

**The Effectiveness of Afterschool Programs on Student Achievement  
in a Title I School District at Grades 3, 4, and 5**

Aron C. Attebery

B.A., University of St. Mary, 1999

M.S., Pittsburg State University, 2004

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*Wendy A. Gentry*

Wendy A. Gentry, Ph.D.  
Major Advisor

*Regena M. Aye*

Regena M. Aye, Ed.D.

*Lana Gerber*

Lana Gerber, Ed.D.

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## **Abstract**

The purpose of this study was to examine the impact of afterschool programs on students' achievement in grades 3, 4, and 5 in a Title I school district. Specifically, this study aimed to examine whether students who receive afterschool support in reading and math benefited academically on the Northwest Evaluation Association Measures of Academic Progress (NWEA MAP) assessments. This study was designed to analyze scores to see if there is a difference on NWEA MAP assessments among students who received afterschool support in reading and math. The participants for this study were third-, fourth-, and fifth-grade students enrolled in an afterschool program for the 2016–2017, 2017–2018, and 2018–2019 school years. The results showed that implementing afterschool programs for students impacted NWEA MAP assessment scores. The mean change in Rasch Unit (RIT) scores on the NWEA MAP reading and math assessments for 2016–2017 increased by 16.04 and 17.10, respectively, from fall to spring. The mean change in RIT scores on the NWEA MAP reading and math assessments for 2017–2018 increased by 12.36 and 14.12, respectively, from fall to spring. The mean change in RIT scores on the NWEA MAP reading and math assessments for 2018–2019 increased by 13.91 and 11.58, respectively, from fall to spring.

## **Dedication**

*We all have dreams. But in order to make dreams come into reality, it takes an awful lot of determination, dedication, self-discipline, and effort.*

– Jessie Owens

I dedicate my dissertation work to my family, friends, colleagues, and students. I will always appreciate those who have supported me throughout the process. I dedicate my work to KC Cool Kids most of all. I will always appreciate and remember all they did, especially when I wanted to give up. A special thanks to Ben, Emily, Audrey, and Jack Attebery. My four children were why I wanted to complete this dissertation and prove that challenging work, dedication, and perseverance pay off.

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## **Chapter 1**

### **Introduction**

Students across the United States participate in afterschool programs to support academics. While homework assistance can be part of the agenda, focusing on a specific skill such as math and reading may connect knowledge differently (American Federation of Teachers, 2014). Following a brief historical overview of education in America, this section includes the statement of the problem, the purpose of this study, its significance, and all research questions listed. Finally, this chapter concludes with definitions of terms used throughout the study, followed by the organization of the study.

### **Background**

Since the early 1900s, education has been a major political debate and legislation topic. Major legislative and educational reform changes have occurred in the last 20 years. The No Child Left Behind (NCLB) Act of 2001 was intended to make landmark educational changes; it was designed to improve achievement and change the culture of American schools (US Department of Education, 2005). As part of the NCLB act, students are assessed in English language arts and mathematics each year.

On December 10, 2015, President Obama reauthorized the Every Student Succeeds Act (ESSA). The United States Department of Education stated that this law builds on key areas of progress made possible by the efforts of educators, communities, parents, and students across the country. ESSA replaced the Elementary and Secondary Education Act (ESEA), the NCLB Act enacted in 2002.

Title I grant provides federal funding to schools that have high poverty levels. Its primary purpose is to ensure that all children receive a high-quality education (US

Department of Education, 2018). Schools must have a child poverty rate of at least 60% to operate a school-wide Title I program. A school-wide Title I program can benefit all students and is not just limited to students considered economically disadvantaged. The funding is meant to help students at risk of falling behind academically. The funding provides supplemental instruction for economically disadvantaged students or at risk of not meeting state standards. Students are expected to show academic growth faster with the support of Title I instruction. The Title I program originated as the Elementary and Secondary Act of 1965.

In Kansas City, Kansas, Wyandotte County, the Title I school district consists of four elementary schools, one middle school, a sixth-grade academy, one high school, and one school of choice that serves a diverse population. There are approximately 4,000 students enrolled, which meets the qualifications to be designated as a Title I district; thus, it receives federal funds to support economically disadvantaged students.

District leaders noticed the need for academic support after implementing the Northwest Evaluation Association's Measurement of Academic Progress (NWEA MAP) assessment for students. Therefore, they began to examine instructional program applications to help educators close the achievement gap by meeting the needs of students struggling with math and reading. Currently, the district has licenses for applications focusing on reading and math. These digital programs support the curriculum in the classroom or at home. The rigorous and interactive lessons adapt to each student, providing personalized learning. They are comprehensive e-learning programs that assess students with a computer-adaptive assessment. Based on their results, learners are placed under interactive online instructions. Struggling students are

routed through reteaching lessons, and teachers are given instant reports to monitor student progress.

In addition to offering academic support to students during the school day, leaders implemented an afterschool program. This program, titled BOOST, was developed for students in grades 3 to 5; they receive an additional one hour of targeted instructions three days per week. At the beginning of the program, students received small group instructions. The district adopted a one-to-one technology initiative; as of 2016, students were using online support applications. The school district has not yet formally evaluated the impact of afterschool programs on student achievement. Therefore, the NWEA MAP data has not been collected and analyzed as an entire district.

The NWEA MAP assessment is administered in the fall and spring. Students are put into tiers based on levels of need. Student growth norms and normative data are analyzed to compare achievement status and changes in achievement status (growth) due to students' performance in the same grade at a comparable stage of the school year (Northwest Evaluation Association, 2016). The measurement of student growth comes from the fall and spring NWEA MAP assessments.

### **Statement of the Problem**

With the rise in educational accountability, continuous quest to close the achievement gap, and high demand for teachers to increase student growth in core subject areas, there has been an increasing need for student academic interventions (Darling-Hammond, 2014).

Yaffe (2010) cited the need for more data and information regarding afterschool programs by indicating that studies of traditional supplementary educational services

after school positively affected student learning for only 4.4% of students. Yaffe (2010) said that in educational and fiscal responsibility, programs should use reliable data, thorough documentation, and acceptable methodology so that schools can determine which programs work and which do not. Research conducted in another study in Middle-Level Education (RMLE) showed some gain in students who received afterschool support from district teachers compared to those not receiving support (Rothman & Henderson, 2011).

Heinrich et al. (2010) found no significant changes in district assessments' student achievement scores for students enrolled in afterschool programs. The researchers used math and reading test score data for multiple school years. Munoz and Ross (2009) looked at test scores on math and reading assessments for about 2,500 students in grades 3 to 8. Examining test scores on state-mandated assessments in math and reading, they found no significant differences between afterschool program attendees and those students not in attendance. Ross et al. (2009) examined the relationship between attendance and student achievement in afterschool programs using a value-added methodology to control student ability and teacher effects in two different models. They included only students who completed over 50 percent of their contracted hours in an afterschool program and matched them to students with similar predicted achievement scores. The researchers found no significant improvement in reading assessments among roughly 350 students receiving afterschool classes.

Title 1 school in Kansas explores opportunities to close the achievement gap in math and reading. Schools use baseline data from the NWEA MAP assessment to identify and respond to student needs through intervention. Students who score below the

20th percentile on fall NWEA MAP, which is low, are eligible for afterschool programs. School district leaders have not yet evaluated the impact of afterschool programs on overall student achievement on assessments. Therefore, the NWEA MAP assessment data has not been collected and analyzed. There is a need to examine whether implementing afterschool programs was beneficial to increasing student achievement in reading and math.

### **Purpose of the Study**

The purpose of this study was to examine the impact of afterschool programs on students' achievement in grades 3, 4, and 5 in a Title I school district in Kansas. Specifically, the purpose of this study was to examine whether students who receive afterschool support in reading and math benefited academically on the NWEA MAP assessments. This study was designed to analyze scores for a difference in student growth on NWEA MAP among students who received added support in reading and math in an afterschool program. This research project collected and analyzed data from 2016–2017, 2017–2018, and 2018–2019 NWEA MAP assessment scores from fall to spring.

### **Significance of the Study**

Schools are expected to increase student achievement throughout the year. Hopefully, this study would guide school administrators and districts to interpret achievement scores and understand the benefits of an afterschool program. The afterschool program in this study focused on students in grades third through fifth. Student success is measured using the NWEA MAP assessment in reading and math.

It is important to understand that The No Child Left Behind Act of 2001 determined that each state must measure the success of a ' 'student's progress in reading

and math. Schools are expected to put programs in place that increase student achievement. These findings would benefit district stakeholders as they decide on using federal funds under Title I.

Policymakers, state education officials, school administrators, teachers, and researchers in the field of education would benefit from the findings of this study. This study on the effects of afterschool programs would inform schools in Title I settings to implement a district-wide afterschool program.

This study would also help parents and students understand the benefits of attending afterschool programs focusing on reading and math achievement.

### **Delimitations**

According to Lunenburg and Irby (2008), "Delimitations are self-imposed boundaries set by the researcher on the purpose and scope of the study" (p. 134). The following delimitations were defined:

1. Reading and mathematics data were collected and analyzed during 2016–2017, 2017–2018, and 2018–2019 since it was the most current data.
2. The population was limited to students in Title 1 schools in Kansas enrolled in the third, fourth, and fifth grades.
3. The reading and math assessment scores for fall and spring were the only scores used, showing a school year's growth rate.
4. Participants in this study were enrolled in an afterschool program for both the fall and spring semesters in Title I school district in Kansas.

## **Assumptions**

Lunenburg and Irby (2008) defined assumptions as the parameters around which the study was conducted, including the “nature, analysis, and interpretation of the data” (p. 135). According to Roberts (2004), assumptions are the items taken for granted in the study. The following assumptions were made while conducting this research study:

1. The NWEA MAP data accurately and reliably measured student achievement.
2. General education teachers adhered to all protocols and rules for administering the NWEA MAP assessment for reading and math.
3. All data compiled by Title 1 schools in Kansas are accurate.
4. Teachers used consistent and aligned curriculum resources in all classrooms.
5. Student attendance was proficient.
6. The data collected and analyzed were entered accurately.

## **Research Questions**

The following research questions were addressed to examine the effect of afterschool on students' NWEA MAP reading and math assessment scores.

**RQ1.** To what extent is a change in scores from fall 2016 to spring 2017 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment?

**RQ2.** To what extent is there a change in scores from fall 2016 to spring 2017 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment?

**RQ3.** To what extent is there a change in scores from fall 2017 to spring 2018 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment?

**RQ4.** To what extent is there a change in scores from fall 2017 to spring 2018 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment?

**RQ5.** To what extent is there a change in scores from fall 2018 to spring 2019 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment?

**RQ6.** To what extent is there a change in scores from fall 2018 to spring 2019 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment?

### **Definition of Terms**

**Northwest Evaluation Association (NWEA).** NWEA is a research-based not-for-profit organization that supports students and educators worldwide by creating assessment solutions that measure growth and proficiency—and provides insights to help tailor instruction. For 40 years, NWEA has developed K-12 assessments and professional learning offerings to help advance all students along their optimal learning paths. Educators trust their tools in more than 9,500 schools, districts, and education agencies in 145 countries. (<https://teach.mapnwea.org/admin/home.seam>)

**Measures of Academic Progress (MAP).** A state-aligned computerized adaptive assessment program measures student achievement in kindergarten through twelfth grade.



Data collected is used to develop targeted instructional strategies and plan school improvement (Northwest Evaluation Association, 2016).

**NWEA MAP Test (Measures of Academic Progress).** The NWEA MAP is published by NWEA and is given to children in grades K-12 via computers. Its cross-grade structure measures students who perform above and below grade level. It follows a multiple-choice pattern and provides questions that are depth of knowledge. The test is untimed, but students spend about 60 minutes per subject area. The test is given to students at the beginning, middle, and end of the school year to measure their academic achievement and growth (NWEA MAP 2019).

**Rasch Unit Scale (RIT).** The Rasch unit scale (RIT) measures and compares academic growth. Specifically, the scale measures levels of academic difficulty. The RIT scale extends equally across all grades, making it possible to compare students' scores throughout their education (Northwest Evaluation Association, 2020).

**Response to Intervention (RTI).** Response to intervention (RTI) is a systematic approach to teaching and learning that includes intervention, monitoring student progress, and using data to make instructional decisions.

**Socioeconomic Status (SES).** Socioeconomic status (SES) encompasses not just income but also educational attainment, financial security, and subjective perceptions of social status and social class. Socioeconomic status can encompass quality of life attributes and the opportunities and privileges afforded to people within society (American Psychology Association, 2016).

**Title I.** Title one of the Elementary and Secondary Act is a federally funded program that provides supplemental support to high-poverty schools. Title I aims to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic standards (Kansas State Department of Education, 2020).

### **Organization of Study**

The first chapter of this study includes background information about the school district where this study was completed. The statement of problem, purpose, significance, delimitations, and assumptions are identified. Additionally, the research questions that guided the study are presented. Chapter 2 includes a literature review regarding the history of education, curriculum, state and federal policies, testing, and tiered framework. In Chapter 3, the study's methodology includes the research design, selection of participants, measurement, data collection procedures, and hypothesis testing. Chapter 4 contains the results of the data analysis. A summary of the study, findings related to the current literature, and a conclusion that includes implications for action and recommendations for future research are included in Chapter 5.

## **Chapter 2**

### **Review of Literature**

#### **Introduction**

The research involved in afterschool programs has been discussed and analyzed in the past decade with considerable focus on improving student outcomes, assessing students, participation in programming, designing instruction via curriculum focus, and overall effectiveness. The main purpose of this review is to outline the key pieces of afterschool programs that impact learning outcomes. The design of instruction and learning activities makes the learning process take place. Instruction is a systematic process in which every complement of design is crucial to success (Dick & Carey, 1996). In the instructional design process, there is so much to consider.

Instructional design and performance research is discussed throughout the literature review. Using a high-quality, focused curriculum is a best practice, and when students are assessed, will reinforce instruction in afterschool programs. Scheduling students in an afterschool program will increase participation, resulting in greater learning gains. Scheduling students in an afterschool program will increase participation, resulting in greater learning gains. The delivery mode designed and implemented in an afterschool program will focus on performance and effectiveness.

Every day, millions of students wake up and report to school. These students come from all backgrounds and have various experiences and readiness levels. It is up to our teachers to meet them, teach them, and promote them. When we think of teachers as having different personalities and ways of teaching and combining this with all students' learning characteristics, there are multiple combinations of the elements of teaching and

learning. Educating students through a sequence of educational programs, planned activities, and viable curriculums, beginning in preschool, is increasingly becoming a critical issue in the United States.

School systems have been tasked with instructing students and holding educators accountable for their success or lack of. Schools have developed a process for tracking student achievement with standardized tests. This information provides a baseline for academic readiness and outlines the trajectory of student outcomes. Schools use this information to meet student needs and initiate afterschool programs.

Afterschool programs have been around for many years. Specifically, afterschool programs focusing on gaps in academic achievement are increasing as we see the need for direct support for some of our most struggling learners. Achievement in math and reading continues to be a focus as we bridge the gaps in education.

Afterschool programs that focus on building success in reading and math support closing the achievement gap in education. Literature and research provide more information on programs that resulted in significant gains in curricular areas for elementary students. The benefits go beyond academics and may be shown to improve attendance, decision-making skills, and even behaviors.

Prior research related to afterschool programs has given considerable focus to improving student outcomes, assessing students, participation in programming, designing instruction via curriculum focus, and overall effectiveness. The main purpose of this review is to outline the key pieces of afterschool programs that impact learning outcomes and introduce the conceptual framework for the study. This chapter includes an overview of afterschool programs and the curriculum for present-day intervention. The writing and

research of present-day educators and their contributions to education are included in other review areas. Different viewpoints on government policies and lawmakers also impact our American education system. Furthermore, a brief discussion on the Northwest Evaluation Association Measures of Academic Progress (NWEA MAP) assessment is shared.

### **Afterschool Programs**

Afterschool programs offer academic augmentation for opportunities to decrease the achievement gap found in schools (Esquivel, 2020; Kremer et al., 2015). Afterschool programs have become a resource and partner for public schools (Sanders et al., 2019). Despite many challenges facing children living in low-income urban environments, afterschool programs have demonstrated an ability to contribute to youth academic ability, effort, and achievement (Mahoney et al., 2005).

The leaders and administrators of afterschool programs have the unique challenge of making decisions that influence students' academic choices and incorporate innovations necessary to impact educational challenges. Several researchers have examined the distribution of school resources within school districts and student needs as lamentable compared to between-district allocation (Burke, 1999; Roza & Hill, 2004). Since the 1990s, afterschool programs for children and youth have increased significantly throughout the United States. The U.S. Department of Education reported that more than 10 million K-12 students participate in programs (Afterschool Alliance, 2014). The need to improve low-achieving students' reading skills has been the focus and concern of educators for many years (Voyer & Voyer, 2014).

Afterschool programs can affect and provide resources that enhance certain groups of students (Holstead & King, 2011). Afterschool programs have shown to be needed to support students academically and socially. They should be engaging students and building on their academic skills. Children's cognitive abilities play a significant role in developing academic and literacy skills that are critical in developing children, especially in academic enrichment after afterschool programs (McCombs et al., 2017).

Lauer et al. (2006) examined 35 afterschool programs; they reviewed the effectiveness of school districts and public schools incorporating afterschool programming to impact the academic success of urban students demonstrating poor regular classroom performance. The overall results indicated significant effects on the academic achievement of youth in the subject areas of mathematics and reading. Overall, greater educational gains occurred in afterschool programs with these elements included, such as academic coaching or reading comprehension.

### **Improving Student Outcomes**

Improving students' academic outcomes is one of the primary goals of any afterschool program. "Afterschool programs can improve student outcomes and impact academic performances in a number of ways, including moving the needle on academic achievement test scores" (Family Research Project, 2008, p. 2). Attendance in programs could be one of the biggest factors of success. Roth et al. (2010) believe that students participating in supervised activities will eventually increase their achievements.

After school, students attend programs to socialize with peers, learn academic concepts, and support homework. Students active in attendance and engagement experience positive outcomes socially, emotionally, behaviorally, and academically.

According to Fredricks et al. (2010), students who participate in community programs after school will see positive outcomes in development, obtain higher academic success, and show motivation to learn and social and emotional health.

In studies conducted regarding attendance in programs, students attending afterschool programs from 45–85 hours (about three and a half days) had a tremendous impact on educational gains in reading and mathematics. Attendance is necessary for student success. "Spending time in afterschool programs has improved students' graduation rates" (Hall et al., 2010, p.16). Students receive constant and consistent feedback from teachers regarding reading and math concepts in an afterschool educational setting. In most cases, students do not have a wait time as in a traditional setting. Lessons have proven effective academic growth when students are placed in small skill-based groups. Researchers reviewed the effectiveness of school districts and public schools incorporating afterschool programs that impacted the academic success of urban students demonstrating poor regular classroom performance. The overall results indicated significant effects on the academic achievement of youth in the subject areas of mathematics and ELA (Lauer et al., 2006). Overall, greater educational gains occurred in afterschool programs when elements included, such as academic coaching or reading comprehension.

### **Responsibility in Education**

Educating young minds and preparing them for the future is fundamental to the role of educators. Education aims to prepare children to be better future citizens (Jenlink, 2009). Educators are increasingly responsible for teaching students in a continually changing world. Jenlink and Townes (2009) stated, "As our public schools become more

and more culturally diverse, and our classroom teachers become more and more homogenized, attention to multicultural education becomes pressing" (p. 49). School buildings' socioeconomic and cultural makeup is always in flux, and educators must find the means to meet their needs.

### **Assessment**

Today's schools are rewarded or punished for their success on statewide assessments. Jardin (2005) indicated that examinations became valuable for gathering information and knowledge about individuals. Foucault saw examinations as tools of disciplinary power (Jardin, 2005). He summed up his description of the effects of examinations as:

Since all students take mandatory high-stakes tests, ranking has become an essential tool for policymakers. Ranking schools from highest to lowest has become a major tool to eliminate, marginalize, or devalue those abilities that will not support society's predominant knowledge and power (Jardin, 2005). Many school districts are deemed 'failing' premised on mandated testing results in current schooling. Consequently, failing school districts must make significant changes or implement improvement plans. In some states, policymakers take over school districts and merge them with more successful districts (Jardin, 2005).

### **Curriculum Focus**

In the last several decades, the curricular focus for afterschool programs has been on two core subjects: math and reading. Of course, reading impacts every subject, while mathematical concepts and skills can be found from an application standpoint in most curriculums. A goal for a literacy-focused afterschool program is the following: "Improve



student ability to read and comprehend the school-selected social studies curriculum and textbooks" (Saddler & Staulters, 2008, p. 204). The focus on state assessments provides an additional reason for math and reading during afterschool. Since the inception of NCLB, much of the research has focused on reading, mathematics, and state assessments (Ascher, 2006). High-stakes testing is essentially a reality for all public schools. The focus on afterschool and making annual yearly progress (AYP) has resulted in a "narrowed educational agenda into students' out-of-school hours" (Ascher, 2006, p. 204). There is an argument for making AYP and high-stakes testing dictate afterschool curriculum focus; however, reading and mathematics are two foundational subjects that impact all other core academic subjects.

### **Program Participation**

Research examining the effect of participation in afterschool programs found that the more consistent students' participation is, the greater the gains in their math and reading achievement (Pierce et al., 2013). The higher the levels of participation in afterschool among low-income students, the smaller the achievement gap is between them and their high-income peers. A 2006 meta-analysis of afterschool program studies conducted by Mid-continent Research for Education and Learning (McREL) found that afterschool programs had positive and significant effects among students at risk of failure in reading or math. Researchers found positive results in reading achievement in elementary grades (Lauer et al., 2006).

Vandell et al. (2007) evaluated afterschool programs serving 3,000 low-income elementary and school students. They found that low-income youth's regular participation

in high-quality afterschool programs resulted in significant gains in test scores and work habits and reduced behavioral problems.

### **Conceptual Framework**

The conceptual framework for this study is grounded in the Response to Intervention (RTI) framework. RTI is a systematic approach to teaching and learning that includes intervention, monitoring student progress, and using data to make instructional decisions (Johnson et al., 2006) to ensure that instruction is delivered the way it was intended or designed (Gresham et al., 2000). The need for data driven instruction is well documented (CEC, 2007). Administrators, teachers, and intervention teams use performance data to inform instructional decisions, including implementing the RTI model (Bianco, 2010). An RTI framework that integrates instructional design, instructional strategies, and purposeful technologies can offer support for all students (Basham et al. 2010) and “meet the challenges of increasing diversity in student populations and the need for increasingly complex systems of instructional design” (Kozleski & Huber, 2010, p. 258). The RTI framework has been used to address achievement gaps in both reading and math (McNeil, 2015; Spangenberg & p, 2020), which serves as the focus for this study, as well as research and practice in the universal design for learning and technology (Basham et al., 2010). 2010).

Students who struggle academically may not need additional support from same-aged peers but more time to learn the content. There is not always enough time to provide additional support during the academic school day, so afterschool programs should be considered for students who need reading and math support.

The conceptual framework of RTI can be based on Gagné's (1985) learning conditions. Gagné et al. (1988) suggest external and internal learning conditions through five basic assumptions for instructional design. These assumptions show that learning individual tasks is a foundation for instruction and individualized learning. For the framework of RTI to work, educators must know each student receiving support in a program to tailor academic instruction to the student.

There are many available definitions of RTI. However, all definitions consistently include the critical elements of screening, intervention, and progress monitoring (Russell Newman-Gonchar, 2011).

This approach became increasingly criticized due to over-identification or misidentification of students with disabilities, absence of instructional relevancy for teachers, lack of preventative efforts, and lack of consistency (Berkeley et al., 2009). The reauthorization of Individuals with Disabilities Education Improvement Act (IDEA) encouraged the implementation of RTI, and states began exploring the RTI framework (IDEA Act, 2004). From the earliest implementation period, educators realized that RTI benefited students with potential learning disabilities, but it also helped ensure appropriate and differentiated instruction for all students (Berkeley et al., 2009). This expanded the responsibility for student growth to a broader education team, including the special education teacher, general education teacher, school psychologists, interventionists, administrators, and instructional coaches (Russell & Newman-Gonchar, 2011).

RTI provides levels of support to all students and allows for individualized instruction (Basham et al., 2010). The shared responsibility of the RTI framework and the

intentionally broad definition are two critical elements that have led to the widespread adoption of RTI.

The features of an effective conceptual framework include focusing on student levels of learning, coordination of support, ongoing decision-making based on data, and cohesive leadership (Castro-Villarreal et al., 2014). Through effective RTI program implementation, at-risk students receive an individualized plan of instruction based on a framework that fits students' needs to be successful and achieve academic standards.

### **Afterschool: Implementation and Effectiveness**

The primary goal of an afterschool program is to provide application and practice for academic skills and knowledge (American Federation of Teachers, 2014). There is a current focus on high stakes testing in the United States. Many schools are looking for alternate ways to intervene and offer support for struggling learners. There are many different models to follow when implementing a program. In my district, we focus on small groups, missing skills, and meeting the needs of diverse learners through both teachers and technology.

Regular class activities may not be enough for youth to overcome education issues or provide the social and personal resources to prevail over their economically disadvantaged background (Eccles et al., 1993). Pierce (2010) studied the issues beneath the surface of high performance. The study focused on the achievement gap in the United States. It recommended implementing effective student support programs to help school leaders realize their existence and the achievement gap's extent.

The 21st Century Community Learning Centers (21CCLC) program was part of President Clinton's political plan to focus on school-age childcare. Mahoney et al. (2005)

stated that the lack of supervision for children during hours following school dismissal has consequences for in-school success. Conducting afterschool tutorials is a viable option for unsupervised students, and 21CCLC programs were a major source of federal resources for afterschool programs. Most program centers offered homework assistance and academic activities, such as tutorials and remedial teaching (James-Budumy et al., 2008).

### **Best Practices**

The literature on afterschool programs and their effectiveness in raising achievement, associated best practices, and other attributes is not without question. Some studies show that it is effective in one content area but not another; others show that it is effective only for some subgroups and students. Many studies highlight differing implementation strategies as best practices.

The following research summaries demonstrate the variety of afterschool programs. Although each study uses different methodologies, most authors recommend strategies to enhance student outcomes: maintaining rigorous data regarding process and outcomes, high student attendance rates, the relationship between tutors and students, small group instruction, and adequate training for tutors.

Yaffe (2010) has cited the need for more data and information regarding afterschool programs by several authors, researchers, and business people in the educational field assembled for an achievement gaps symposium on out-of-school learning held by Educational Testing Service in 2010. Yaffe (2010) indicated that studies of traditional supplementary educational services in an afterschool program positively affect learning for only 4.4% of students. Other programs showed positive results, but

they were not recognized due to poor research methodology. Yaffe (2010) said that in educational and fiscal responsibility, afterschool programs must use reliable data, thorough documentation, and acceptable methodology to know which programs work and which do not. Other authors, such as Heinrich and Burch (2011), have echoed this finding.

The afterschool programs studied included short- and long-term goals and timely progress checks. Nelson-Royes and Reglin (2011) found that teacher participants said documented reading progress occurred for all students who regularly attended 12 weeks (about three months). One reason for improved student reading achievement was that instruction could be more easily understood in a less stressful environment than in the classroom. The teachers also cited repetitive practice, reinforcement, and individualized academic plans to increase reading achievement. Other reasons cited for the afterschool programs' effectiveness were that students were required to practice and do homework, and the best teachers were hired for the program.

Zimmer et al. (2010) studied the effectiveness of the educational assistance program (EAP) administered by the state of Pennsylvania and (SES) in Pittsburgh Public Schools. EAP and SES focused more heavily on academic activities than previous Pittsburgh programs. The SES program focuses almost exclusively on low-performing and low-income students. EAP services focus on evidence-based instructional models aligned to state standards and provided to students based on their current achievement level; it is not provided solely for low-income students. The EAP program targets students who score below proficiently on the statewide examinations or below a set score on district administrated tests. SES is federally funded through NCLB as part of Title I

and may be provided by various faith-based, for-profit, and nonprofit entities. At the same time, tutors for EAP are hired and managed by the school district. In Zimmer et al.'s (2010) Pittsburgh study, 600 students received SES services, while 6,000 students received EAP services.

Zimmer et al. (2010) found that two important components of the programs were significantly related to student achievement gains: the tutor's experience and grouping by skill level for mathematics and reading. Overall, Zimmer et al. (2010) found that students in SES made significant gains in mathematics but not reading. Students participating in EAP made small gains in both mathematics and reading. The prior research summarized reveals a gap that the study seeks to explore. The focus of this study is to determine whether afterschool programs impact academic success.

### **Measuring Growth**

Effectiveness is key for any program. This study was developed to find a correlation between afterschool programs and academic growth. Measuring growth is the most appropriate way to determine that effectiveness. Measuring growth can be done in several ways, depending on the subject, focus, duration, repetition of sessions, grade level, and the program's overall goal. Some examples of measuring growth can stem from informal and formal assessments, summative and performance assessments, and classroom grades. Sanderson's (2003) research on a Title I program called Title One After School Tutorial (TOAST) utilized both "formal and informal" assessments (p. 4). The informal assessment piece was "teachers observing students' reading behaviors and use of reading strategies" along with "noting changes in students' self-esteem and risk-taking regarding reading (Sanderson, 2003, p. 4).

## Summary

Chapter 2 reviewed literature to determine the various impacts on student achievement. Research studies, journal articles, websites, and other literature were reviewed. Most research shows a positive correlation, or impact of response to intervention and afterschool programs, on student achievement. The literature review contained an overview of educational systems, afterschool programs, improving outcomes, curriculum, program participation, response to intervention, implementation, best practices, and measuring growth. By establishing a conceptual framework (RTI), this study addressed the gap in prior literature on the effectiveness of afterschool programming.



## **Chapter 3**

### **Methods**

This study aimed to explore the effects of afterschool programs on reading and math assessment scores on the NWEA MAP for third-, fourth-, and fifth-grade students enrolled in 2016–2017, 2017–2018, and 2018–2019.

This chapter presents a description of the research design and the selection of participants. Additionally, this chapter contains information about the procedures for collecting NWEA MAP data and details about data analysis. Finally, it concludes with hypothesis testing and the study's limitations.

#### **Research Design**

This study utilized a quantitative research method based on a non-experimental design. Quantitative research involves collecting and analyzing numerical data (Early, 2010). This study focused on the NWEA MAP assessment for fall and spring during three academic years, 2016 to 2019. The scores were analyzed to find patterns and averages. Archival data, which includes the academic year, grade level, fall reading and math RIT scores, and spring reading and math RIT scores on the NWEA MAP assessment, were used to determine the effectiveness of afterschool programs. The paired *t*-test was considered the most appropriate to analyze data. The variables in the study were reading and math RIT scores on the NWEA MAP assessment for the students who participated in afterschool programs.

#### **Selection of Participants**

The participants for this study were third-, fourth-, and fifth-grade students enrolled in an afterschool program in a Title I school in Kansas. Participants of this study

were enrolled in the 2016–2017, 2017–2018, and 2018–2019 academic school years. The subjective sampling technique, which Lunenberg and Irby (2008) described as "selecting a sample based on the researcher's experience or knowledge of the group to be sampled" (p. 175), was employed.

The selection of participants was as follows:

1. Students in this study were in the third, fourth, and fifth grades for three academic years from 2016 to 2019.
2. Students who took part scored at or below the 20th percentile in NWEA MAP assessments during the fall testing window.
3. Students received afterschool academic support in reading and math.
4. Students attended afterschool programming with at least 80% attendance.
5. Students were administered both fall and spring NWEA MAP assessments.
6. This study used 2016–2017, 2017–2018, and 2018–2019 assessment scores.
7. This study included 342 students: 36 in 2016-2017, 78 in 2017-2018, and 228 in 2018-219

## **Measurement**

Creswell & Creswell (2017) recommended that measurement information be included with an explicit description of the instrument used in data collection for descriptive research. McMillan (2008) described sound measurement as essential in effective quantitative studies. Therefore, specific details about instrumentation were necessary for inclusion in this study.

The NWEA MAP assessment was used to measure student performance in this study. The NWEA MAP assessment is a scientifically based measurement. The NWEA

MAP assessment allows educators to measure a student's growth and compare the student to a national norm at a specific grade level (NWEA, 2009).

The NWEA MAP assessment scores students based on an RIT score. This unit of measurement reflects the skills a student has mastered, is ready to attempt, or is basic exposure to the topic. The RIT score is based on the accuracy percentage within the given tested skills. If a student answers less than 50% of questions correctly within a skill set, these are considered skills to be introduced or exposed. Those questions answered above the 50% rate of success are approaching proficiency.

### **Data Collection Procedures**

Before collecting data, a request was submitted for the data needed to complete the study (J. Engel, personal communication, November 18, 2020). The district assessment assistant granted the request (December 16, 2020) (see appendices). The superintendent of schools (July 8, 2021) (see appendices) was granted permission. In addition, a proposal for conducting research was submitted to the Baker University Institutional Review Board (IRB) on June 18, 2021(see appendices). The IRB granted permission to the researcher in writing on July 14, 2021 (see appendices).

The archived data were collected for the analysis. Data were collected from students who participated in the afterschool program and took fall and spring assessments in 2016–2017, 2017–2018, and 2018–2019. The fall RIT score was compared to the spring RIT score to determine effectiveness.

The data for NWEA MAP is stored in a database housed by NWEA. The data collected for this study was downloaded into a student management system by the

assessment coordinator in January of 2020. In October 2022, data were exported to Microsoft Excel and imported into IBM SPSS.

### **Data Analysis and Hypothesis Testing**

**RQ1.** To what extent is there a change in scores from fall 2016 to spring 2017 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment in a Title I school in Kansas?

**H1.** After implementing an afterschool program, there is a change in the NWEA MAP reading assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2016-2017.

A paired-samples *t*-test was conducted to test *H1*. The reading NWEA MAP Assessment RIT scores of third-, fourth-, and fifth-grade students in the Title 1 school in Kansas who received afterschool support were compared from fall 2016 to spring 2017. The mean of fall 2016 scores on the NWEA MAP reading assessment was compared to the mean of spring 2017 scores on the NWEA MAP reading assessment for the student. The level of significance was set at .05.

**RQ2.** To what extent is there a change in scores from fall 2016 to spring 2017 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment in a Title I school in Kansas?

**H2.** After implementing an afterschool program, there is a change in the NWEA MAP math assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2016-2017.

A paired-samples *t*-test was conducted to test *H2*. The math NWEA MAP assessment scores of third-, fourth-, and fifth-grade students in the Title 1 school in

Kansas who received afterschool support were compared from fall 2016 to spring 2017. The mean of fall 2016 scores on the NWEA MAP math assessment was compared to the mean of spring 2017 scores on the NWEA MAP math assessment for the student. The level of significance was set at .05.

**RQ3.** To what extent is there a change in scores from fall 2017 to spring 2018 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment in a Title I school in Kansas?

**H3.** After implementing the afterschool program, there is a change in the NWEA MAP reading assessment for students in third, fourth, and fifth grade enrolled in the Title 1 school in Kansas in 2017-2018.

A paired-samples *t*-test was conducted to test *H3*. The reading NWEA MAP assessment scores of third-, fourth-, and fifth-grade students in the Title 1 school in Kansas who received afterschool support were compared from fall 2017 to spring 2018. The mean of fall 2017 scores on the NWEA MAP reading assessment was compared to the mean of spring 2018 scores on the NWEA MAP reading assessment for the student. The level of significance was set at .05.

**RQ4.** To what extent is there a change in scores from fall 2017 to spring 2018 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment in a Title I school in Kansas?

**H4.** After implementing an afterschool program, there is a change in the NWEA MAP math assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2017-2018.

A paired-samples *t*-test was conducted to test *H4*. The math NWEA MAP assessment scores of third-, fourth-, and fifth-grade students who received afterschool support were compared from fall 2017 to spring 2018. The mean of fall 2017 scores on the NWEA MAP math assessment was compared to the mean of spring 2018 scores on the NWEA MAP math assessment for the student. The level of significance was set at .05.

**RQ5.** To what extent is there a change in scores from fall 2018 to spring 2019 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment in the Title 1 school in Kansas?

**H5.** After implementing an afterschool program, there is a change in the NWEA MAP reading assessment scores for students in the third, fourth, and fifth grade enrolled in the Title 1 school in Kansas in 2018-2019.

A paired-samples *t*-test was conducted to test *H5*. The reading NWEA MAP assessment scores of third-, fourth-, and fifth-grade students who received afterschool support were compared from fall 2018 to spring 2019. The mean of fall 2018 scores on the NWEA MAP reading assessment was compared to the mean of spring 2019 scores on the NWEA MAP reading assessment for the student. The level of significance was set at .05.

**RQ6.** To what extent is there a change in scores from fall 2018 to spring 2019 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment in the Title 1 school in Kansas?

**H6.** After implementing an afterschool program, there is a change in the NWEA MAP math assessment scores for students in the third, fourth, and fifth grade enrolled in the Title 1 school in Kansas in 2018-2019.

A paired-samples *t*-test was conducted to test *H6*. The math NWEA MAP assessment scores of third-, fourth-, and fifth-grade students enrolled in the Title 1 school in Kansas who received afterschool support were compared from fall 2018 to spring 2019. The mean of fall 2018 scores on the NWEA MAP math assessment was compared to the mean of spring 2019 scores on the NWEA MAP math assessment for the student. The level of significance was set at .05.

### **Limitations**

Lunenburg and Irby (2008) defined limitations as "factors that may have an effect on the interpretation of the findings or the generalizability of the results" (p. 133). Since a researcher cannot control limitations, it is important to identify and report the limitations to communicate clearly, avoiding false interpretation (Lunenburg & Irby, 2008). Limitations of this study included:

1. Some students might have benefited from previous learning opportunities or firsthand experiences, which could have assisted them in answering NWEA MAP assessment questions.
2. Classroom instruction between NWEA MAP assessment testing periods might have differed according to educators' instructional methods and teaching styles in third, fourth, and fifth grades throughout the Title 1 school in Kansas.
3. The testing environment for administering the NWEA MAP assessment might have varied from classroom and school within the school district.

4. This study utilized samples from one public school district. Caution should be exercised in generalizing findings.

### **Summary**

A non-experimental quantitative design was used to analyze RIT scores to see if there is a difference in student growth on NWEA MAP among students who received added support in an afterschool program.

This chapter contained the research design and selection of student participants. Hypothesis testing was described as performed. Lastly, the limitations of the study were shared. The results from this study are presented in Chapter 4.



## Chapter 4

### Results

This study aimed to examine the impact of afterschool programs on students' achievement in grades 3, 4, and 5 in a Title 1 school in Kansas. Specifically, the purpose of this study was to examine whether students who receive afterschool support in reading and math improved on the NWEA MAP. This study was designed to analyze RIT scores to observe the student growth on NWEA MAP among students who received added support in reading and math. In this chapter, the testing hypothesis and results are discussed.

#### Descriptive Statistics

During the 2016–2017, 2017–2018, and 2018–2019 school years, the NWEA MAP assessment was administered to students in grades 3, 4, and 5. This assessment was administered to measure academic progress in both mathematics and reading. The NWEA MAP assessment was administered in six intervals, including fall and spring for each year. The sample for this study included third-, fourth-, and fifth-grade students who received afterschool programs to address gaps in reading and math. This study included 342 students: 36 (Reading:26, Math:10) in 2016-2017, 78 (Reading:44, Math:33) in 2017-2018, and 228 (Reading:108, Math:120) in 2018-2019.

In the 2016-2017 testing data, the reading mean ( $M = 171.76$ ,  $SD = 9.99$ ) was statistically lower than the mean reading scores for the students after completing the afterschool program ( $M = 187.80$ ,  $SD = 11.07$ ) and the math value mean ( $M = 178.40$ ,  $SD = 9.03$ ) was statistically lower than the mean math scores for the students after completing the afterschool program ( $M = 195.50$ ,  $SD = 7.38$ ).

In the 2017-2018 data, the reading mean value ( $M = 170.88$ ,  $SD = 11.47$ ) was statistically lower than the mean reading scores for the students after completing the afterschool program ( $M = 183.25$ ,  $SD = 15.66$ ). The math mean value ( $M = 179.91$ ,  $SD = 11.10$ ) was statistically lower than the mean math scores for the students after completing the afterschool program ( $M = 194.03$ ,  $SD = 11.25$ ).

In the 2018-2019 data, the reading mean value ( $M = 175.18$ ,  $SD = 11.03$ ) was statistically lower than the mean of reading scores for the students after completing the afterschool program ( $M = 189.09$ ,  $SD = 13.04$ ). The math mean value ( $M = 185.20$ ,  $SD = 10.68$ ) was statistically lower than the mean math scores for the students after completing the afterschool program ( $M = 196.78$ ,  $SD = 12.93$ ).

### **Hypothesis Testing**

The research questions focused on the differences in reading and mathematics performance on the NWEA MAP assessment from the fall to spring for 2016–2017, 2017–2018, and 2018–2019. The data were analyzed using a paired *t*-test to determine if significant mean differences existed for students receiving afterschool programs (from fall to spring) on the NWEA MAP reading and math assessment. The following hypotheses were proposed:

**RQ1.** To what extent is there a change in scores from fall 2016 to spring 2017 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment for students in a Title I school in Kansas?

**H1.** After implementing an afterschool program, there is a change in the NWEA MAP reading assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2016-2017.

The paired-samples *t*-test indicated a statistically significant difference between the two means (fall 2016 to spring 2017),  $t(25) = -8.45, p < .001$ . The reading mean ( $M = 171.76, SD = 9.99$ ) was statistically lower than the mean reading scores for the students after completing the afterschool program ( $M = 187.80, SD = 11.07$ ). The hypothesis was supported. The afterschool program significantly changed participants' reading performance from fall 2016 to spring 2017. The magnitude of this difference was a large effect size with Cohen's  $d = -1.66$ .

**RQ2.** To what extent is there a change in scores from fall 2016 to spring 2017 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment for students in a Title I school in Kansas?

**H2.** After implementing an afterschool program, there is a change in the NWEA MAP math assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2016-2017.

The results of the paired-samples *t*-test indicated a statistically significant difference between the two means,  $t(9) = -4.44, p < .001$ . The math value mean ( $M = 178.40, SD = 9.03$ ) was statistically lower than the mean math scores for the students after completing the afterschool program ( $M = 195.50, SD = 7.38$ ). The hypothesis was

supported. The afterschool program makes a significant difference in participants' math performance. The magnitude of this difference was a large effect size with Cohen's  $d = -1.40$ .

**RQ3.** To what extent is there a change in scores from fall 2017 to spring 2018 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment for students in a Title I school in Kansas?

**H3.** After implementing the afterschool program, there is a change in the NWEA MAP reading assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2017-2018.

The results of the paired-samples  $t$ -test indicated a statistically significant difference between the two means,  $t(43) = -7.44, p < .001$ . The reading mean value ( $M = 170.88, SD = 11.47$ ) was statistically lower than the mean reading scores for the students after completing the afterschool program ( $M = 183.25, SD = 15.66$ ). The hypothesis was supported. The afterschool program might make a significant difference in participants' reading performance. The magnitude of this difference was Cohen's  $d = -1.12$ .

**RQ4.** To what extent is there a change in scores from fall 2017 to spring 2018 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment for students in a Title I school in Kansas?

**H4.** After implementing an afterschool program, there is a change in the NWEA MAP math assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2017-2018.

The paired-samples  $t$ -test indicated a statistically significant difference between the two means,  $t(33) = -10.92, p < .001$ . The math mean value ( $M = 179.91, SD = 11.10$ )

was statistically lower than the mean math scores for the students after completing the afterschool program ( $M = 194.03$ ,  $SD = 11.25$ ). The hypothesis was supported. The afterschool program might make a significant difference in participants' math performance. The magnitude of this difference was a large effect size with Cohen's  $d = -1.87$ .

**RQ5.** To what extent is there a change in scores from fall 2018 to spring 2019 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment for students in a Title I school in Kansas?

**H5.** After implementing an afterschool program, there is a change in the NWEA MAP reading assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2018-2019.

The paired-samples  $t$ -test indicated a statistically significant difference between the two means,  $t(107) = -12.99$ ,  $p < .001$ . The reading mean value ( $M = 175.18$ ,  $SD = 11.03$ ) was statistically lower than the mean of reading scores for the students after completing the afterschool program ( $M = 189.09$ ,  $SD = 13.04$ ). The hypothesis was supported. The intervention might make a significant difference in participants' reading performance. The magnitude of this difference was a large effect size with Cohen's  $d = -1.25$ .

**RQ6.** To what extent is there a change in scores from fall 2018 to spring 2019 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment for students in a Title I school in Kansas?

**H6.** After implementing the afterschool program, there is a change in the NWEA MAP math assessment scores for students in third, fourth, and fifth grades enrolled in the Title 1 school in Kansas in 2018-2019.

The paired-samples *t*-test indicated a statistically significant difference between the two means,  $t(119) = -14.52, p < .001$ . The math mean value ( $M = 185.20, SD = 10.68$ ) was statistically lower than the mean math scores for the students after completing the afterschool program ( $M = 196.78, SD = 12.93$ ). The hypothesis was supported. The intervention might make a significant difference in participants' math performance. The magnitude of this difference was a medium effect size with Cohen's  $d = -1.33$

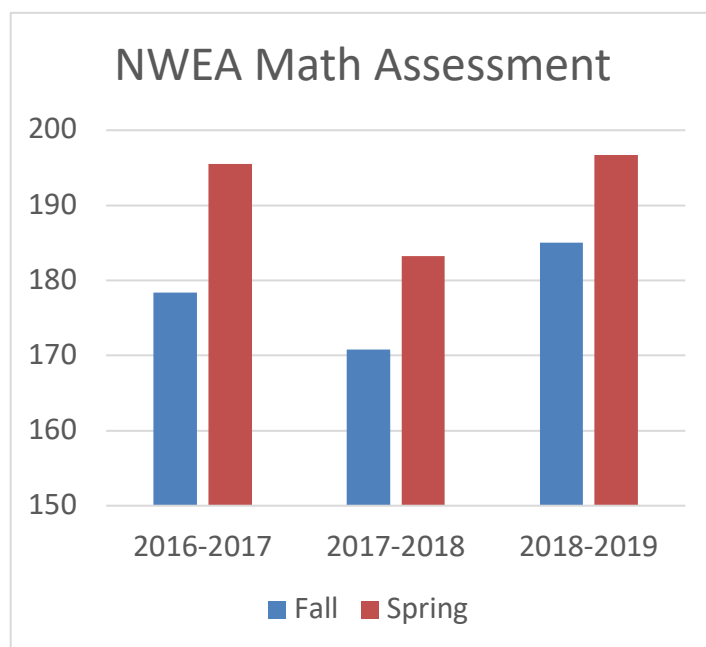
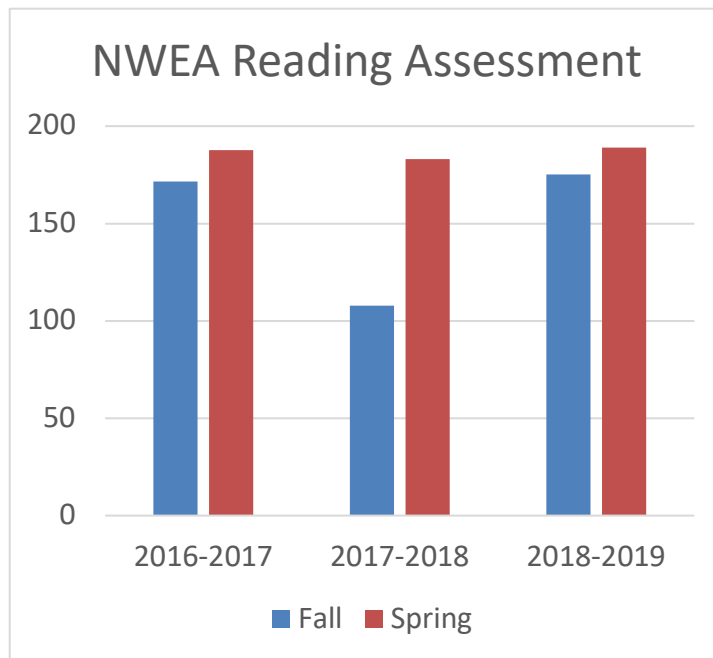


Figure 2. NWEA math assessment scores.



*Figure 3.* NWEA reading assessment scores.

### **Summary**

This chapter contained data analysis, hypothesis testing, and results for each research question. The results showed a difference in scores from fall to spring on the NWEA MAP assessment during the 2016–2017, 2017–2018, and 2018–2019 academic school years in reading and math among third, fourth, and fifth grades as shown in figure 2 and figure 3.

The subsequent chapter summarizes the research and major findings from the study. Additionally, implications for action and recommendations for future research are explained.

## Chapter 5

### Interpretation and Recommendations

This study was designed to determine if students participating in an afterschool program would increase academic abilities in reading and math. This chapter summarizes items discussed in chapters one through four, including a study summary, an overview of the problem, research questions, a review of methodology, and major findings. Findings related to the literature, implications for action, recommendations for future research, and concluding remarks are discussed at the end of this chapter.

#### Study Summary

The current study is summarized in this section. The overview of the problem and research questions are reviewed. A review of methodology and major findings concludes this section.

**Overview of the problem.** Title 1 school in Kansas explores opportunities to close the achievement gap in math and reading. Schools use baseline data from the NWEA MAP assessment to identify and respond to student needs. Students who score below the 20th percentile on fall NWEA MAP, which is low, are eligible for afterschool programs. School district leaders have not yet evaluated the impact of afterschool programs on overall student achievement on assessments. Therefore, the NWEA MAP assessment data has not been collected and analyzed, and previous literature reviews show inconsistent effects for the afterschool program. There is a need to examine whether implementing afterschool programs is beneficial to increasing student achievement in reading and math.



**Purpose statement and research questions.** The purpose of this study was to examine the impact of an afterschool program on students' achievement in grades three through five in a Title I school district in Kansas. This study was designed to analyze RIT scores to see if there is a difference in NWEA MAP reading and math assessments among students who received added support in an afterschool program for 2016-2017, 2017-2018, and 2018-2019. The research questions focused on the differences from fall to spring RIT scores in reading and mathematics performance on the NWEA MAP assessment for the 2016–2017, 2017–2018, and 2018–2019 academic years.

**RQ1:** To what extent is there a change in scores from fall 2016 to spring 2017 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment in the Title 1 school in Kansas?

**RQ2:** To what extent is there a change in scores from fall 2016 to spring 2017 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment in the Title 1 school in Kansas?

**RQ3:** To what extent is there a change in scores from fall 2017 to spring 2018 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment in the Title 1 school in Kansas?

**RQ4:** To what extent is there a change in scores from fall 2017 to spring 2018 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment in the Title 1 school in Kansas?

**RQ5:** To what extent is there a change in scores from fall 2018 to spring 2019 third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP reading assessment in the Title 1 school in Kansas?

**RQ6:** To what extent is there a change in scores from fall 2018 to spring 2019 for third-, fourth-, and fifth-grade students receiving afterschool support on the NWEA MAP math assessment in the Title 1 school in Kansas?

**Review of the methodology.** This study utilized a quantitative research method based on a non-experimental design. Archival data were used for this study. A paired sample t-test using IBM SPSS 26 was employed to analyze this data. The 342 participants were third-, fourth-, and fifth-grade students. Participants of this study were enrolled in the afterschool program for the 2016–2017, 2017–2018, and 2018–2019 academic school years in a Title I school in Kansas.

**Major findings.** Evidence showed that implementing an afterschool program for students impacted NWEA MAP assessment scores for grades third-fifth for the 2016–2017, 2017–2018, and 2018–2019 academic years. The mean change in Rasch Unit (RIT) scores on the NWEA MAP reading assessment and math assessments for 2016–2017 increased by 16.04 and 17.10, respectively, from fall to spring. The mean change in RIT scores on the NWEA MAP reading assessment and math assessments for 2017–2018 increased by 12.36 and 14.12, respectively, from fall to spring. The mean change in RIT scores on the NWEA MAP reading assessment and math assessments for 2018–2019 increased by 13.91 and 11.58, respectively, from fall to spring.

### **Findings Related to Literature**

In this section, the study's findings related to the literature are examined. The discussion focuses on implementing an afterschool program to increase student achievement in reading and math. Lauer et al. (2006) examined 35 schools and researched the effectiveness of schools incorporating afterschool programs. The study

focused on student participation, best practices, and the implementation of programs. The results of this study showed that student achievement results improved for students participating in programs directed toward academic intervention programs. This is similar to the afterschool programs researched by Lauer et al. (2006), which looked at 35 schools, Harvard Family Research Project, which researched best practices in raising achievement scores, and Fredricks et al. (2010) noted success and the benefits of such programs.

The literature related to an afterschool program, its effectiveness in raising achievement, best practices, and other attributes is not undeniable, Little et al. (2008) wrote that programs serving students after school impact achievement scores, which directly correlates to the study conducted for this study. According to Fredericks et al. (2010), these students also benefited from academic success. Students in this study also averaged success, as measured by NWEA MAP assessments.

Many studies highlight differing implementation strategies as best practices. Common best practices of an afterschool program are critical to ensure expected results, as shown in this study. A 2006 meta-analysis of afterschool program studies conducted by Mid-continent Research for Education and Learning (McREL) found that afterschool programs had positive and significant effects among students at risk of failure in reading or math. Some studies showed that it is effective in one content area but not another (Zimmerman et al., 2010); others showed that it is effective for some students but not all.

## **Conclusions**

This section includes conclusions about the impact of an afterschool program on student progress in reading and math as measured by NWEA MAP assessments.

Recommendations for future research follow implications for action.

**Implications for Action.** This research can provide school districts with data from academic assessments to support their decision-making process in afterschool programs. The research results showed that afterschool support positively impacted student achievement according to NWEA MAP assessment scores collected and analyzed. School administrators are currently spending significant time and resources to implement afterschool programs. Many school districts use federal funds under Title I of the No Child Left Behind Act of 2001 (NCLB) to support supplementary tutoring programs to improve the academic achievement of low-income children. Policymakers, State Education Agency officials, policymakers, school administrators, teachers, and researchers in after school programs would benefit from this study's findings to show the correlation between providing an afterschool program and student achievement.

The educator's ability to design instruction and make instructional decisions based on data is critical to success in an afterschool program. It is important to consider the assumptions and limitations as identified. In addition, districts should consider reviewing future research recommendation results as they become available.

**Recommendations for Future Research.** As the researcher analyzed these results and reflected on the findings, recommendations were developed for future research. The recommendations for future research are summarized and should be

considered by other researchers who wish to determine whether an afterschool program significantly impacts student achievement.

One recommendation for further research is to examine the impact of an afterschool program on NWEA MAP assessment scores over time by utilizing a longitudinal study. Inconsistencies in teachers may decrease after the first year of implementation. Other factors, such as changes in curriculum, staff, or resources, may negatively impact. To eliminate some of those factors, multiple years should be considered.

Another recommendation for future researchers is to expand the sample study to include students from rural, urban, and suburban school districts in other grades. By expanding the study, researchers can generalize the results across different grade levels and school districts that use NWEA MAP assessments.

Finally, a study should be considered to measure the impact of an afterschool program on a cohort of students from the third to fifth grades of the same students. By examining the longitudinal data, one could measure the long-term effects of an afterschool program and student achievement.

**Concluding Remarks.** Intervention, monitoring student progress, and using data to make instructional decisions are well-known practices for increasing student achievement. Implementing an afterschool program that uses these practices can ensure growth for all students. Based on the findings in this study, students increased from fall to spring of each year analyzed.

## References

- Ascher, C. (2006). NCLB supplemental educational services: Is this what our students need? *Phi Delta Kappan*, 88(2), 136–141.
- Afterschool Alliance. (2014). *Taking a deeper dive into afterschool: Positive outcomes and promising practices*. (ED557914). ERIC. <https://eric.ed.gov/?id=ED557914>
- Afterschool Alliance. (2010). *The afterschool hours in america: afterschool alliance*. (ED611372). [https://eric.ed.gov/?q=010+the+afterschool+hours+in+america%3a+afterschool+alliance&ff1=dtYSince\\_2003&id=ED611372](https://eric.ed.gov/?q=010+the+afterschool+hours+in+america%3a+afterschool+alliance&ff1=dtYSince_2003&id=ED611372)
- American Federation of Teachers. (2014). *Academic goals for afterschool programs*. American Federation of Teachers. Retrieved from <https://www.aft.org/academic-goals-after-school-programs#:~:text=provide%20application%20and%20practice%20for,has%20less%20time%20to%20provide>.
- Basham, J., Israel, M., Graden, J., Poth, R., & Winston, M. (2010). A comprehensive approach to RTI: Embedding universal design for learning and technology. *Learning Disability Quarterly*, 33(4), 243-255.
- Berkeley, S., Bender, W. N., Peaster, L. G., & Saunders, L. (2009). Implementation of response to intervention: A snapshot of progress. *Journal of Learning Disabilities*, 42(1), 85–95.
- Bianco, S. D. (2010). Improving student outcomes: Data-driven instruction and fidelity of implementation in a response to intervention (RTI) model. *Teaching Exceptional Children Plus*, 6(5), Article 1.

- Burke, S. (1999). An analysis of resource inequality at the state, district, and school levels. *Journal of Education Finance*, 24(4), 435–458. Retrieved ERIC database. (EJ589385)
- Castro-Villarreal, F., Rodriguez, B. J., & Moore, S. (2014). Teachers' perceptions and attitudes about response to intervention (RTI) in their schools: A qualitative analysis. *Teaching and Teacher Education*, 40, 104–112.  
<https://doi.org/10.1016/j.tate.2014.02.004>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Newbury Park, CA: Sage.
- Council for Exceptional Children (CEC). (2007). *Position on response to intervention (RTI): The unique role of special education and special educators*. (ED499403)  
<https://eric.ed.gov/?id=ED499403>
- Darling-Hammond, L. (2014, August 30). To close the achievement gap, we need to close the teaching gap [Blog post]. Retrieved from [https://www.huffpost.com/entry/to-close-the-achievement\\_b\\_5542614](https://www.huffpost.com/entry/to-close-the-achievement_b_5542614)
- Dick, W., & Carey, L. (1996). *The systematic design of instruction* (4th ed.). New York, NY: Harper Collin
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Iver, D. M. (1993). Development during adolescence. The impact of stage-environment fit on young adolescents' experiences in schools and in families. *The American Psychologist*, 48(2), 90–101.
- Esquivel, J. (2020). *Themes of academic achievement gap: The differences in framing after school program engagement to high-and low-income audiences* (Doctoral

dissertation). Available from ProQuest Dissertations and theses database.

(Publication No. 27960983)

Every Student Succeeds Act 2015. Retrieved from <https://www.ed.gov/essa?src=rn>

Fredricks, J. A., & Eccles, J. S. (2010). Breadth of extracurricular participation and adolescent adjustment among African-American and European-American youth. *Journal of Research on Adolescence*, 20(2), 307-333.

Gagné, R. (1985). *The conditions of learning and theory of instruction*. New York, NY: Holt, Rinehart and Winston.

Gagné, R. M., Briggs, L. J., & Wagner, W. W. (1988). *Principles of instructional design* (3rd ed.). New York, NY: Holt, Reinhart and Winston.

Gersten, R., & Newman-Gonchar, R. (2011). *Understanding RTI in mathematics: proven methods and applications*. Los Alamitos, Calif.: Instructional Research Group.

Gresham, F. M., MacMillan, D. L., Beebe-Frankenberger, M. E., & Bocian, K. M. (2000). Treatment integrity in learning disabilities intervention research: Do we really know how treatments are implemented? *Learning Disabilities Research & Practice*, 15(4), 198–205.

Hall, K. W., Williams, L. M., & Daniel, L. G. (2010). An afterschool program for economically disadvantaged youth: Perceptions of parents, staff, and students. *Research in the Schools*, 17(1).

Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (2004)

Jardine, G. (2005). *Foucault & education*. New York: Peter Lang.



- Johnson, E., Mellard, D. F., Fuchs, D., & McKnight, M. A. (2006). *Responsiveness to Intervention: How to do it*. Lawrence, KS: National Research Center on Learning Disabilities.
- Hall, K. W., Williams, L. M., & Daniel, L. G. (2010). An afterschool program for economically disadvantaged youth: perceptions of parents, staff, and students. *Research in the Schools, 17*(1).
- Harper, S., & Anglin, M. (2010). Narrowing the gap in academic achievement. *Canadian Teacher, 15*.
- Harvard Family Research Project. (2008). *After school programs in the 21st century: Their potential and what it takes to achieve it*. Retrieved from <http://https://archive.globalfrp.org/evaluation/publications-resources/after-school-programs-in-the-21st-century-their-potential-and-what-it-takes-to-achieve-it>
- Heinrich, C. J., & Burch, P. (2011). *The implementation and effectiveness of supplemental educational services (SES): A review and recommendations for program improvement*. <https://www.thefreelibrary.com/The+implementation+and+effectiveness+of+supplemental+educational...-a0286558549>
- Heinrich, C. J., Meyer, R. H., & Whitten, G. (2010). Supplemental education services under No Child Left Behind: Who signs up, and what do they gain? *Educational Evaluation and Policy Analysis, 32*(2), 273–298.
- Holstead, J., & King, M. H. (2011). Self-assessment of high-quality academic enrichment practices. *Afterschool Matters, 13*, 30–37. Retrieved from ERIC database. (EJ980177)
- Jardine, G. (2005). *Foucault & Education*. New York: Peter Lang

- Jenlink, P. (2009). Affirming diversity, politics of recognition, and the cultural works of schools. In Jenlink, P. M., & Townes, F.H. (Eds.), *The struggle for identity in today's schools* (pp. 14–29). Plymouth, England: Rowman & Littlefield Education.
- Jenlink, P., & Townes, F. (2009). *The struggle for the identity in today's schools*. Plymouth, England: Rowman & Littlefield Education.
- Johnson, E., Mellard, D. F., Fuchs, D., & McKnight, M. A. (2006). *Responsiveness to Intervention: How to do it*. Lawrence, KS: National Research Center on Learning Disabilities.
- Kansas State Department of Education. (2020). Title Services. Retrieved from <https://www.ksde.org/Agency/Division-of-Learning-Services/Special-Education-and-Title-Services/Title-Services>
- Kozleski, E., & Huber, J. (2010). Systemic change for RTI: Key shifts for practice. *Theory into Practice, 33*(4), 243-255.
- Kremer, K. P., Maynard, B. R., Polanin, J. R., Vaughn, M. G., & Sarteschi, C. M. (2015). Effects of afterschool programs with at-risk youth on attendance and externalizing behaviors: A systematic review and meta-analysis. *Journal of Youth and Adolescence, 44*(3), 616–636. <https://doi.org/1007/s10964-014-0226-4>
- Lauer, P. A., Akiba, M., Wilkerson, S. B., Apthorp, H. S., Snow, D., & Martin-Glenn, M.L. (2006). Out-of-school-time programs: A meta-analysis of effects for at-risk students. *Review of Educational Research, 76*(2), 275–313. <https://doi.org/10.3102/00346543076002275>

- Lunenburg, F., & Irby, J. (2008). *Writing a successful thesis or dissertation: Tips and strategies for students in the social and behavioral sciences*. Thousand Oaks, CA: Corwin Press.
- Mahoney, J. L., Lord, H., & Carryl, E. (2005). Afterschool program participation and the development of child obesity and peer acceptance. *Applied Developmental Science, 9*, 202-215.
- McCombs, J., Whitaker, A., & Yoo, P. (2017). *The value to out of school programs*. Santa Monica, CA: RAND Corporation
- McMillan, J. (2008). *Educational Research. Fundamentals of the Consumer* (5th ed.). Virginia Commonwealth University. NY: Pearson Education Inc.
- McNeil, S. (2015). Visualizing mental models: Understanding cognitive change to support teaching and learning of multimedia design and development. *Educational Technology, Research and Development, 63*(1). 73-96.
- Munoz, M. A., & Ross, S. M. (2009). *Supplemental education services as a component of No Child Left Behind: A mixed-methods analysis of its impact on student achievement*. Jefferson, KY: Accountability, Research, and Planning Department, Jefferson Public Schools.
- Nelson-Royes, A. M., & Reglin, G. L. (2011). Afterschool tutoring for reading achievement and urban middle school students. *Reading Improvement, 48*(3), 105-117.
- Northwest Evaluation Association. (2016). *Linking the Kansas K.A.P. assessments to NWEA MAP tests*. Northwest Evaluation Association.  
<https://eric.ed.gov/?id=ED567826>

- Lauer, P.A., Akiba, M., Wilkerson, S.B., Apthorp, H.S., Snow, D.R., & Martin-Glenn, M.L. (2006). Out-of-School-Time Programs: A Meta-Analysis of Effects for At-Risk Students. *Review of Educational Research, 76*, 275 - 313.
- Pierce, K. M., Auger, A., & Vandell, D. L. (2013). Participation in out-of-school settings and student academic and behavioral outcomes. Retrieved from: [http://expandinglearning.org/research/vandell/resources/AERA\\_Promising\\_Programs\\_FINAL.pdf](http://expandinglearning.org/research/vandell/resources/AERA_Promising_Programs_FINAL.pdf)
- Pierce, L. (2010). Beneath the surface of high performance. *Leadership, 40*(1), 34
- Roberts, A., & Spangenberg, E. (2020). Peer 'tutors' views on their role in motivating learners to learn mathematics. *Pythagoras, 41*(1).  
<https://eric.ed.gov/?q=mathematics&pg=48&id=EJ1272027>
- Roberts, C. M. (2004). *The dissertation journey*. Thousand Oaks, CA: Corwin Press.
- Ross, S. M., Neergaard, L. L., Harrison, L., Ford, J., & Paek, J. (2009). *Implementation and outcomes of supplemental education services: The 2007-2008 Tennessee state-wide evaluation study*. Center for Research on Education Policy, The University of Memphis.
- Rothman, T., & Henderson, M. (2011). Do school-based programs significantly improve student performance on standardized tests? *Research in Middle Level Education, 34*(6).
- Roza, M., & Hill, P. T. (2004). How within-district spending inequities help some schools to fail. *Brookings Papers on Education Policy, 7*, 201–227.  
<https://eric.ed.gov/?q=%22Roza+Marguerite%22&ff1=locOhio&id=EJ897597>
- Saddler, B., & Staulters, M. (2008). Beyond: Afterschool literacy instruction. *Intervention in School and Clinic, 43*(4), 203–209.

- Sanders, M., Galindo, C., & DeTablan, D. (2019). Leadership for collaboration: Exploring how community school coordinators advance the goals of full-service community schools. *Children & Schools, 41*(2), 89–100.  
<https://files.eric.ed.gov/fulltext/EJ984546.pdf>
- Sanderson, D. R. (2003). Setting up a successful after school tutorial program: One district's journey. *Reading Improvement, 40*(1), 1–6.
- U.S. Department of Education. (2018). *Improving basic programs offered by local education agencies*. <https://www2.ed.gov/programs/titleiparta/index.html>
- Vandell, D. L., Reisner, E. R., & Pierce, K. M. (2007). *Outcomes linked to high quality afterschool programs: Longitudinal findings from the study of promising afterschool programs*. Washington, DC: Policy Studies Associates.
- Voyer, D., & Voyer, S. D. (2014). Gender differences in scholastic achievement: a metaanalysis. *Psychological Bulletin, 140*(4), 1174–1204.  
<https://www.semanticscholar.org/paper/Gender-differences-in-scholastic-achievement%3A-a-Voyer-Voyer/d560c3c8cfe5a105a32de42bf8ea2989058213a7>
- Yaffe, D. (2010). Addressing achievement gaps: After the bell rings-learning outside of the classroom and its relationship to student academic achievement. *Policy Notes, 18*(1). <https://eric.ed.gov/?id=ED520149>
- Zimmer, R., Hamilton, L., & Christina, R. (2010). Afterschool in the context of no child left behind: Effectiveness of two programs in the Pittsburgh public schools. *Economics of Education Review, 29*(1), 18–28. <https://eric.ed.gov/?id=EJ869948>

## Appendices

## Appendix A: Institutional Review Board



### *Baker University Institutional Review Board*

July 14<sup>th</sup>, 2021

Dear Aron Attebery and Marc Childress,

The Baker University IRB has reviewed your project application and approved this project under Exempt Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at [npoell@bakeru.edu](mailto:npoell@bakeru.edu) or 785.594.4582.

Sincerely,

A handwritten signature in blue ink that reads "Nathan D. Poell".

*Nathan Poell*, MLS  
Chair, Baker University IRB

Baker University IRB Committee  
Sara Crump, PhD  
Nick Harris, MS  
Christa Manton, PhD  
Susan Rogers, PhD

## Appendix B: Superintendent Approval



### OFFICE OF THE SUPERINTENDENT

TURNER UNIFIED SCHOOL DISTRICT 202  
DR. JASON DANDOY, SUPERINTENDENT OF SCHOOLS

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800 SOUTH 55<sup>TH</sup> STREET | KANSAS CITY, KS 66106 | (P) 913 288-4111 (F) 913 287-8564 [WWW.TURNERUSD202.ORG](http://WWW.TURNERUSD202.ORG)

July 8, 2021

Mr. Attebery,

I have reviewed your proposal to conduct dissertation research in Turner USD 202. Your study, which includes analysis of archived Turner USD 202 MAP data is approved. Please feel free to share this communication with Baker University.

Best of luck during your research. If you need anything from me during the process, I will be happy to assist.

A handwritten signature in black ink that reads "Dr. Jason Dandoy". The signature is written in a cursive, flowing style.

Dr. Jason Dandoy  
Superintendent of Schools



## Appendix C: IRB Submission Form



### IRB Request

Date March 4, 2021

IRB Protocol Number \_\_\_\_\_  
(IRB use only)

#### I. Research Investigator(s) (students must list faculty sponsor)

Department(s) \_\_\_\_\_

	Name	Signature	
1.	<u>Aron Attebery</u>	_____	Principal Investigator
2.	<u>Kyunghwa Cho</u>	_____	<input type="checkbox"/> Check if faculty sponsor
3.	<u>Mark Childress</u>	_____	<input type="checkbox"/> Check if faculty sponsor
4.	_____	_____	<input type="checkbox"/> Check if faculty sponsor

Principal investigator contact information

Phone

(816) 520-3614

Email

aronattebery@stu.bakeru.edu

Address

2208 W 51 Street

Mission, KS 66205

**Note: When submitting your finalized, signed form to the IRB, please ensure that you cc all investigators and faculty sponsors using their official Baker University (or respective organization's) email addresses.**

Faculty sponsor contact information

Phone

Mark Childress

Email

marcus.childress@bakeru.edu

Expected Category of Review:  Exempt  Expedited  Full  Renewal

#### II. Protocol Title

THE EFFECTIVENESS OF AFTERSCHOOL TUTORING PROGRAMS ON STUDENT ACHIEVEMENT IN A TITLE I SCHOOL DISTRICT AT GRADES 3, 4 AND 5

### III. Summary:

The following questions must be answered. Be specific about exactly what participants will experience and about the protections that have been included to safeguard participants from harm.

**A. In a sentence or two, please describe the background and purpose of the research.**

The purpose of this study was to examine the impact of after-school tutoring on students' achievement in grades three through fifth in a Title I school district. Specifically, the purpose of this study was to examine whether the resources distributed for these program benefits students who receive after-school support in reading and math. In addition to teacher pay, funding supports transportation, student snacks and academic resources and technology applications. This study was designed to analyze scores to see if there is a difference in conditional student scores. TUSD implemented an after-school tutoring program beginning in the fall of 2008. This program, titled BOOST, was developed for students in grades 3rd through 5th, they receive an additional one hour of targeted instruction, three

**B. Briefly describe each condition, manipulation, or archival data set to be included within the study.**

This study will utilize a quantitative research method based on a non-experimental design. Archival data will be used for this study. Comparative methods were considered most appropriate to examine possible differences between groups of students.

The variables in the study are reading and math portions of the NWEA MAP assessment for students in third, fourth, and fifth grades. The reading and math NWEA MAP scores of third, fourth, and fifth grade students will be analyzed.

### IV. Protocol Details

**A. What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.**

District data for NWEA MAP test scores will be collected and analyzed from three consecutive years of students in grades 3-5.

**B. Will the subjects encounter the risk of psychological, social, physical, or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.**

Student data will be pulled from district archives. I do not anticipate the subjects will encounter any psychological, social, or legal risk.

**C. Will any stress to subjects be involved? If so, please describe.**

I do not anticipate any stress to subjects during the research process, especially data collection. Student data is archived in student management system for district.

D. Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.

The subjects will not be deceived or misled in any way since student data is archived in student management system for district.

E. Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.

There will not be a request for any information that may be considered personal or sensitive since student data is archived in student management system for district.

F. Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.

All materials presented will be academic questions developed by NWEA. They should not be offensive, threatening or degrading.

G. Approximately how much time will be demanded of each subject?

None, student data is archived in student management system for district.

H. Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.

Subjects will be students in grades 3-5 in Turner USD 202 from the academic years 2016-2017, 2017-2018, and 2018-2019.

I. What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?

All students take the standardized assessments that data is pulled from. All data is archived. Request for data was granted verbally from the Associate Superintendent.

J. How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.

A written consent form will not be used. All students take the standardized assessments that data is pulled from. All data is archived.

K. Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.

Student data is part of a student's permanent record. Data collected and analyzed will not be identified with specific subjects. All students take the standardized assessments that data is pulled from. All data is archived. Student data will not be connected to a name for research purposes.

L. Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher, or employer? If so, explain.

Only students who have taken the test will be part of the study. I will not have any information from students who are not assessed. All students take the standardized assessments that data is pulled from. All data is archived.

M. What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with the data after the study is completed?

All student data is managed within a student management system at both district level and NWEA. Data is stored for all years a student is assessed with NEW MAP. All data is archived.

N. If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?

No. there are not any risks involved in this study. Subject will not receive any benefits.

O. Will any data from files or archival data be used? If so, please describe.

All information used will be archived data. Data is stored in a student management system at the district level and also in a NWEA databased monitored by NWEA.