# THE IMPACT ON TIER I STUDENT ACHIEVEMENT DUE TO RESPONSE TO INTERVENTION2 IMPLEMENTATION IN ONE ELEMENTARY SCHOOL IN A MIDDLE TENNESSEE METROPOLITAN SCHOOL

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# THE IMPACT ON TIER I STUDENT ACHIEVEMENT DUE TO RESPONSE TO INTERVENTION$^2$ IMPLEMENTATION IN ONE ELEMENTARY SCHOOL IN A MIDDLE TENNESSEE METROPOLITAN SCHOOL DISTRICT

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Education Specialist

Stacy M. Rone

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We are submitting a Field Study Report written by Stacy Rone entitled "The Impact on Tier I Student Achievement Due to Response to Intervention$^2$ Implementation in One Elementary School in a Middle Tennessee Metropolitan School District." We have examined the final copy of this Field Study Report for form and content. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Educational Specialist Degree in School Administration and Leadership.

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Accepted for the Graduate and Research Council

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# DEDICATION

There are several people who have played an important role to me throughout my program. My successful completion has a lot to do with their encouragement and knowledge, I will forever appreciate their guidance and support.

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## ABSTRACT

STACY M. RONE, The Impact on Tier I Student Achievement Due to Response to Intervention$^2$ Implementation in One Elementary School in a Middle Tennessee Metropolitan School District (Under the direction of DR. J. GARY STEWART.)

Schools within Tennessee implemented RTI$^2$ in 2014 throughout the state in order to help students make gains with reading proficiency. This study was conducted in one elementary school in a Middle Tennessee Metropolitan School District with a population of approximately 610 students. The purpose within the study helped to determine the effectiveness of RTI$^2$ throughout all three tiers. More specifically, the study focused on the impact on student achievement due to the lack of an additional 30-minute instructional time given to the Tier II and Tier III students. The study was conducted with fidelity throughout the process and the synopsis of findings were reported based upon those findings.

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# CHAPTER I

# INTRODUCTION

## Statement of the Problem

Overall, within the United States, students have not been performing well in reading proficiency. According to the National Assessment of Education Progress (NAEP; 2015), students in fourth through eighth grade did not show a significant gain in 2015 compared to 2013. In fact, fourth grade scores indicated that there was no significant increase and eighth grade scores reflected a decrease of two points lower during the 2015 school year (NAEP, 2015). This is a huge problem today and must be dealt with in order for students to begin making gains in reading proficiency.

In order for students to become proficient readers, they must be exposed to interventions tailored to meet their individual needs. Response to Intervention (RTI) is an important and prevalent component within schools today and was implemented exclusively to meet the individual needs of each individual learner. Many schools have used RTI models to help identify students with learning disabilities and for the prevention of reading difficulties (Otaiba, Folson, Schatschneider, Wanzek, Greulich, Meadows, Li & Connor, 2011). Response to Intervention is being used throughout the United States to help decrease the number of students with reading challenges. Response to Intervention is something that must be studied within schools in order to fully ascertain its effectiveness.

Tennessee adopted the RTI model and added an instruction aspect, which is known as Response to Intervention and Instruction ($RTI^2$). This was extended in order to

help close the gaps between the top 10% and bottom 25% of students. The majority of the students fell between the 26th percentile and 89th percentile, but they received the smallest amount of instruction compared to their peers who qualified for Tiers II and III. Therefore, the problem studied was the impact on Tier I student achievement due to the lack of additional instructional time that was offered to Tiers II and III students during $RTI^2$ time.

**Purpose of the Study**

Response to Intervention and Instruction consists of three levels; Tier I, Tier II, and Tier III. Students within schools that consisted of $RTI^2$ qualified for one of the tiers based upon an assessment given to them three times throughout the year. The Middle Tennessee School examined within this study followed the same guidelines for identifying students and placed them in a tier based upon the results of the Path Driver Universal Screener given to them. The data set used for this study came from archival test results for fourth grade students within the target school for this study. The variables were $RTI^2$ tier, gender and the student achievement scores on the Tennessee Comprehensive Assessment Program (TCAP).

**Significance of the Study**

This study was based on the research conducted by Otaiba et al. (2014). The study focused on students who were receiving Tier I instruction, but the researcher wanted to determine the effectiveness of Tier II and Tier III instruction. Therefore, the basis for this study was to determine the impact of student achievement on Tier I students. During the course of researching this topic and the specific aspects of the $RTI^2$

initiative, the researcher was unable to find a specific study that was designed and conducted to determine the impact on Tier I students. However, much research had been conducted about RTI and the impact it had on reading proficiency. Therefore, between the research within this study and research that already existed, some rather specific assumptions could be made based on the results analyzed.

This study was used to contribute knowledge to education through the study of the $RTI^2$ initiative and the impact that $RTI^2$ instruction had on Tier I in comparison to Tier II and Tier III instruction. It was a necessary aspect within $RTI^2$ that needed to be analyzed and thoroughly examined to help researchers make improvements regarding the process. This study could be used to help districts and school systems implement RTI effectively because it forces them to envision the big picture and not just focus on the Tier II and Tier III students. This too could be a significant contribution to education, which was another reason for this study.

**Research Questions**

1. Is there an interaction between tier and gender?
2. Are student achievement growth scores lower for male students than female students for all tiers?
3. Are student achievement growth scores lower for Tier I students than Tier II students for both genders?
4. Are student growth scores lower for male students in Tier I than in Tier II?
5. Are student growth scores lower for female students in Tier I than in Tier II?

**Null Hypotheses**

1. There will be no interaction between tier and gender.
2. Student achievement growth scores will not be lower for male students than female students for all tiers.
3. Student achievement growth scores will not be lower for Tier I students than Tier II students for both genders.
4. Student growth scores will not be lower for male students in Tier I than in Tier II.
5. Student growth scores will not be lower for female students in Tier I than in Tier II.

**Delimitations**

This study focused on student growth scores among fourth grade students within one elementary school in a Middle Tennessee Metropolitan School District. The student achievement scores are one of the variables within this study and were selected for inclusion in this study because they demonstrate the most reliable data about student growth among fourth grade students. Therefore, it was best to utilize these scores within this study to measure growth scores compared to other data available.

Response to Intervention and Instruction was selected for inclusion for this study because there was a need within the target school district to determine the impact on Tier I students' achievement growth scores due to the lack of the additional 30 minutes of instructional time given to Tier II students. Tier I students within this school went to a special area classroom and had an additional 30 minutes of related arts, while the Tier II and Tier III students were receiving intervention and instruction lessons from a certified educator within a small group setting.

**Limitations**

This study focused on fourth grade students who received Tier I, Tier II, or Tier III interventions and instruction. Due to the limited amount of students allowed to be in Tiers II and III, there was a higher amount of students in Tier I because the student-to-teacher ratio must be kept to a minimum.

Teachers following the fidelity of $RTI^2$ was a limitation within this study. In order for the students to receive the interventions and instruction needed to make gains the teachers must provide lessons and interventions with fidelity, meaning that the teachers needed to provide the best possible lessons and interventions in order for students to be successful and have academic growth. This was also necessary in order for students to be properly identified as possibly having a learning disability.

Effective strategies were necessary in order for $RTI^2$ to be effective. This was a limitation because one had to assume that the teachers were using the required strategies to maximize student growth. The use of effective strategies was not measured within this study, therefore it was assumed that the teachers were teaching the strategies with fidelity.

Students remained in Tier II and Tier III for 10 weeks before another data cycle was completed. This caused a limitation in some of the data because students may have been in Tier II or Tier III within the first cycle, but then exited afterwards. Therefore, any student who received Tier II or Tier III interventions was included in that category and not the Tier I category.

The sample being studied was selected from one Middle Tennessee Metropolitan Elementary School because the data set would become too large if other schools were included. The population would be the entire school district, but a sample school was selected in order to maintain a manageable amount of data. Therefore, the school selected was based upon a school that divided the Tier I, Tier II, and Tier III students into three separate groups, and had the Tier I students receiving different instruction from the Tier II and Tier III students.

**Assumptions**

Students receiving interventions had consistent attendance, and participated in the required lessons in order to receive quality instruction. Student attendance was not monitored in this study. If the students had poor attendance, it could affect their rate of progress and overall student achievement.

All students performed to the best of their abilities on the Path Driver test that was used to determine tier placement within this study. Students also performed to the best of their abilities on the Tennessee Comprehensive Assessment Program (TCAP) assessment, which was used to determine their growth score during this study.

Teachers were trained properly in order to provide effective lessons and interventions in order to maximize student growth. This was an assumption because the lessons and interventions needed to be based upon students' needs in order for the interventions and lessons to be effective. The training of teachers was not analyzed within this study; therefore, it was assumed that they received the proper training necessary to deliver effective interventions and lessons.

All teachers were consistently providing quality lessons and interventions to meet the specific needs of students. This study only monitored the student achievement scores; therefore, it did not know the types of lessons and interventions provided. This lead to the assumption that all teachers provided the necessary lessons and interventions necessary to target specific students' needs.

**Definition of Terms**

1. Response to Intervention, or RTI is the practice of providing high-quality interventions matched to student need beginning by giving all students a universal screener in a general education classroom (A Program of the National Center for Learning Disabilities, n.d.). It is a multi-tiered approach to identify and support students with learning and behavior needs. Interventions are given to struggling learners at different levels of intensity and the levels increase as the students' progress through the process. General education teachers, special education teachers, and specialists give these services. Progress monitoring is used to measure the performance of the individual students receiving the interventions. The data is then used to make decisions about the intensity and duration of the interventions for each student involved in RTI.
2. Response to Intervention and Instruction, or $RTI^2$ is a framework that relies on the premise of high-quality instruction and interventions tailored to student need where core instructional and intervention decisions are guided by student outcome data (Tennessee Department of Education, 2013, p. 6).

3. Path Driver is an online assessment system that gives an accurate measure of students' reading proficiency and foundational understanding of mathematics. This program is used to manage consistent screening and progress monitoring across the entire district (EPS Literacy and Intervention, n.d.).
4. Tennessee Comprehensive Assessment Program (TCAP) is the statewide assessment that is used to measure students' skills and academic progress. Students in grades three through eight take the achievement portion of the TCAP (Tennessee Department of Education, n.d., April, 2016).
5. Data Cycle is the cycle used during RTI within each school. A data cycle is 10 weeks long and consists of progress monitoring to track data and a universal screener to initially identify students for tier placement.

# CHAPTER II

# REVIEW OF LITERATURE

## Introduction

Student achievement is an extremely important aspect to the educational experiences in school in this present era. More and more schools are relying on standardized tests to measure student achievement and growth. In order for students to succeed, RTI helps close the gaps among struggling students. Tennessee added the component of instruction to RTI, which is referred to as RTI$^2$. This was a new approach adopted in Tennessee within the RTI$^2$ Framework. According to the Tennessee Department of Education (2013), Tennessee State Standards established very high expectations for student achievement. Therefore, the RTI$^2$ framework supports all children in meeting the expectation for increased emphasis on student academic achievement. This happens through high quality instruction, making instructional decisions based on data, and meeting the needs of all students.

## History of RTI

According to Graner, Faggella-Luby, and Fritschmann (2005), RTI has been around in special education for quite some time and is not entirely a noval idea. In fact, "RTI was developed starting in the late 1970s by numerous researchers seeking a method of identifying learning disabilities that avoids the problems of the discrepancy model" (Lohman, 2007, p. 1). The discrepancy model was the traditional method used to determine whether a student had a learning disability and needed special education services before the implementation of RTI$^2$. "This model assesses whether a substantial

difference, or discrepancy, exists between a student's scores on an individualized test of general intelligence and his or her scores obtained for one or more areas of academic achievement" (Iris Center, 2016, p. 2). RTI allows for early and intensive interventions in the regular education setting based on a student's learning before any referral for special education services take place, which is unlike the discrepancy model. Therefore, according to Bradley, Danielson, and Doolittle (2007), the benefit of RTI is that teachers no longer have to wait for students to fail in order for them to receive services. Having this knowledge and research data was critical to the start of the process for getting RTI established within regular education.

> According to Bradley, Danielson, and Doolittle (2007):
>
> In 1997, work began on the reauthorization of the Individuals with Disabilities Act (IDEA). The National Joint Committee on Learning Disabilities (NJCLD) wrote a letter to the U.S. Office of Special Education Programs (OSEP) expressing concern that neither early nor accurate identification of specific learning disabilities (SLD) was occurring (p. 8).

The letter written to the OSEP lead to the Learning Disabilities (LD) Initiative, which brought researchers, professional organizations, advocacy groups, educators, and other stakeholders together to form a consensus that the identification and implementation of improved procedures for SLD identification needed to be, implemented (Bradley & Danielson, 2004). This group focused on finding an alternative way for identifying students with SLD, which led them to RTI. Bradley, Danielson, & Hallahan (as cited in Bradley, Danielson, & Doolittle, 2007) supported this view by stating:

> There should be alternative ways to identify individuals with SLD in addition to achievement testing, history, and observations of the child. Response to quality intervention is the most promising method of alternate identification and can both promote effective practices in schools and help to close the gap between identification and treatment (p.8).

All of the work done by the LD Initiative was used to make changes in how SLD identification took place and was taken into consideration in the process of creating the reauthorization to the IDEA Act in 2004 (Bradley, Danielson, & Doolittle, 2007).

In 2004, the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA) gave states the option to discontinue the use of an IQ driven discrepancy model for the identification of special education students, and replace it with the more systematic approach of RTI (U.S. Department of Education, 2006). This policy allowed schools to abandon the wait and fail approach in special education identification, with the hopes of eliminating the common error of wrongfully identifying students with a disability. IDEIA allows schools to demonstrate with data that several remediated and researched instructional strategies occurred before a student was referred to special education (Printy & Williams, 2015). According to the U.S. Department of Education (2006), IDEIA 2004, aimed to reduce the number of special education students across the nation by encouraging active intervention strategies through RTI.

Between 2004 and 2006, the inclusion of RTI to IDEIA went fairly unnoticed, so the federal government clarified the intention of RTI in IDEIA 2006 and added a policy incentive, allowing schools to use up to 15% of their federal special education funding

for early childhood interventions (U.S. Department of Education, 2006). This fueled the implementation of RTI nationally. By 2011, 43 states were allowing RTI or other similar methods of determining special education eligibility, and seven of those states required RTI exclusively (Printy & Williams, 2015). A report by Spectrum K12 School Solutions (2010) gave evidence that RTI implementation was underway nationally and continuing to grow yearly.

After the 2006 IDEIA reauthorization, the state of Tennessee amended its criteria for determining eligibility of a student with an SLD to allow local education agencies to use either RTI or a discrepancy model (Tennessee Department of Education, 2013). However, a consistent adoption throughout the state did not happen during that time. Since then, several events have led to the current policy changes. In the spring of 2012, The Common Core Leadership Council developed a K-2 guideline for best instructional practices in Reading and Mathematics (Tennessee Department of Education, 2013). The guideline for best instructional practices in Reading and Mathematics was presented in the fall of 2012 to the districts; and presented at the Tennessee Educational Leadership Conference (LEAD). Afterwards, the state of Tennessee gathered feedback pertaining to the RTI framework (Tennessee Department of Education, 2013). This lead the Tennessee Department of Education to search for a partner organization with a strong research background to help with the development of Reading and Mathematics training in relationship to the Common Core State Standards and tiered, supplemental intervention.

In 2013, a RTI task-force was convened to discuss the implementation of a state-wide RTI model. The group voted to move forward with a state-wide plan and provided

recommendations based upon their findings (Tennessee Department of Education, 2013). The state interviewed educators to serve on the Reading/RTI Leadership Team, and started writing the Response to Instruction and Intervention Framework termed RTI$^2$ (Tennessee Department of Education, 2013). According to the Tennessee Department of Education (2013), "a school psychologist task force was assembled to help develop and review content related to interventions and eligibility standards for students suspected of having a specific learning disability" (p.7). This lead to the proposal for identifying students with a SLD using RTI$^2$ problem-solving model being presented and passed by the Students with Disabilities Advisory Council. Then, according to the Tennessee Department of Education (2013) the State Board of Education (SBE) passed the proposal on the first reading on April 19, 2013 and made it final upon the second reading on June 21, 2013.

Tennessee mandated that RTI$^2$ be implemented in all elementary schools throughout the state beginning July 1, 2014, and that RTI$^2$ be the sole criteria by which a student be identified as having an SLD in the state of Tennessee (Tennessee Department of Education, 2013). When response to intervention was combined with response to instruction the state recognized "that some students need modified, more intensive, or different instruction in order to be academically or behaviorally successful, while other students need targeted, strategies, or intensive intervention(s) in order to facilitate their success" (Knoff & Dyer, 2010, p. 2). Therefore, they mandated the framework throughout the state and began tracking the success within the RTI framework, which was the basis for this study.

**Elements of RTI**

According to the Tennessee Department of Education (2013), there are elements within RTI that are crucial in order for effectiveness and success of all students and the RTI program initiative. These elements are Tier I, Tier II, and Tier III instruction, a universal screener, progress monitoring, district and school RTI$^2$ teams, fidelity of implementation, parent contact/communication, and highly trained personnel. Proper implementation of RTI is crucial; therefore, it is important for one to understand the elements within schools that pertain to the RTI framework. Therefore, the researcher will elaborate more about the definition of each element and the reasoning behind each elements importance.

**Universal Screener.** An important part of the RTI process is the determination of student placement within the tiers. Students in Tier I receive differentiated instruction as part of the RTI$^2$ framework; this ensures that the students are getting instruction based on their individual needs. Universal screeners assess the ability of the students within Tier I. According to the Tennessee Department of Education (2013):

> A universal screener is a brief screening assessment of academic skills (i.e., basic reading skills, reading fluency, reading comprehension, math calculation, math problem solving, written expression) administered to ALL students to determine whether students demonstrate the skills necessary to achieve grade-level standards. (p. 236)

It is the mechanism for identifying students who struggle to learn when provided a scientific, evidence-based general education (Jenkins, Hudson, & Johnson, 2007).

Universal screening happens three times per school year, in the fall, winter, and spring for students in grade kindergarten through eighth. "Universal screening measures consist of a brief assessment focused on target skills that are highly predictive of future outcomes" (Hughes & Dexter, n.d., para. 2). The universal screener identified students who were performing at, on, and above grade level. The $RTI^2$ team then would utilize this data to determine the placement of students who received Tier II and Tier III interventions and instruction.

The universal screener used in this research study was Path Driver. Educators "utilize this online assessment system for a fast and accurate measure of students' reading proficiency. This powerful tool reduces testing time and helps administrators manage consistent screening and progress monitoring across an entire district" (EPS, n.d. para. 1). Therefore, the data from this universal screener placed students into the appropriate tiers; I, II, or III. After placement, teachers used the data to plan and instruct students according to their individual needs.

A collaborative group of educators will continue to discuss the data after placing students, to ensure proper placement. "Teacher expertise is the most important factor in improving children's learning, and children experiencing the most difficulty should have the most expert teachers" (Johnston, 2011, p. 520). Therefore, discussing data and having students receive quality instruction throughout the RTI process incorporated an integral part within the framework to ensure the success of $RTI^2$.

**Tier I.** Within Tier I, "all students receive research-based, high quality, general education instruction using Common Core Standards in a positive behavior environment

that incorporates ongoing universal screening and ongoing assessment to inform instruction" (Tennessee Department of Education, 2013, p. 87). In 2015, Tennessee implemented Tennessee Education Standards to replace the Common Core Standards, but the importance of them remained the same. Approximately 80-85% of students will fall within Tier I, meaning that differentiated instruction effectively meets the needs of the majority of the students in elementary classrooms. The instruction within the classrooms must be high quality and based upon student needs, which means this may look differently among classrooms and schools. Therefore, it is important for the students to receive a high quality curriculum and instruction in the general education classroom, which is an aspect within Tier I instruction.

It is important for Tier I instruction to be based upon grade-level Common Core State Standards in English Language Arts and Mathematics in order to allow all students to be exposed to quality curriculum and instruction. Fidelity monitoring of Tier I instruction ensured that this was happening. Further examination of fidelity monitoring happens below in the fidelity of implementation section. Another important aspect within Tier I is insuring that the students are receiving research based instruction based on their needs. The classroom also must incorporate small group instruction in Reading and Mathematics. On a regular and consistent basis instruction was assessed and monitored. All of these items must be done and adhered to in order to determine if Tier I instruction is being effective for all individual students using a universal screener.

Another important aspect within Tier I instruction is the use of differentiation. This happens with evidence-based strategies throughout Tier I instruction. According to

Jones, Yssel, and Grant (2012), comprehension in the early years are critical to advancing students' literacy skills, which occurred using differentiation. Therefore, differentiation implementation within Tier I was crucial.

**Tier II.** Identification for Tier II children within RTI happened due to the effectiveness of the necessary components within Tier I instruction.

In addition to Tier I:

> Interventions provided to students that fall below the 25th percentile on universal screening and are struggling academically and/or behaviorally. Research-based interventions will be provided to students within their specific area(s) of deficit. These students are progress monitored using a tool that is sensitive to change in area of deficit and that provides a Rate of Improvement (ROI) specific to the individual deficit. (Tennessee Department of Education, 2013, p. 196)

Approximately 10-15% of students fall within Tier II within an elementary setting and receive intervention and instruction based upon his or her deficits (Tennessee Department of Education, 2013). Daily Tier II interventions last for 30 minutes, and administration by highly qualified personnel happened throughout the process. The ratio for Tier II is 1:5, meaning one highly qualified personnel to five students. If students are making gains in Tier II, they may move back to Tier I instruction. This decision is reliant upon the school's $RTI^2$ team using progress-monitoring data.

On the other end of the scale are the higher achieving students; these students too can qualify for Tier II. Enrichment within Tier II is used for students who are above the 90th percentile, which shows that their needs cannot be met within Tier I instruction. It is

equally as important for these students to have their needs met because they need to continue to show growth in reading. This leads to the discussion of important aspects within Tier II instruction.

There are many important aspects within Tier II in order for maximum student achievement. The first important aspect is that teachers must show knowledge and evidence of goal setting for each child. This helps the student take responsibility for his or her learning and become aware of his or her progress. Goal setting is also beneficial to the school $RTI^2$ team, because it easily identifies the student's area of need and how he or she is progressing within that specific area. Student progress is another imperative element within Tier II and happens weekly through progress monitoring, meaning the student's progress is tracked weekly during Tier II in order to monitor progress and make adjustments as needed. Based on the progress monitoring scores a ROI is calculated and used to determine future interventions for each individual student, which is why it is so important for students to have progress and track their progress through progress monitoring and goal setting.

**Tier III.** The Tier II section stated that students could return to Tier I, if they showed a high ROI from progress monitoring. "However, if students are still not meeting grade level expectations after intensive, targeted Tier II interventions, they may be moved to Tier III in order to provide more intense interventions to meet their needs" (Van Sickle, 2014, p. 14). Therefore, it is imperative that intervention teams make sure students are able to move freely between the tiers, based on the students' needs and progress.

Tier III instruction is in addition to Tier I, interventions are provided to students who have not made significant progress in Tier II, are 1.5-2.0 grade levels behind or are below the 10th percentile. Tier III interventions are more explicit and more intensive than Tier II interventions. Research-based interventions are provided to students within their specific area(s) of deficit. These students, who are struggling academically and/or behaviorally are progress monitored using a tool that is sensitive to change in area of deficit and that provides a ROI specific to the individual deficit.

Approximately 3-5% of students fall within Tier III and qualify to receive instruction and interventions based upon his or her deficits. Daily Tier III interventions last for a minimum of 45 minutes, and administered by highly qualified personnel. The ratio for Tier III is 1:3, meaning one teacher per three students. Just like in Tier II, one can move back a tier if the student is making gains. Therefore, it is important to know the important aspects in Tier III intervention and instruction (Tennessee Department of Education, 2013).

Progress monitoring is an important aspect within Tier III and used for a variety of reasons. The first reason is that the $RTI^2$ team will use the progress monitoring data to move the students within the appropriate tier based on their needs and progress. In addition, students will set goals pertaining to their progress and continue to track their progress throughout the data cycle. Lastly, special education services used progress monitoring to determine if a student received a special education referral. The school $RTI^2$ team will meet to analyze the data, measure the effectiveness of interventions and check student progress toward goals. Therefore, it is crucial that the properly done

components within all tiers occur consistently with proper adherence. However, more specifically Tier III services must occur according to the necessary requirements, due to the importance of special education identification. These are the important aspects in Tier III; however, further investigation about the completion of progress monitoring with schools is necessary.

**Progress Monitoring.** Appropriate placement among the three tiers occurs by using a universal screener. Once student identification occurs for Tier II or Tier III placement, interventions and progress monitoring must occur. Progress monitoring is specific to each child's individual need. Therefore, one student may be progress monitored on reading comprehension while another is being progress monitored on reading fluency. The progress monitoring has to occur weekly or bi-weekly depending on tier placement. The Tennessee Department of Education (2013) stated:

> School RTI$^2$ teams will meet to analyze data, measure the effectiveness of interventions and check student progress toward goals. A plan will be in place for when students are and are not making adequate progress within Tier II. If students are not making adequate progress in Tier II, the intervention may need to be changed. Students should have at least four data points during Tier II interventions before a change is considered. Only one or two variables should be changed at a time to measure effectiveness of the change. A change in intervention will be considered within each tier before moving to the next tier of intervention. A minimum of eight to ten data points are required in order to make a data-based decision to change to Tier III. School RTI$^2$ teams will decide the

best placement of students in Tier III. Tier III interventions must be more intense than Tier II interventions because they are used for special education placement. (p. 139)

Therefore, progress monitoring is an integral and important part of the RTI$^2$ framework.

Progress monitoring within this study occurred weekly for Tier II and Tier III students receiving remediation interventions. The students in Tier II and Tier III receiving enrichment were progress monitored bi-weekly throughout the year within this study. Highly trained personnel are an essential aspect within progress monitoring, which is why fidelity is so important. The progress monitoring was done with fidelity and by a highly trained person throughout the study. The school's administrators, school psychologist, and academic coach ensured that progress monitoring completion occurred correctly and on time, therefore, allowing for the most reliable data for this study.

**School RTI$^2$ Teams.** In order to ensure that the students' placement happened appropriately into the correct tier, a school RTI$^2$ team was essential. The team consists of the classroom teachers, the school psychologist, school administrators, and the instructional coach. The guidance counselor, speech pathologist, and special education teacher(s) may also be included when applicable. The primary goal of this team is to ensure the success of all students through high quality interventions and instruction. The main responsibility of this team is to communicate a shared vision and responsibility to promote and establish the leadership roles necessary to provide protocols for the efficient implementation of RTI$^2$ at the school level (Tennessee Department of Education, 2013). As previously stated, the school RTI$^2$ team meets after each universal screening, which is

in the fall, winter, and spring. To place students into the appropriate tiers the RTI$^2$ teams used data. The data arrangement was in percentile rankings. The team also meets at least once every four and a half to five weeks to develop a school level plan and examine progress; the next steps will be determined based upon the progress examined during the data chat.

Having a school RTI$^2$ team is critical to ensure success among all of the students. "The culture of collaboration at the school level requires an understanding that multiple staff members must share responsibility for ensuring that all students are receiving appropriate instruction" (Tennessee Department of Education, 2013, p. 20). Tier I students receive their instruction from their classroom teacher, but that may not be the case for Tier II and Tier III students. Therefore, it is imperative that everyone shares the responsibility of student achievement. Therefore, the collaboration of the school RTI$^2$ team is essential, and occurrence must happen within an environment that puts students' needs first.

**Fidelity of Implementation.** Having fidelity within RTI$^2$ is an important aspect within the framework. This looks different depending upon tier placement. "Fidelity monitoring is the systematic monitoring by a responsible instructional leader (e.g., principal, instructional coach) to determine the extent to which the delivery of instruction or an intervention adheres to the protocols or program models originally developed" (Tennessee Department of Education, 2013, p. 109). This is not part of a formal evaluation, but is important in determining the fidelity of Tier I instruction. The monitoring has to occur at least once per marking period and documentation has to

happen by the person who did the fidelity monitoring. Therefore, fidelity monitoring is an important aspect within Tier I in order to ensure that instruction happened effectively and consistently.

The school studied during this research monitored for fidelity once per semester minimally and weekly maximally. The school's principal, assistant principal, or academic coach did the monitoring. The monitoring followed the guidelines set forth by the Tennessee Department of Education. The first guideline is the reviewing of lesson plans weekly, to ensure the following of the scope and sequence. Secondly, they are looking to see if the teacher is following the schedule that he or she submitted to the administrator. Lastly, the principal or academic coach monitors to see if the teacher is posting the daily target and does it align to the Common Core State Standards.

Tier II instruction also must have fidelity in order to monitor achievement and progress. According to the Tennessee Department of Education (2013), a process for monitoring fidelity must be in place along with having a person who is responsible for the monitoring. Each student within Tier II must have a fidelity check at least three times during each data cycle. Daily student attendance tracking occurred throughout Tier placement. The fidelity checks should be unannounced and occur while interventions were taking place. The reason for individuality of student monitoring happened to ensure that each student received the interventions as prescribed. These interventions must have implementation with integrity and if this does not happen at least 80 percent of the time, then the interventionist should be supported with training until the 80 percent is reached (Tennessee Department of Education, 2013).

The school studied followed these guidelines precisely. The teachers had to submit lesson plans weekly to the building administrator in order to review effectiveness. The administration of observations occurred consistently while interventions took place. The administrator, school psychologist, and leaders reviewed progress monitoring at least once every five weeks to ensure that the students' placement within the correct tier and intervention happened. The academic coach and school administrators conducted the fidelity monitoring in Tier II.

Fidelity monitoring within Tier III is as equally important as the other two tiers. Tier III fidelity monitoring must have a system in place to monitor each student based upon the intervention specific to each student by using reliable and valid measures. Student attendance was monitored throughout Tier III, and was used when determining any further actions required for tier placement or special education referrals. The fidelity of implementation per intervention was assessed throughout the process, with the minimum requirement for Tier III being four times per data cycle. The interventionist must have ongoing documentation of the interventions used, progress monitoring results, student attendance, and evidence of implementation at 80 percent of greater at all times. To track fidelity a generic checklist and unannounced observations became a requirement within this tier.

The sample school adhered to the guidelines mentioned above with fidelity. The schools' administrators and academic coach monitored fidelity using a checklist and unannounced observations. Therefore, adhering to fidelity was an integral part within the tiers throughout the field study, and was done routinely and accurately.

**Research Based Interventions.** Interventions within RTI$^2$ are an imperative component of the framework. General education teachers, special education teachers, speech pathologists, academic coaches, and administrators are responsible to ensure that all students are receiving research-based interventions. Van Sickle (2014) stated:

> If a student is placed in Tiers II or III, it may be due to a gap in instruction; therefore, it is important that teachers are using research-based instruction not only in Tier I instruction for all classroom students, but also in the more intense interventions that occur in Tiers II and III. (p. 18)

The effectiveness of RTI is dependent upon the use of research-based practices within the classroom. Therefore, it is critical that teachers use research-based strategies in order to help close the gap of struggling students due to the class of ineffective teaching. Using research based strategies and interventions help close the gaps for the struggling students. However, this may not be the case for individuals with a learning disability, so they would require special education services. Having research-based interventions used during instruction within all tiers helped to eliminate ineffective teaching as a cause for a students' low performance. Therefore, students can begin receiving the assistance that they need. Therefore, it is imperative that teachers use research-based instruction within all tiers and with fidelity.

**Highly trained personnel.** Having highly trained personnel within a school building is an essential component within RTI$^2$. According to the Tennessee Department of Education (2013), "Highly trained personnel will provide interventions. Highly trained personnel are those who are adequately trained to deliver the selected intervention

as intended with fidelity" (p. 12). The school studied in this research had general education teachers, administrators, special education teachers, guidance counselors, a school psychologist, speech pathologists, a behavior specialist, and an academic coach who were highly trained. Students receiving remediation interventions were struggling in Reading; therefore, it was imperative that these students received quality instruction from personnel whom were highly trained.

Student achievement is dependent upon having highly trained personnel within schools. The highly trained personnel within this study followed the guidelines and specification required to be considered highly qualified, which was a determination for the use of this school. Van Sickle (2014) stated:

> Students receive interventions, in the case of remediation, because of a lack of mastery of a skill. This lack of mastery may be due to several factors, one of them being a gap in instruction. It is even more crucial that students in Tier II and Tier III interventions for remediation are taught by teachers highly trained in reading. (p. 19)

Therefore, it becomes imperative that individuals who are highly qualified and trained in the delivery of interventions and instruction. Providing students with research-based interventions from highly trained personnel allows for growth in reading. The Tennessee Department of Education (2013) stated:

> On the elementary level, the focus of English/Language Arts CCSS instruction and intervention includes the foundational skills of reading; speaking and

> listening; literature; informational texts; writing; and language while developing the erudition of history, social studies, and science. (p. 15)

Therefore, all interventions and instruction are required to be planned and implemented to meet the needs of each individual student within Tier I, Tier II, and Tier III (Tennessee Department of Education, 2013).

**Parent Contact/Communication.** Communication with parents/guardians is of utmost importance in order to gain the support and understanding necessary for the successfulness of RTI$^2$. "The more parents understand concerning their children's education, the more likely they will be to cooperate and participate in assisting their children at home and encouraging their children to do their best at school, day-to-day" (Tennessee Department of Education, 2013, p. 59). Communication with parents is a necessity; the following are items that are necessary for clear, precise, and proper parent communication. First, a culture focusing on student achievement should include educators, families, and communities. Next, regular parent communication in a similar pattern should occur with parents. The letters are short and easy to understand, and they do not use acronyms not understood by both parties, which is another important aspect for proper parent communication. Teachers should provide all written documentation sent home in the native language spoken within the home. As often as possible, speak personally with the parent concerning the child's placement or removal from Tier II or Tier III. Lastly, teachers will keep all of the communication with parents or guardians positive, but still doing everything possible to express the school's concern for their

child(ren) (Tennessee Department of Education, 2013). Therefore, keeping parents in mind and up to date is imperative to ensure student achievement within all three tiers.

**Student Achievement**

The study already elaborated on all of the components necessary for success during RTI$^2$, these are the same components necessary for student achievement. Missing any component has the potential to cause gaps in student achievement. Therefore, it is imperative that all highly trained personnel incorporate all of the components necessary within the RTI$^2$ framework; to include, highly trained personnel, a universal screener, Tier I, Tier II, and Tier III interventions, progress monitoring, school RTI$^2$ teams, fidelity of implementation, research based interventions, and parent contact/communication. Student achievement in this study was measured though the use of TCAP scores.

**TCAP Scores.** The assessment used to assess achievement during this study was the TCAP. This assessment begins in grade three and continues until grade eight, however, this study only focused on fourth grade scores. More specifically, the focus was on Normal Curve Equivalent (NCE) scores. The Education Consumers Foundation (2015) stated:

> A test score reported on a scale that ranges from 1 to 99 with an average of 50. NCE's are approximately equal to percentiles. For example, an NCE of 70 is approximately equal to or greater than 70% of its reference group. Assuming a normally distributed population, plotting the distribution of scores will result in a bell shape commonly known as a bell curve. (para. 10)

Within the NCE is the Tennessee Value-Added Assessment System (TVAAS). According to the Tennessee Department of Education (n.d., March, 2016) "The TVAAS measures the impact schools and teachers have on their students' academic progress. TVAAS measures student growth, not whether the student is proficient on the state assessment" (p.1). Therefore, TVAAS was the best and most reliable data to use in the determination of student achievement for all three tiers, which is why this study selected the use of TVAAS scores for data analysis.

**Gaps in Literature**

Conducting research is an integral part in determining the effectiveness of programs. Before research begins one looks at previous researchers to determine the area needed for research. It was determined that there was very little evidence of how $RTI^2$ affected the student achievement of Tier I students. A large amount of data is evident pertaining to the student achievement within Tier II and Tier III, which will be discussed further within this study, however, a limited amount of data pertained to Tier I instruction and interventions. Van Sickle (2014) stated that "since RTI is fairly new to education, there is not an abundance of research or case studies on the implications of RTI. However, there are some promising research findings to support RTI" (p. 24). Therefore, this study conducted research on the impact Tier I had on students due to the lack of the additional instructional time given to the Tier II and Tier III students.

**Advantages of RTI**

Although RTI is moderately new to Tennessee, there are several advantages of implementation. The first advantage is eliminating the "wait to fail" method previously

used for identification. According to Mellard and Johnston (2008), "for many children it took a couple of years before the discrepancy between normative achievement and IQ became sufficiently substantial, by which time a considerable history of failure and confusion could accumulate" (p. 513). Therefore, the implementation of RTI was crucial for children with learning disabilities because RTI speeds up the process for identification of special education services.

Another advantage of RTI is that it contributes to a school's goal of student improvement. Mellard and Johnson (2008) stated:

> Before any school improvement effort is undertaken, a school must decide what it stands for and what it hopes to achieve. Once articulated, this theory of purpose becomes the yardstick by which schools measure how well the policies they adopt contribute to and support courses of action that work toward supporting their goals. (p. 8)

A school's goal of student achievement frequently happens as a mission statement, which guides all of the activities in which a school engages. "RTI framework can be supportive of mission statements that focus on increasing student learning and instructional improvement," which is crucial for student achievement (Mellard & Johnson, 2008, p. 14).

Within the RTI framework, one uses data to assess the effectiveness of student achievement. The growth of student achievement is built upon the purpose of RTI. Therefore, student achievement is an advantage within the RTI framework. A study by Scholin and Burns (2012) reported that students in grades first through fifth all

showed student achievement through the successful implementation of RTI interventions and instruction. After all, "Effective use of student outcome data is the foundation on which RTI systems are built" (O'Connor & Freeman, 2012, p. 302). Therefore, student achievement caused from the successful implementation of RTI is a huge advantage.

Another advantage found within RTI is the ability to help struggling students. Jenkins, Hudson and Johnson (2007) stated:

> An RTI approach is consistent with research showing that early identification and intervention can reduce subsequent reading failure. Universal screening, the first step in targeting students who struggle to learn when provided a strong evidence-based general education (Tier I) and who require supplemental (Tier II) instruction. (p. 582)

This was the exact focus of the study done by Ehren (2013), which stated "students get what they need, when they need it for as long as they need it'" (p. 451). That is the advantage of RTI, in former research and within this study.

Preventive measures are another advantage within RTI. One preventative measure is the ability to close learning gaps. The closure of learning gaps helps to get students caught up before it is too late. Sack-Min (2009) wrote, "if done well, even some of the students most struggling avoid special education entirely because they get help they need, and those with learning disabilities can be diagnosed and start receiving services more quickly" (p. 38). In the study done by Sack-Min, special education referrals decreased by 300% due to students' individual needs were met through

interventions designed specifically for them. Therefore, RTI is crucial in supporting the success of individual students.

Among the wide variety of research studied within this study, the advantages were abundant. These advantages included the support of the school's mission statement and goals, eliminating the "wait to fail" method, student achievement, helping struggling students, meeting benchmarks, and closing learning gaps. No doubt, more research exists supporting the many advantages within RTI. However, the ones focused upon, were pertinent to the validity of this study.

**Disadvantages of RTI**

Along with advantages typically there are disadvantages, which is the case for RTI. The disadvantages found within the research was lack of funding, the assessments used for identification and progress monitoring, too much power in the hands of administrators, and the lack of research focusing on Tier I instruction. Following, this study delves deeper into the issues found within all of the disadvantages.

The first disadvantage is the lack of funding to support RTI with fidelity. In order to implement RTI successfully you need highly trained personnel, who are capable of providing research based instruction and interventions. This comes at a high cost for anyone that begins implementing RTI. Johnston (2011) stated:

> Because improving the quality of instruction and adding high-quality interventions require resources, the crafters of the 2004 reauthorization of IDEA allowed up to 15% of the special education budget to be used for this purpose. On the one hand, then, the logic for RTI is based in regular education: before you

> classify a child as disabled, ensure the problem is not an instructional one. On the other hand, the RTI funding stream, intended to reduce the need for special education, is in the special education budget. If states and schools productively and aggressively take up the RTI option, it will reduce the funding and the need for special education teachers. (p. 515)

Therefore, according to the reauthorization act the funding should eventually work itself out, but that does not help get the initial implementation of RTI.

Another problem pertaining to budget is how teachers have to change the way that they teach. In order to do this, schools and districts provide professional development on teaching styles, which is very costly. However, according to Johnson, "teacher expertise is the most important fact in improving children's learning, and children experiencing the most difficulty should have the most expert teachers" (2008, p. 520). Even though teaching was found to be valuable within the classroom, the ability to teach research-based instruction and interventions is a new concept and not always successful. Wanzek & Vaughn (2008) argue that:

> Students whose response to interventions has been relatively low are likely to require very intensive and ongoing interventions over time, and their response to these interventions is likely to be slow, …[these students] may need different instruction than other at risk readers" (p. 138).

Therefore, the research of interventions is never ending and very costly.

Another problem within RTI are the assessments used for identification of tier placement, and the progress monitoring methods used. IDEA requires a committee to

evaluate a student for possible SLD to consider "data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction" (Johnston, 2008, p. 522). This means that the "monitoring needs to determine whether a child is responding to instruction, and whether instruction is responding appropriately to the child" (Johnston, 2008, p. 522). It is imperative that all components within assessments are researched based before the implementation and purchase of the program begins.

Initially, student identification for tier placement uses a universal screener, which is another disadvantage within RTI. Using one assessment to identify students can lead to a false positive, which is "individuals who fail the screen but pass the later criterion measure" (Jenkins, Hudson, & Johnson, 2007, p. 584). So, using one universal screener can lead to false identifying students for tier placement. Therefore, according to Van Sickle (2014), "with so much instructional time at stake for students, and with limited spots for interventions, it is important that the school RTI team has a true picture of students' abilities and deficits" (p. 28).

A universal screener has the ability to determine if a student is below, on, or above grade level. However, it does not have the ability to specifically pinpoint the deficit of each individual student. "A perfect screen would distinguish every student who needs intervention from every student who doesn't, but the perfect screen doesn't exist" (Jenkins, Hudson, & Johnson, 2007, p. 583). Therefore, a universal screener has the ability to determine students who struggle in reading and students who excel in reading, but it may not pinpoint the specific interventions best suited for each individual student.

Therefore, since assessments and universal screeners are required one needs to consider which ones are going to be used within RTI.

Choosing an assessment leads to the next disadvantage; too much power in the hands of building principals and districts. IDEIA clearly stated that RTI implementation is a requirement. However, principals interpret the way implementation happens in a variety of ways, and can be faithful to the original policy intended or can breakdown the original policy intentions (Printy & Williams, 2014). According to Hargreaves, Lieberman, & Fullan, (as cited in Printy & Williams, 2014) "Research has shown that principals generally add intervention rather than addressing issues with core instruction" (p. 183). Therefore, it is imperative to mainstream the exact expectations within RTI, to eliminate gaps happening from building to building or district to district.

Another aspect of principals and districts having too much power pertains to RTI implementation and success. According to O'Connor and Freeman (2012), "staff from any school system engaged in RTI implementation will find a large majority of staff who report that leadership (or lack thereof) has been a substantial influence to success or failure of their implementation efforts" (p. 299). They go on to say that throughout their research they surveyed over 700 school staff members from multiple schools pertaining to leadership playing an active role by showing commitment for school improvement actions. Among those surveyed only 11% strongly agree, and 50% disagreed or strongly disagreed. Clearly, this is a huge disadvantage within the RTI process and makes the success of RTI questionable.

An additional disadvantage is that there is a lack of research on Tier I student achievement. Considering that the 80 percent of students fall within Tier I, research on the effectiveness within Tier I is crucial for the successful implementation of RTI. Jones, Yssel, and Grant (2012) stated:

> Many general education teachers who have read about Response to Intervention (RTI) and attended professional development sessions targeted at disseminating information on implementation ideas such as progress monitoring (PM) and evidence-based practices want to implement the strategies they learn. When interested practitioners return to their classrooms, however, they are often faced with a wide variety of materials, strategies, and assessment options that are difficult to sort out and may or may not fit into the RTI concept in general. (p. 210)

This same thing happens with Tier I instruction, because the teacher is responsible to provide quality instruction for everyone, which is a difficult thing to research. However, "researchers have begun to address the importance of empirical studies designed to evaluate the effectiveness of Tier I core instruction and class interventions that may be effective" (Jones, Yssel, & Grant, 2012, p. 211). Jones, Yssel, and Grant (2012) also stated that the completion on embedding evidence-based intervention models at the Tier I level needed to be completed. Therefore, the lack of research within Tier I was the basis for this field study.

# CHAPTER III

# METHODOLOGY

## Introduction

The purpose of this field study was to analyze the impact on Tier I student achievement based on the implementation of RTI$^2$. It focused on the lack of the additional 30-minute instructional time given to Tier I students, compared to the additional 30-minute instructional time given to Tier II and Tier III students. The students receiving Tier I instruction went to special area teachers during RTI time and were able to do a variety of lessons about either art, music, counseling, physical education, or library skills. The Tier II and Tier III students were receiving interventions tailored to their specific needs by highly trained classroom teachers during that 30-minute time. Therefore, the need arose to analyze the effect this was having on Tier I student achievement.

## Research Design

The sample for this study consisted of fourth grade students within one elementary school in a Middle Tennessee Metropolitan School District that followed the RTI$^2$ framework mandated by the state of Tennessee. During the 2014-2015 school year, the school had 96 fourth grade students; however, 13 of those students did not have the data needed to be included within this study. Therefore, the study participants decreased to 83 students within the fourth grade. Among the 83 participants, 40 were females. All students were recruited based upon the school chosen and being in the fourth grade. Another requirement for qualification was that the students had to attend the same school

during the 2013-2014 school year. This was important because the baseline achievement score was needed in order to determine growth among the participants. A further breakdown of demographics for the participants is listed in Table 1.

Table 1

*Tier Frequencies for Male and Female Students in Tier I and Tier II*

| Participant Ethnicity | Frequency | Percentage |
|---|---|---|
| Tier I Students | | |
| Male | 35 | 42.17 |
| Female | 33 | 39.76 |
| Tier II Students | | |
| Male | 6 | 7.23 |
| Female | 9 | 10.84 |
| Total | 83.0 | 100.0 |

**Instruments**

The independent variables within this study was RTI Tier I and Tier II and gender. The dependent variable was student growth scores for the 2015 school year. The levels within the independent variable were gender, and Tier I, Tier II, and Tier III placement. Scores between males and females were studied within this study to determine if there was a difference among males and females in relationship to RTI and student growth. Ethnicity was also a level within this study because it is important to rule out that ethnicity played a factor among the results. However, the district was unable to