V. L., & Hébert, C. L. (2011). Response to Intervention (RTI) and continuous school improvement (CSI): using data, vision, and leadership to design, implement, and evaluate a schoolwide prevention system. Eye on Education.


http://www.principals.org/KnowledgeCenter/Publications.aspx


Progress and Challenge in Raising High School Graduation Rates.


Authors:


https://doi.org/10.3102/0034654314559845


https://doi.org/10.1080/00228958.2009.10517298


https://doi.org/10.1016/j.jsp.2006.05.005


https://doi.org/10.2307/749515


https://www.isbe.net/Documents/rti_state_plan.pdf


https://www.handsandvoices.org/articles/docs/RtI.pdf


https://doi.org/https://doi.org/10.1177/0031721715610086


https://books.google.com/books?id=xpGX1EWL_EMC


of the National Center for Learning Disabilities.

http://www.rtinetwork.org/learn/what/whatisrti


No Child Left Behind (NCLB), (December 6, 2001).


OSEP. (2008). *Memorandum to chief state school officers*.

OSEP. (2011). *Memorandum to state directors of special education*.


Rumberger, R. (2002). Student Mobility and Academic Achievement. *ERIC Digest, June, 7.*


https://doi.org/10.1080/1045988X.2013.837813


https://doi.org/https://doi.org/10.1177/004005991004200306

https://doi.org/tps://doi.org/10.1177/004005991004300107
Appendices

Appendix A: Mathematics Self-Efficacy and Anxiety Questionnaire

Mathematics Self-Efficacy and Anxiety Questionnaire (MSEAQ)

In order to better understand what you think and feel about your college mathematics courses, please respond to each of the following statements. If there are questions you do not wish to answer, please select “No Response.”

NR= No Response  1=Never  2=Seldom  3=Sometimes  4=Often  5=Usually

<table>
<thead>
<tr>
<th>Question</th>
<th>Self-Efficacy</th>
<th>Anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel confident enough to ask questions in my mathematics class.</td>
<td>Self-efficacy: In class assignment and factor</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>2. I get tense when I prepare for a mathematics test.</td>
<td>Anxiety: Grade Anxiety</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>3. I get nervous when I have to use mathematics outside of school.</td>
<td>Anxiety: Future Factor</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>4. I believe I can do well on a mathematics test.</td>
<td>Self-efficacy: Grade Anxiety</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>5. I worry that I will not be able to use mathematics in my future career when needed.</td>
<td>Anxiety: Future Factor</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>6. I worry that I will not be able to get a good grade in my mathematics course.</td>
<td>Anxiety: Grade Anxiety</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>7. I believe I can complete all of the assignments in a mathematics course.</td>
<td>Self-efficacy: In Class Assignment &amp; Factor</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>8. I worry that I will not be able to do well on mathematics tests.</td>
<td>Anxiety: Grade Anxiety</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>9. I believe I am the kind of person who is good at mathematics.</td>
<td>Self-efficacy: Self Efficacy Factor</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td>10. I believe I will be able to use mathematics in my future career when needed.</td>
<td>Self-efficacy: Future Factor</td>
<td>NR 1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11. I feel stressed when listening to mathematics instructors in class.</td>
<td>Anxiety: Future Factor</td>
<td>NR</td>
</tr>
<tr>
<td>12. I believe I can get an “A” when I am in a mathematics course.</td>
<td>Self-efficacy: Self-efficacy Factor</td>
<td>NR</td>
</tr>
<tr>
<td>13. I worry that I will not be able to get a good grade in mathematics course</td>
<td>Self-efficacy: Self-efficacy Factor</td>
<td>NR</td>
</tr>
<tr>
<td>14. I get nervous when asking questions in class.</td>
<td>Anxiety: In-class &amp; Assignment Factor</td>
<td>NR</td>
</tr>
<tr>
<td>15. Working on mathematics homework is stressful for me.</td>
<td>Anxiety: Grade Anxiety Factor</td>
<td>NR</td>
</tr>
<tr>
<td>16. I believe I can learn well in a mathematics course.</td>
<td>Self-efficacy: Self-efficacy Factor</td>
<td>NR</td>
</tr>
<tr>
<td>17. I worry that I do not know enough mathematics to do well in future mathematics courses.</td>
<td>Anxiety: Future Factor</td>
<td>NR</td>
</tr>
<tr>
<td>18. I worry that I will not be able to complete every assignment in a mathematics course.</td>
<td>Anxiety: In-class &amp; Assignment Factor</td>
<td>NR</td>
</tr>
<tr>
<td>19. I feel confident when taking a mathematics test.</td>
<td>Self-efficacy: Grade Anxiety Factor</td>
<td>NR</td>
</tr>
<tr>
<td>20. I believe I am the type of person who can do mathematics.</td>
<td>Self-efficacy: Self-efficacy Factor</td>
<td>NR</td>
</tr>
<tr>
<td>21. I feel that I will be able to do well in future mathematics courses.</td>
<td>Self-efficacy: Self-efficacy Factor</td>
<td>NR</td>
</tr>
<tr>
<td>22. I worry I will not be able to understand the mathematics.</td>
<td>Anxiety: Future Factor</td>
<td>NR</td>
</tr>
<tr>
<td>23. I believe I can do the mathematics in a mathematics course.</td>
<td>Self-efficacy: Self-efficacy Factor</td>
<td>NR</td>
</tr>
<tr>
<td>24. I worry that I will not be able to get an “A” in my mathematics course.</td>
<td>Anxiety: Grade Anxiety Factor</td>
<td>NR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>25. I worry that I will not be able to learn well in my mathematics course.</td>
<td>Anxiety: Future Factor</td>
<td>NR</td>
</tr>
<tr>
<td>26. I get nervous when taking a mathematics test.</td>
<td>Anxiety: Grade Anxiety Factor</td>
<td>NR</td>
</tr>
<tr>
<td>27. I am afraid to give an incorrect answer during my mathematics class.</td>
<td>Anxiety: In-class &amp; Assignment Factor</td>
<td>NR</td>
</tr>
<tr>
<td>28. I feel confident when using mathematics outside of school.</td>
<td>Self-efficacy: Future Factor</td>
<td>NR</td>
</tr>
</tbody>
</table>
Appendix B: Adolescent Motivation to Read Profile Survey

Respond to these questions as honestly as possible. Clearly circle one answer/response. If you are unsure, choose the best answer option. Your responses will not be shared with peers.

1. My friends think I am __________.
   a. a very good reader
   b. a good reader
   c. an okay reader
   d. a poor reader

2. Reading a book is something I like to do.
   a. Never
   b. Not very often
   c. Sometimes
   d. Often

3. I read __________.
   a. not as well as my friends
   b. about the same as my friends
   c. a little better than my friends
   d. a lot better than my friends

4. My best friends think reading is ________________.
   a. really fun
   b. fun
   c. okay to do
   d. no fun at all

5. When I come to a word I don’t know, I can __________.
   a. almost always figure it out
   b. sometimes figure it out
   c. almost never figure it out
   d. never figure it out

6. I tell my friends about good books I read.
   a. I never do this
   b. I almost never do this
   c. I do this some of the time
   d. I do this a lot

7. When I am reading by myself, I understand ________________.
131

8. People who read a lot are ________________.
   a. very interesting
   b. interesting
   c. not very interesting
   d. boring

9. I am ________________.
   a. a poor reader
   b. an okay reader
   c. a good reader
   d. a very good reader

10. I think reading on an e-reader is ________________.
    a. a great way to spend time
    b. an interesting way to spend time
    c. an okay way to spend time
    d. a boring way to spend time

11. I worry about what other kids think about my reading ________________.
    a. every day
    b. almost every day
    c. once in a while
    d. never

12. Knowing how to read well is ________________.
    a. not very important
    b. sort of important
    c. important
    d. very important

13. When my teacher asks me a question about what I have read, I ________________.
    a. can never think of an answer
    b. have trouble thinking of an answer
    c. sometimes think of an answer
    d. always think of an answer

14. I think reading is ________________.
    a. a boring way to spend time
b. an okay way to spend time
c. an interesting way to spend time
d. a great way to spend time

15. Reading is _____________.
   a. very easy for me
   b. kind of easy for me
   c. kind of hard for me
   d. very hard for me

16. As an adult, I will spend ________________.
   a. none of my time reading
   b. very little time reading
   c. some of my time reading
   d. a lot of my time reading

17. When I am in a group talking about what we are reading, I _____________.
   a. almost never talk about my ideas
   b. sometimes talk about my ideas
   c. almost always talk about my ideas
   d. always talk about my ideas

18. I would like for my teachers to read out loud in my classes _________________.
   a. every day
   b. almost every day
   c. once in awhile
   d. never

19. When I am asked about the theme of a book, I feel like _________________.
   a. a poor reader
   b. an okay reader
   c. a good reader
   d. a very good reader

20. When I am given reading for homework, I feel _________________.
   a. confident
   b. okay
   c. kind of stressed
   d. stressed

21. When I get to choose what I am reading, I think reading is _________________.
   a. really fun
   b. fun
22. Reading a textbook for history is ______________.
   a. very hard for me
   b. kind of hard for me
   c. kind of easy for me
   d. very easy for me

23. When teachers give me time to read silently in school, I spend ______________.
   a. all of that time reading
   b. some of that time reading
   c. very little of that time reading
   d. none of that time reading

24. Reading a novel for English is ______________.
   a. very easy for me
   b. kind of easy for me
   c. kind of hard for me
   d. very hard for me

Appendix C: “As Is” Chart

- **Context**
  - Changing Demographics
  - Decline in student performance

- **Culture**
  - Method to “support” struggling learners is segregation and below grade level curriculum.
  - Teachers view student’s work ethic as causation for poor performance.
  - Lack of Vision and limited Teacher “buy-in” to School Improvement initiatives

- **Conditions**
  - Limited financial resources
  - Limited time for intervention support
  - Inadequate SpEd programming
  - Lacking aligned and documented curriculum in all courses.

- **Lack of access to rigorous learning environments for all students.**

- **Competencies**
  - Teachers are lacking knowledge and skill on differentiation, accommodation and modification of curriculum and instruction
  - Teachers are afraid and uncomfortable with the use of data for decision making.
Appendix D: “To Be” Chart

- **Context**
  - Changing Demographics
  - Increase in student performance (SAT Suite)
  - Increase in grade level coursework placement

- **Culture**
  - Teachers believe all students can learn and that they are the catalyst and influence for growth
  - Students are all viewed as capable of grade level coursework
  - Teachers expand their viewpoint and toolkit to utilize ideas from other successful districts. (Collaborative)
  - Equity and access are a major district focus

- **Conditions**
  - Limited financial resources
  - Time provided in bell schedule for intervention support
  - Adequate SpEd programming/staffing that offers a continuum of services.
  - Every course has an aligned and documented curriculum.
  - Appropriate staffing for intervention programming.

- **Competencies**
  - Teachers are knowledgeable about the differences between differentiation, accommodation and modification.
  - Teachers have ample toolkit to differentiate and accommodate instruction for all students.
  - Teachers are comfortable with the use of data for instructional and curricular decision making.

- **All students have access and support to be successful in rigorous grade level curriculum.**