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The Effectiveness Of Read 180 At A Cooperative High School In New England (CHSNE)

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Preferred Citation

THE EFFECTIVENESS OF READ 180 AT A

COOPERATIVE HIGH SCHOOL IN NEW ENGLAND (CHSNE)

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THE EFFECTIVENESS OF READ 180 AT A
COOPERATIVE HIGH SCHOOL IN NEW ENGLAND (CHSNE)

ABSTRACT

Over the last decade, schools have employed a variety of intervention plans to assist below grade-level achieving students to quickly gain missing skills with the ultimate goal of allowing these students access to proper grade level curriculum. These intervention plans have been directly aligned with educational laws in the US such as the *No Child Left Behind Act* and the *Every Student Achieves Act* with very little success. There has been a great deal of research conducted on the most effective and efficient ways to properly diagnose, address, and implement these intervention plans; however there is a lack of literature examining the relationship of the alignment of standards that are common to individual intervention programs and those of the state and federal government. This study fills a gap in the literature and extends the dialogue on this topic focusing specifically on whether Scholastic's READ 180 intervention program is a suitable Response to Intervention. The program allows struggling readers to gain reading skills and achieve credit in a standard high school Freshman English course. The researcher notes alignment of common standards in the READ 180 program and the curriculum of the standard Freshman English course at the Cooperative High School of New England (CHSNE). This study concluded that students who received the READ 180 treatment saw Lexile growth three times greater than the students who did not receive the treatment; however these students earned a passing grade in the standard high school Freshman English class six times less frequently. Further, this study determined that, even though there is direct alignment in the standards in this standard English class and the READ 180 intervention program, growth in the READ 180 standards did not equate to the same growth in the standards in the English course or attainment of credit.

University of New England

Doctor of Education
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CHAPTER 1: INTRODUCTION

Adolescent literacy has become a significant issue in recent years in the United States because of critically low reading levels (Alliance for Excellent Education, 2005). Specifically, one in every three people in the US drop out of high school and one in four families in America are identified as low income and the parents do not have sufficient schooling to improve their economic status (Education News, 2018). Many experts feel the fastest way to improve literacy among adolescents is through Response to Intervention (RtI) or, the use of data which can "diagnose student needs and provide intensive interventions for struggling learners" (Alliance for Excellent Education, 2005, para 6). The Response to Intervention model uses assessment data to inform and leverage available resources to advance student literacy rates. Further, following a format which allows data to drive programming decisions and intervention strategies for struggling readers is the most effective way to allow these students to gain the crucial life skill that society mandates (Alliance for Excellent Education, 2005).

The Cooperative High School in New England (CHSNE), a pseudonym for the site of the study, serves students from four different communities. The student population is roughly 1,100 with a certified teaching staff of 125. CHSNE first opened in the fall of 1958 with an attendance of 474 students. "Dream. Think. Do." These three words greet the students and staff of CHSNE as they pull into the parking lot every morning. Taken together, they summarize the mission of the school, which is to provide opportunities for students to explore their interests and abilities, create supported pathways for students to pursue them, and ensure that students leave school both college and career ready. This mission is directly achieved through the varied and curricular opportunities provided to the students within the building, the community, and/or through

distance learning. Further, CHSNE constantly provides professional development for the staff that directly relates to current programs and initiatives.

This school delivers academic expectations through a wide range of academic courses and electives to support 21st-century learning expectations. CHSNE also offers a robust and wide range of athletic and non-athletic extracurricular activities. CHSNE was recognized by the *Excellence in Education Initiative* in 2016 as the high school of the year within its state. This initiative recognizes public schools that meet high standards of excellence and can serve as representatives of the many excellent schools throughout the state. This level of excellence has been achieved through a number of initiatives and programs that have been adopted by CHSNE over the last decade.

For example, in 2008 the high school received data for the incoming freshman class that showed 42% of students were reading below the 8th grade reading level. Students were entering CHSNE in the fall without the basic reading skills necessary to complete standard high school curricula. The administration selected the READ 180 reading intervention program over other similar programs to focus on this literacy issue. The goal of this intervention was to use the READ 180 program to fit the needs of the students at CHSNE and help with rapid growth of their literacy rates. This original intervention plan was implemented to quickly increase the literacy rates of CHSNE's students who were reading below the 9th grade level as they began high school. After the intervention increased these students' reading levels, staff enroll students who improved their ability to read at least to grade level in standard high school courses. This intervention began at the start of 9th grade for these students.

CHSNE serves some of the wealthiest and poorest students and families in the state. The premise behind utilizing programs such as this reading intervention program is to increase

literacy and then educate students who attend CHSNE from various sending schools and very different socio-economic backgrounds. Specifically, CHSNE has roughly 20% of its student population who qualify for free and reduced lunch. CHSNE also services a large transient population. Historically, students from one specific sending school have not achieved at the same rate as other students at CHSNE. This lack of achievement is represented in the form of below average reading scores and high failure and dropout rates. The students from this same sending school are also the largest percentage of socioeconomically disadvantaged students attending CHSNE. Therefore, roughly a decade ago, CHSNE began to create approaches to specifically focus on these struggling learners. These students historically have represented the students who were most likely to drop out of high school (Wissick, 2010).

In a 2009 survey conducted in the United States, 51% of high schools that responded stated they began to use a RtI program or similar intervention strategy to address students struggling with literacy. This was an increase from just 16% the year earlier (Spectrum K12, 2009). READ 180, produced by Scholastic and Voyager Passport and produced by Sopris Learning, are two intervention programs designed for students in elementary through high school whose reading ability is below average, which is distinguished by Scholastic as less than proficient and is classified as either Basic or Below Basic (Wissick, 2010). These programs are designed to fill gaps in students' literacy skills through the use of a computer program, specific literature considered to be of high interest to students, and a direct instructional model in reading skills (Wissick, 2010). The software component of the program is interactive and intuitive. It tracks and adapts to each student's progress. According to Wissick, "In addition to the computer program, the READ 180 program includes workbooks designed to address reading comprehension skills, paperback books for independent reading, and audiobooks with

corresponding CDs for modeled reading" (2010, para 5). READ 180 has been found to have positive and lasting effects on the comprehension levels and general literacy achievement for adolescent learners specifically those who are struggling readers (Wissick, 2010).

READ 180, owned and developed by Scholastic, is a comprehensive student reading support program that allows for the measurement of a student's reading level, measured in scientific units called Lexiles. A Lexile is an individual reading measurement that represents a person's ability to read, but little research exists on whether this increased readability reflects students' ability to pass standard assessments. Scholastic uses a test called Scholastic Reading Inventory (SRI test) to measure the Lexile scores of individuals,

> Scholastic Reading Inventory (SRI) Interactive is a computer-adaptive assessment designed to measure how well students read literature and expository texts of varying difficulties. This psychometrically valid assessment instrument can be used as a diagnostic tool to place students at the best level in the program so they can read with success. (What works clearinghouse, 2007, para 6)

Voyagers and READ 180 both have a computer-based instructional model that supplies the intervention program in the form of direct instructional techniques to students who read below grade level with the specific purpose of quickly increasing these students' Lexile scores by "…merging brain science, growth mindset, ongoing assessment, professional development, and knowledge necessary for school and life" (What works Clearinghouse, 2007, para 4). The READ 180 program, developed more than 15 years ago, is a product that works as a blended learning intervention designed to assist schools and districts by increasing the reading comprehension, academic vocabulary, and writing skills of struggling readers from grades 4 through 12 (READ 180, 2018).

Statement of Problem

Students attending CHSNE who read below grade level have a difficult time passing classes and obtaining credits in standard high school curriculum. Further, little research has been done to identify the impact the READ 180 program has on students' overall ability to earn credit in other disciplines such as a standard high school English course. The READ 180 program was designed with the explicit purpose of gathering data about students' literacy rates and using that data to make informed decisions about necessary interventions and programming for struggling readers. However, what has not been researched is the student's ability to apply these skills in standard high school courses.

Based on Scholastic's SRI scores, this intervention has been successful. The 9th grade struggling readers who have entered CHSNE over the last 10 years have all raised their Lexile scores to or close to grade level within their first two years of high school. However, even though these struggling readers increased their Lexile scores to the proficient level, there may not be a correlation between growth in this intervention and earning credits in the standard high school course. The initial findings of the first Scholastic SRI test 10 years ago revealed roughly 42% of incoming freshmen students were not reading at the 9th grade reading level upon entering high school, and from that group, 8% were reading near the 4th grade reading level. Most high schools do not have remedial programs and classes to fit the needs of incoming freshman who read at the 4th grade reading level. Despite this seeming success in remediating reading ability, the effect of READ 180 on students' overall learning in other disciplines such English has not been examined.

Purpose

The purpose of this study is to examine, using historical data, the effectiveness of the READ 180 reading intervention program on students' overall learning in a standard high school English course. The researcher looked at the correlation between the growth in SRI scores in the READ 180 intervention program and student achievement of credits in a standard high school Freshmen English course at CHSNE. Ultimately, this study examined if the READ 180 intervention program is a suitable program to allow students who read below grade level to become better readers, and established if this intervention, as it is currently presented, allows these students to earn credits in a standard high school curriculum.

Research Question & Design

The primary research question for this study was:

To what extent does academic achievement in standard high school Freshmen English differ for students who participate in the READ 180 and those who do not participate in the intervention?

A quantitative causal-comparative research design was selected as the appropriate methodology to conduct this study because it provides the researcher the ability to study cause and effect relationships with historical secondary data and to study data within a specific area of research. Further, a quantitative case study, when applied appropriately, can become a valuable way for a researcher to evaluate programs and develop theories (Creswell, 2013). The researcher compared the growth in Lexile scores of 40 students who received the READ 180 reading intervention, the dependent variable, and their performance in Freshmen English, the independent variable, compared to the performance of students enrolled in the same Freshmen English class but who did not receive the intervention (control group).

This is a quantitative causal-comparative study that used historical secondary data. These historical data points are from the 2018/2019 school year and consist of:

- Descriptive demographic information

- Scholastic Reading Inventory (SRI) scores

- Grades in a standard high school Freshmen English class

All information used in this study has been protected including student names, individually identifiable locations, and any descriptions which might identify students or staff from CHSNE. The results of this research examined if the READ 180 intervention is an effective intervention in preparing struggling readers to successfully complete high school level curricula. Judgement sampling has been used to collect this historical data, which allowed for the researcher to effectively analyze a specific sampling size that possesses a certain characteristic or trait and directly target the population of interest.

Identification of the Variables

The students identified to take the READ 180 intervention are the dependent variable in this study. The dependent variable was the final grade achieved in a standard high school Freshmen English class which show whether students received credit for a standard high school course. A causal comparative quantitative study effectively allows the researcher to make determinations from secondary data where the researcher has no control over the data or the assignments of groups. The focus of this study was to determine the impact of the READ 180 intervention on students' overall ability to earn credits in a standard high school English course. This research design was selected to determine if there is a causal relationship between the intervention program and students earning credit in standard high school courses.

Conceptual Framework

Response to Intervention (RtI) is an appropriate framework to guide this study as its purpose is to use instructional strategies to assist in improvement of students' skills. RtI allows educators to use a multi-tiered approach to properly identify students who have specific learning or behavioral needs. For students who struggle academically, the RtI process starts with the implementation of interventions that increase in difficulty to accelerate student learning. These services can be provided by a number of school personnel including regular education and special education teachers. Progress of students following RtI is very closely monitored to determine both learning rate as well the level of performance in each individual student so informed decisions can be made regarding the duration and intensity of the intervention itself (What is RtI?, 2017). For RtI to be most effective, the following components should be implemented with fidelity and rigor:

- High-quality, scientifically based classroom instruction. All students receive high-quality, research-based instruction in the general education classroom.

- Ongoing student assessment. Universal screening and progress monitoring provide information about a student's learning rate and level of achievement, both individually and in comparison with the peer group. These data are then used when determining which students need closer monitoring or intervention. Throughout the RtI process, student progress is monitored frequently to examine student achievement and gauge the effectiveness of the curriculum. Decisions made regarding students' instructional needs are based on multiple data points taken in context over time.

- Tiered instruction. A multi-tier approach is used to efficiently differentiate instruction for all students. The model incorporates increasing intensities of instruction offering specific, research-based interventions matched to student needs.

- Parent involvement. Schools implementing RtI provide parents information about their child's progress, the instruction and interventions used, the staff who are delivering the instruction, and the academic or behavioral goals for their child itself. (What is RtI?, 2017, para 2-5)

The student problem-solving model of RtI specifically looks at how the intervention and the implementation of the intervention work to increase student performance. Therefore, the RtI framework allows educators to use performance data of students to determine the overall effectiveness of the intervention based on the individual growth of each student. Further, the RtI model allows for the appropriate adjustments of the intervention to maximize student growth potential in the identified area of weakness (Tilly, Harken, Robinson, & Kurns, 2008). Therefore, the RtI framework was chosen as the framework for this study as two of the standard protocols for RtI are in the area of problem solving and standard protocol (Georgia Department of Education, 2012).

Assumptions, Limitations, and Scope

Throughout the process of this research, certain assumptions were made by the researcher. Properly identifying and stating these assumptions are part of the research process and can add to the overall acceptance of the research fndings. The assumptions identified are all based on previous studies involving a similar topic, and the potential exists that this study could prove some of these identified assumptions to be false. Specific to this study, which evaluated the effect of the READ 180 reading intervention program on student achievement in standard

high school courses, these assumptions could include the general characteristics of data, variable types, and trends in correlation. There is an assumption to this study that all teachers and administrators who have been involved in the READ 180 intervention are capable and knowledgeable about monitoring student progress so the program can undergo proper implementation. Also, there is an assumption that all data that is part of this study is accurate.

There are a few perceived limitations to this study. First, the majority of students who received the READ 180 intervention and whose records were included in this study came from the same sending school and the same town; therefore, they may not be representative of students from other sending schools. Furthermore, there are two different teachers who teach the READ 180 intervention at CHSNE as well as six different teachers who teach a standard high school Freshmen English class. Although both READ 180 teachers were trained simultaneously in the READ 180 programming, the consistency of the delivery of instruction to the students could be in question. The variety of student learning styles could also be a variable in this study as well as student attendance, tardiness, and suspensions.

Significance

This study is significant because it explored the relationship between READ180 as a Response to Intervention (RtI) and academic performance in a standard high school English course and it fills a knowledge gap about the effect of the intervention. Further, it is of great significance that high schools continually evaluate intervention programs like READ 180 to measure if the effectiveness of the intervention is in line with both the goals of the school and the needs of the students. Specifically, through a quantitative analysis of historical data, this study sought to examine if the READ 180 program at CHSNE is an effective intervention program to diagnose and treat students who read below the 9th grade level with the ultimate goal of having

these students successfully earn credits in standard high school courses. There is a lack of professional literature that has investigated the effectiveness of READ 180 as both an intervention tool to increase Lexile scores and lead to obtainment of credits and higher academic achievement in standard high school courses.

Further, the use of judgment sampling or purposeful sampling was beneficial to this project for, as Creswell (2013) explained, there are "…three considerations of the purposeful sampling strategy: deciding the participants or sites, selecting the sampling strategy, and determining the sample size" (p. 26). The use of judgment sampling, specifically equating the groups, fits this quantitative research best for it allows the researcher to decide on and control all participants of this study. This study examined in-depth the effect of the READ 180 reading intervention program on student achievement in standard high school courses at this cooperative high school in New England.

To further the current knowledge on this topic and fill potential gaps in previous studies, an argument can be made that there has been a shift in the education system in the United States. A 2014 Forbes article suggested that a college diploma presently possesses a similar value to that of a high school diploma 20 years ago, and this change has a clear impact on the purposefulness of a high school diploma (Farrington, 2014). High schools need to better prepare all students to be either college or career ready and therefore, appropriate programs need to be designed to accomplish this goal. This study may fill a gap in the literature with this premise in mind. While studies have been conducted that have focused on the effectiveness to the READ 180 in increasing Lexile scores, there is not an abundance of studies regarding the effectiveness of the READ 180 intervention program with specific attention to the correlation between increased Lexile scores and the ability to earn credits in a standard high school English course. However,

there is not an abundance of research that determines if there is a correlation between the effectiveness of the READ 180 program and students earning credits in standard high school courses.

Angela Duckworth (2016), a psychology professor at the University of Pennsylvania and author of critically acclaimed book *Grit: The Power of Passion and Perseverance* offered that students who earn the first twelve credits during their freshman year are most likely to continue with their education and graduate and, in her terms, possess more grit than those who cannot earn credit and continue. Accepting the premise that high schools operate more like colleges did in previous generations and Duckworth's finding that students are more likely to pursue graduation when they earn credits early in their education, coupled with this study that looks at early identification of struggling high school 9th graders and the creation of effective academic programming and pathways, findings would be unique and would fill potential gaps in literature.

Definition of Terms

Lexile(s): the numeric representation of an individual's reading ability or a text's readability or difficulty (Scholastic, 2008).

Judgement sample: A form of random sampling based on the selection or opinion from the researcher. Results from this form of sampling are subject to researcher bias (Creswell, 2013).

READ 180: A reading intervention program designed by Scholastic for students in grades 4 through 12 that read at least two years below grade level and meets all Common Core State Standards (CCSS) (Scholastic, 2008).

Standard high school freshmen English class: Distribution of students of multiple learning levels within the same grade in the same learning environment. This classroom focuses on a personalized learning environment to meet state standards.

Response to intervention (RtI): Early and continuous intervention plan for individual students that provides assessment and assistance in development of skills in a clearly identified area of weakness (What is RtI?, 2017).

Scholastic Reading Inventory (SRI): A computer-adaptive assessment designed to measure how well students read literature and expository texts of varying difficulties. This psychometrically valid assessment instrument can be used as a diagnostic tool to place students at the best level in the program so they can read with success (Scholastic, 2008).

Reading comprehension: The ability to process and understand the meaning of words as well as to integrate with prior knowledge.

Reading intervention: Programs designed to increase the levels of a student's ability to words as well as well as increase levels of fluency and vocabulary.

Targeted intervention: A student who receives extra services with the specific goal to accelerate student learning to close the achievement gap so the student can function within the universal, core group. Ideally, the goal is for the student to function as an independent learner without secondary tier supports (Scholastic, 2008).

Conclusion

Targeted reading interventions allow school staffs to make informed decisions using individual student data to create programs to support student achievement in specific areas of weakness. Literacy rates of students at CHSNE have been the focal point of such interventions for close to the last decade and specific data points have been identified that have added in the

decision-making process of school administration to create programs and plans for the students who struggle completing high school level curriculum. These data led to CHSNE identifying student literacy as a specific area of weakness.

> Reading may be the single most important skill for children to learn, as it's a portal to the world of knowledge. Despite major efforts to help improve literacy levels, the percentage of struggling readers has barely decreased over the last decade. (Helman & Burns, 2012, para 3)

CHSNE leaders also believe that students' literacy is of the utmost importance for students to be successful and this school to adhere to the mission that all students will graduate college- and career-ready.

This study starts with an introduction to the topic and problem of practice. The purpose of the study, the research question, a summary of the conceptual framework, and the assumptions, limitations, and scope of the study were also presented. Chapter 2 will probe the literature used in this study and Chapter 3 will identify the methodologies used in conducting this research, and analytical techniques used to collect and analyze data. Chapter 4 presents data and findings, and chapter 5 is the Conclusion.

CHAPTER 2: LITERATURE REVIEW

The purpose of this study was to examine the effectiveness of the READ 180 reading intervention program on students' overall learning in a standard high school English course. The researcher looked at the correlation between the growth in SRI scores in the READ 180 intervention program and student achievement of credits in a standard high school Freshmen English class. Ultimately, this study considered whether the READ 180 intervention program is a suitable program to support students who read below grade level to become proficient readers, and established if there is a correlation between this intervention, as it is currently presented, and students earning credits in standard high school curriculum. The goal of READ 180 is to increase student fluency in the domains of comprehension and general literacy achievement. Results that show positive growth in both the READ 180 intervention in the form of students progressing to a level of proficiency and attainment of passing grades in Freshman English would be an indication that the READ 180 intervention is an effective response to intervention.

This chapter contains a review of the history of the READ 180 reading intervention program as well as research associated with READ 180 and other intervention programs that have similarly stated desired outcomes. Several studies are also discussed and although not like this study, they have looked at the effectiveness of READ 180 with students who have reading difficulties. These studies are quantitative, qualitative, and mixed-method and look at the READ 180 intervention program versus other similar intervention programs and READ 180 versus standard curricula presented by various school districts as an intervention plan. The lens or conceptual framework will be discussed as well as literature related to the Common Core Standards, Response to Intervention (RtI), and the theoretical framework related to this study

that discusses the role of effective Transformational Leadership.

In a 2009 survey conducted in the United States, 51% of high schools that responded stated that they began to use a Response to Intervention (RtI) program or similar intervention strategy to address students struggling with literacy. This was an increase from just 16% the year earlier (Spectrum K12, 2009). This data suggested that schools need to create programming that will identify and treat students who cannot read with the specific purpose of giving these students the ability to earn credits in standard high school courses. The Cooperative High School in New England (CHSNE) began addressing struggling 9th grade readers 10 years ago. The initial findings of the first Scholastic Reading Inventory (SRI) test 10 years ago revealed roughly 42% of incoming freshmen students were not reading at the 9th grade reading level upon entering high school, and from that group, 8% were reading near the 4th grade reading level and a Response to Intervention (RtI) model was introduced to address this deficit.

A quantitative causal-comparative research design was selected as the appropriate methodology to conduct this study because it provides the researcher the ability to study cause and effect relationships with secondary data and to study phenomena within a specific area of research. Further, a quantitative case study, when applied appropriately, can become a valuable way for a researcher to evaluate programs and develop theories (Creswell, 2013).

Conceptual Framework

Over the past ten years the researcher has worked closely with a population of struggling high school learners who have been delivered the READ 180 intervention based on their inability to read at grade level. This study looked at the effectiveness of this intervention. Response to Intervention (RtI) was an appropriate framework to guide this study as its purpose is to use instructional strategies to assist in improvement of student's skills. RtI allows educators to use a

multi-tiered approach to properly identify students who have specific learning or behavioral needs. For students that struggle academically, the RtI process starts with the implementation of interventions that increase in difficulty to accelerate student learning. These services can be provided by several school personnel including regular education and special education teachers. Progress of students following RtI is very closely monitored to determine both learning rate as well the level of performance in each individual student so informed decisions can be made regarding the duration and intensity of the intervention itself (What is RtI?, 2017). For RtI to be most effective, the following components should be implemented with fidelity and rigor:

- High-quality, scientifically based classroom instruction. All students receive high-quality, research-based instruction in the general education classroom.

- Ongoing student assessment. Universal screening and progress monitoring provide information about a student's learning rate and level of achievement, both individually and in comparison, with the peer group. These data are then used when determining which students need closer monitoring or intervention. Throughout the RtI process, student progress is monitored frequently to examine student achievement and gauge the effectiveness of the curriculum. Decisions made regarding students' instructional needs are based on multiple data points taken in context over time.

- Tiered instruction. A multi-tier approach is used to efficiently differentiate instruction for all students. The model incorporates increasing intensities of instruction offering specific, research-based interventions matched to student needs.

- Parent involvement. Schools implementing RtI provide parents information about their child's progress, the instruction and interventions used, the staff who are

delivering the instruction, and the academic or behavioral goals for their child itself.

(What is RtI?, 2017, para 2-5)

The student problem-solving model of RtI specifically looks at how the intervention and the implementation of the intervention work to increase student performance. Therefore, the RtI framework allows for educators to use performance data of students to determine the overall effectiveness of the intervention based on the individual growth of each student. Further, the RtI model allows for the appropriate adjustments of the intervention to maximize student growth potential in the identified area of weakness (Tilly, Harken, Robinson, & Kurns, 2008). Therefore, the RtI framework was chosen for this study as two of the standard protocols for RtI are in the area of problem solving and standard protocol (Georgia Department of Education, 2012).

This causal comparative quantitative study examined if there was a correlation between increased Lexile scores and passing a standard high school English course. CHSNE used as the basis for this study with a population of roughly 1,100 students, has used the READ 180 software for more than ten years to determine and track the individual Lexile scores of all students. Students whose Lexile score is at the lowest level, known as Below Basic, are entered into a reading intervention program at the start of 9th grade designed to boost their reading scores with the goal of having students read well enough to complete high school curriculum.

The researcher has been the vice principal of CHSNE for the last 13 years as well as previously teaching English at CHSNE for 11 years. These experiences have created a special interest for the researcher to see students succeed at CHSNE. The researcher has lived a constant struggle with students who enter CHSNE after being socially promoted from middle school. These students did not pass enough courses in middle school to be promoted to high school but

rather were sent on to high school because they were too old to stay in middle school. The lack of skills and being socially promoted result in these students entering high school without the ability to complete entry-level curriculum.

Common Core

The Common Core standards were implemented to help create a generation of learners in this country that will leave high school college and career ready however, statistics suggested that high school graduates in this country are not prepared for college.

> Today, far less than half of U.S. 12th graders are 'college ready.'" The National
> Assessment Governing Board estimates not quite 40 percent are college ready. The ACT
> folks estimate 26 percent are college ready across the four subjects that comprise their
> suite of questions. (Finn, 2015, para 8)

This data suggested that high school graduates are not prepared for the rigors of the curriculum colleges offer. If these students are not prepared after receiving the standard high school curriculum, then there is no way the students who enter high school with a 5th grade reading level will ever meet this standard.

The Common Core State Standards (CCSS, 2019) asks students to read more complex, fact-based forms of literature that require students to have background knowledge of grade appropriate science and social studies topics. It is left to each individual state to determine how these standards will be met. However, these standards are impossible to achieve for a high school student who reads four or more grade levels below their actual grade. Schools must respond to these vigorous goals in the Common Core with equally vigorous Response to Intervention (RtI) programs that will allow schools and teachers to identify where an individual student struggles and then create a plan to fill those gaps. A 2015 study conducted by the John

Hopkins School of Education reported that, despite the attempts of school districts to implement early literacy intervention programs inspired by No Child Left Behind (NCLB), 66% of all eighth-grade students failed to score proficient in the National Assessment of Educational Progress (NAEP). This same study went on to find,

> Unless these students receive the intensive reading instruction they need in high school, their chances of graduating and securing gainful employment are slim to none. The Baltimore Curriculum Project and the Johns Hopkins Institute for Education Policy hosted an event recently to discuss the adolescent crisis in America. (Moje, 2017, para 1-2)

The goal of the Common Core is to have all students graduate high school college and career ready. The only way schools can accomplish this with their most struggling readers is to use the RtI approach.

Response to Intervention: READ 180

READ 180, produced by Scholastic, is one such intervention program designed for students in elementary through high school whose reading ability is below grade level, which is distinguished by Scholastic as less than proficient and is classified as either Basic or Below Basic (Scholastic Research and Validation, 2008). The READ 180 program is designed to fill gaps in students' literacy skills using a computer program, specific literature considered to be of high interest to students, and a direct instructional model in reading skills (Scholastic Research and Validation, 2008). The software component of the program is interactive and intuitive. It tracks and adapts to each student's progress. "In addition to the computer program, the READ 180 program includes workbooks designed to address reading comprehension skills, paperback books for independent reading, and audiobooks with corresponding CDs for modeled reading"

(Wissick, 2010, pp. 938-939). READ 180 has been found to have positive and lasting effects on the comprehension levels and general literacy achievement for adolescent learners specifically those that are struggling readers (Wissick, 2010).

Scholastic, which developed and owns the READ 180 program, describes the comprehensive student reading support program and claims that "…world's leading learning solution is proven to raise reading achievement by merging brain science, growth mindset, ongoing assessment, professional development, and knowledge necessary for school and life" (READ 180, 2018, para. 1). The READ 180 program was created in 1985 and the product works as a blended learning intervention designed to assist schools and districts to increase the reading comprehension, academic vocabulary, and writing skills of struggling readers in grades 4 through 12 using both a computerized learning module and comprehensive teacher instructional practice (READ 180, 2018).

READ 180

READ 180 was created by Dr. Ted Hasselbring from research started in 1985. Hasselbring, who was part of a Cognition and Technology Group at Vanderbilt University, used a grant from the United States Department of Education, Office of Special Education, to develop a computer program that "used student performance data to individualize and differentiate the path of computerized reading instruction" (Scholastic, 2015, para. 2). This program later became what is known as READ 180. Hasselbring and his peers first put the READ 180 program to work in The Orange County Literacy Project where over 10,000 struggling readers were used to collect data based on their literacy rate. This data drove the instructional model of READ 180 and personalized the computer-based reading program for each student. "The results were overwhelmingly positive with regard to these students being able to increase reading

comprehension, which led to the partnership between Scholastic, the Orange County school district, and Vanderbilt to license the READ 180 program with the program's first launch taking place in 1999 prior to the implementation of the Common Core Standards" (Scholastic, 2015, para 7).

Scholastic and the READ 180 program have addressed including the Common Core Standards, to which all students are expected to be held, with the creation and implementation of READ 180 Next Generation (Scholastic, 2013). Dowling (2016), in her dissertation that reported on teachers' attitudes regarding the READ 180 program, examined if the updated Next Generation version of READ 180 fit the criteria of the Common Core Standards and found that Next Generation includes a variety of types of literature that are updated and are of high interest. This updated version of the program also offers a variety of informational texts aligned with Common Core State Standards (Wissick, 2010). The informational texts are accompanied by text-based comprehension questions that aim to build higher-order thinking skills that accelerate students to grade level (Dowling, 2016). Dowling concluded that the READ 180 Next Generation program does in fact align with the Common Core Standards, and programs like READ 180 can and will be successfully implemented into schools and districts if adequate resources are dedicated to the program (p. 12). The study further concluded that following this formula will ensure districts are properly preparing students to meet the Common Core Standards. Having adequate funding, resources, support, and professional development for teachers, principals, and district leaders is integral to ensuring the success of a program aligned to prepare students for Common Core standards (Dowling, 2016).

Since the first launch of the READ 180 program, numerous studies were conducted to evaluate the effectiveness of this reading intervention program and further its effectiveness

within certain sub-groups within the school setting especially special education students or students who are eligible under Section 504 to receive modifications or accommodations from schools. There is support for the READ 180 program as an effective reading intervention program for struggling readers. Scholastic stated that they have helped over one million students become better readers and further references their multi-tiered approach that combines a *Positive Behavioral Interventions and Supports* (PBIS) method and an RtI model to deliver universal, targeted, and intensive supports (Scholastic, 2015). "The What Works Clearinghouse determined that the extent of evidence for the impact of READ 180 on student achievement is medium to large for general literacy achievement and for comprehension" (What works Clearinghouse, 2007, para 9). Scholastic's READ 180 has developed skills of struggling readers for over a decade and therefore has a plethora of data that relate directly to the importance of early identification of struggling readers to create appropriate personalized learning opportunities.

Intervention

School districts across America have collected data that shows that more and more high school students do not read at an appropriate grade level to function within society upon graduation and are certainly not college- and career-ready. Further, this data also suggested that high schools need to do a better job of implementing appropriate intervention programs to assist these struggling learners. It is of the utmost importance to this proposed study that schools, specifically high schools, create and offer appropriate reading intervention programs for their struggling readers. The National Center for Educational Statistics (NCES) stated that approximately 3.5% of high school students drop out of school yearly and only roughly 75% of students who are entering the 9th grade eventually graduate (as cited in Chapman, Laird, & KewalRamani, 2010, p. 4). The NCES attributed poor academic skills rooted in below grade-

level reading ability as a major cause for students not completing high school and further asserted that schools must implement appropriate interventions "that address both their proximal needs (i.e., what they need right now to be successful in their current courses) and distal needs (i.e., what they need to close large skill gaps) to assure graduation" (Chapman et al., 2010, p. A14). Findings from the National Center for Learning Disabilities (NCLD) suggested that intervention programs such as READ 180 serve a purpose outside of the intervention itself and can be a very powerful tool to identify struggling readers at an early age.

If early identification of struggling readers is successful, schools and districts can create appropriate personalized interventions and learning opportunities for each student, and these learning opportunities can be measured and evaluated through a competency-based evaluation system, which would truly measure exactly what students know. The No Child Left Behind (NCLB) act stated that one in 16 public school students has an individual education plan (IEP) and one in fifty has a 504 plan but 76% of students who repeated a grade in 2014/2015 were general education students (National Center for Learning Disabilities, 2017). Programs like READ 180 have become a large part of the treating shortcomings in adolescent literacy in the United States; however, the greater importance of intervention programs such as READ 180 is using their data collection software for early identification of struggling readers so appropriate and individualized programs can be created for these students.

Counter-Narrative

Interventions such as READ 180 have also been criticized heavily and have not had success within some schools and districts across the United States. Whitford, in her 2011 publication in the *Language Arts Journal of Michigan*, *READ 180: Policy Gone Wrong*, stated that her district implemented the READ 180 intervention program completely as a response to

NCLB, but her students did not achieve many of the gains that other schools and districts did, citing specifically the rigidity of the program (Whitford, 2011). However, Whitford did state that the READ 180 program was successful in properly identifying the students in her district that were in most need of a reading intervention program.

The NCES (2010) stated that many high school staffs have attempted to implement reading intervention programs, like READ 180, that were offered to students either before or after school or in place of an English class. This schedule has often failed as these struggling readers who most often have attendance problems as well, so consistent participation in the intervention that takes place prior to school or right after is unlikely. The NCES stated:

> Students are more likely to engage in intervention programs when participation in such programs is seen as directed rather than invitational. The best ways to accomplish this shift are to embed intervention courses into the school's/student's master schedule, require the student to attend, track attendance and participation rates, and follow up with students who display disengagement from the intervention classes. (2017, p. 8)

It is imperative for an intervention program such as READ 180 to be to be offered at a time that the most students in need can access the programming while at the same time, the students who participate in the intervention are still able to access other curriculum and programs at the school that are of high interest to them and allow them to accumulate credits towards graduation. If this does not happen, it is likely that students will lose interest in school and the intervention will fail. However, if the READ 180 program is used as a diagnostic tool for early identification of struggling readers and then paired with curriculum of high interest and a competency-based learning environment, struggling learners will have a unique learning

opportunity during which they can gain valuable skills and earn credit towards a high school diploma.

Transformational Leadership

The Bass Transformation Leadership Theory suggested that an effective transformational leader is capable of establishing and growing relationships with a variety of people and further, suggests that an effective leader using this theory will be able to transform people's expectations, perceptions, and aspirations while establishing a culture of cohesion, commitment, trust, and performance (Bass, 2008). The data collected in this study may allow for personnel, teaching, and administrative oversight and growth among all these characteristics that Bass describes and therefore was an effective lens to measure the success of this study.

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READ 180 vs Other Interventions

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Scholastic Research (2008) conducted a quasi-experimental study that measured the effects of the READ 180 program on 9th grade students in California. Students who were considered struggling readers were selected for that study who scored less than proficient in the Basic or Below Basic performance level the previous year on the state reading test. Students were measured against a comparison-group of students based on reading scores and demographic information. Effectiveness ratings were based on the findings of comparing the 285 students who received the READ 180 intervention and the 285 students in the comparison-group who received an alternative intervention. The study reported student outcomes after one year of program implementation (Scholastic Research, 2008). That study reported a statistically significant effect of READ 180 on the English Language Arts subtest of the California Standards Test (Scholastic Research, 2008). Similar to the Scholastic study, it is important to point out that Scholastic owns and has developed the READ 180 and there is a potential for the findings are biased.

Holland, Jones, and Parker (2013) also compared the effectiveness of the READ 180 intervention program with that of Voyagers Journeys III. This study, conducted during the 2010-2011 school year in an urban high school in Texas, specifically looked at how these two programs benefited student literacy rates in an RtI program. The SRI was used to measure student growth for the READ 180 model while the Texas Assessment of Knowledge and Skills (TAKS) was used for Voyagers. There were 172 9th grade students who took a full year of the READ 180 intervention while 114 students took a full year of the Voyager program. An analysis of covariance or ANCOVAs and t-tests were used to determine if either program had a significant impact on reading achievement. The ANCOVAs results showed that both intervention programs had a significant impact on student literacy rates with the Voyager group making greater gains by a .05% degree of significance over the one-year time span of this study.

The findings from the t-test showed that the students in the READ 180 program made significant gains in overall Lexile scores in literacy over the students who were part of the Voyagers sub group. Holland et al. (2013) determined that both intervention programs were effective tools for students when used as an RtI but could not determine which program was more successful.

READ 180 vs. Standard District Curricula

Haslam, White, and Klinge (2006) conducted a quasi-experiment that studied the effects of READ 180 on middle school students in Texas. The students in this study, who attended the Austin Independent School District of Texas, were all classified as struggling readers. Intervention students were paired with students in a comparison-group through a one-to-one propensity score matching method. Effectiveness ratings were based on the results from comparing the 307 students who received the READ 180 intervention and the 307 students who

received the district's standard curriculum. This study was based on data collected from student outcomes after one year of the program. Haslam et al. (2006) found that the students who received the READ 180 program performed statistically significantly better on the Texas Assessment of Knowledge and Skills Reading Test.

Similar to Haslam, White, and Klinge (2006), Lang, Torgesen, Petscher, Vogel, Chanter, and Lefsky, (2008) conducted a randomized controlled test of almost 1,300 ninth-grade students in seven different high schools in Florida. These students were also classified as struggling readers. Students were chosen for that study who were classified as students in the high-risk or moderate-risk classifications as determined by the Florida Comprehensive Assessment Test (FCAT). Effectiveness was determined using the findings from comparing the 100 high-risk students who received the READ 180 program against 90 high-risk students who received the district's standard curriculum. Also, a comparison was used between 207 moderate-risk students who received the READ 180 intervention and 202 moderate-risk students who received standard curriculum. Similar to the findings of Haslam et al. (2006), Lang et al.'s study also reported student outcomes after one year of program implementation. Lang et al. (2008) also reported a statistically significant effect of READ 180 on the Florida Comprehensive Assessment Test for moderate-risk students (Lang et al., 2008).

White, Haslam, and Hewes (2006) conducted a quasi-experiment that examined the effects of READ 180 on three groups of students in twelve Arizona schools. This group of students were all in the READ 180 program and were reading at least one level below grade. These students were compared to a group of students with a similar reading level and demographics who were not receiving the READ 180 intervention. Rather, they were receiving the standard district curriculum. Effectiveness ratings were based on the findings from three

cohorts of students. The first cohort was developed during the 2003/2004 school year and had 826 grade 9 students who received the READ 180 intervention compared to the 826 students who received standard district curriculum. In 2004/2005 the second cohort was formed the same way, however consisted only of 815 students. Finally, Cohort 3 was formed the next school year with the same perameters and consisted of 1,029 in each group. The study also reported findings after the first year of program implementation. White, Haslam, and Hewes, (2006) reported a statistically significant positive effect of READ 180 on the TerraNova Reading Test among cohort 2 and cohort 3 students.

McWhorter (2009) conducted a quasi-experimental study that looked at the effects of the READ 180 intervention program and at its effects on reading achievement scores of 9th grade students in a Title 1 eligible high school in South Carolina. There were 89 students who were a part of this study which was conducted from 2008-2009. The district began using the READ 180 intervention as a response to below average testing scores and the school's continued failure to make annual yearly progress (AYP). Students were assigned to either the READ 180 program or the standard district curriculum for one semester based on results from the Measures of Academic Progress-English Language Arts (MAP; Northwest Evaluation Association, 2014). There were 89 students placed in the group that would receive the READ 180 intervention. These 89 students represented the students who performed in the lowest 25th percentile and had no-better-than-average test scores, but those test scores were on the decline as well. The other group of students who received the standard curriculum included 365 students. MAP reading pretest scores were used to compare both groups at the end of the study. The MAP pretest scores were also used to help control for established group differences. In contrast to previously reviewed studies, the overall results of McWhorter (2009) revealed no significant difference in

the READ 180 MAP reading scores when pre- and post-test scores were analyzed. This study provided no statistical support that the READ 180 intervention program had a positive effect on students when comparing both curricula (McWhorter, 2009).

Loadman, Lomax, Moore, and Zhu (2010) also conducted a study on the effects of the READ 180 intervention; however, this study focused on low-performing incarcerated youth in the state of Ohio. The study was conducted from 2006-2008 at the Ohio Department of Youth Services (ODYS). There were 1,149 students who participated in this study. Each was between the ages of 14 and 22 years old and read at the 9th or 10th grade reading level. Students were randomly assigned to one of two groups with 609 being assigned to the READ 180 intervention and the remaining 540 assigned to the standard English curriculum. This study used two evaluations to establish grouping of students as well as to collect data with pre- and post-tests The Scholastic Reading Inventory (SRI; Scholastic, 2013) was used to select students for the study as well as for pre- and post-testing. The California Achievement Test (CAT; CTB Macmillan/McGraw-Hill, 2015) was also used as a pre-post measurement (Loadman et al., 2010).

The Loadman et al. (2010) study, unlike the others reviewed thus far, was conducted over a 2-year span and the results from the final longitudinal linear model showed that the READ 180 program had a positive impact on these low performing incarcerated students in Ohio. Further, the study suggested that the experimental group that received the intervention made a gain of 16.01 more SRI points (Lexiles) compared to the group that did not receive the READ 180 programming at the end of this trial. Loadman et al. (2010) also found that the experimental group who continued with the READ 180 intervention for more than two quarters gained 45.87 more SRI points compared to the standard English curriculum (Loadman et al., 2010). Overall

the study found that the there was a statistically significant impact that the READ 180 curriculum had on these incarcerated students compared to the standard English curriculum by 70-80 SRI points in one academic year (Loadman et al., 2010, p. 3).

Rakestraw (2013) conducted a study that evaluated the effectiveness of READ 180 as a Response to Intervention (RtI) tool. The one-year study in 2010 included 7th and 8th grade students in a middle school in Georgia. This targeted intervention group consisted of 59 seventh grade students and 43 eighth grade students who scored 810 or less on the Georgia Criterion Reference Competency Test. The control group in this study was randomly selected and consisted of 102 seventh graders and 102 eighth graders.

The experimental group received the READ 180 intervention and the control group received the standard school curriculum. The 2010 and 2011 Georgia Criterion Referenced Competency Test (CRCT) was used to compare student progress as part of the non-equivalent control group design. An ANCOVA model was used to analyze and compare differences in the CRCT scores between the experimental groups and the control group. Rakestraw (2013) found the READ 180 program did have a positive influence on student's literacy rates. This is evidenced by the fact that the average test scores by students in the experimental group that participated in this study grew by 13.34 points which signifies student growth in reading comprehension (Rakestraw, 2013). However, this study did not determine that even with this significant growth in literacy rates, there was no the same significant growth in academic courses.

Another study that looked to evaluate the effectiveness of the READ 180 program with struggling high school readers was conducted by Smith (2012) in Jacksonville, Florida. This study had 303 students participate in the READ 180 intervention program while almost 2,000

students were given the standard high school English curriculum. This study used the ninth grade Florida Comprehensive Assessment Test (FCAT) (Florida Department of Education, 2010) to determine if students were eligible for the READ 180 intervention. Pre and post-test FCAT scores were used to monitor student's progress.

The results of this study suggested that READ 180 was not an effective way for students to achieve higher scores on the FCAT. Only 33% of the students in the READ 180 group for this study met the yearly minimum gain on the FCAT. This study did however determine that students classified as a minority or with low socio-economic status did perform better on the FCAT if they had received the READ 180 intervention. Students who came from a middle class, white families did not see the same gains. Smith (2012) determined that the READ 180 program was too expensive for producing such minimal gains in student achievement on the FCAT and for the program to be potentially successful, the district would need to employee other interventions as well (Smith, 2012).

Cost of READ 180 vs Voyager

The starting cost for READ 180 is roughly $30,000 for 60 licenses. Along with the licenses comes appropriate teacher and student materials, training for staff members, and technical support. These licenses become property of the district and because the recommendation of READ 180 is a maximum of 15 students in a READ 180 intervention class, this pricing allows for a district to create four sections of the intervention at this pricing (Brown, 2019).

The cost of the Voyager Universal Literacy System is roughly $244 per student for the first year and them $160 per student each year after. Included in this per pupil cost is student learning materials and assessment record sheets for each grade level as well as appropriate

teacher support materials including "…teacher's guides for reading intervention and enrichment activities, a classroom management packet, a literature library, and a teacher supply pack with manipulatives, CDs, puppets, games, and additional materials" (What works clearinghouse, 2007, para 6). In comparison of these two literacy intervention programs that are designed to remediate the same needs of struggling readers, the Voyagers intervention is half the cost of READ 180 supplying almost identical support, materials, and licenses. The CHSNE has spent close to $30,000 a year on the READ 180 program over the last ten years.

Mixed Method Research

Vogel (2013) used a mixed method approach to study 21 9th grade students in a southern California high school. This study looked to measure the effectiveness of READ 180 with student's cognitive reading abilities. This study was 16 weeks in length, and the data was collected from interviews, observations, and student documents, as well as Scholastic Reading Inventory (SRI) test scores.

The qualitative findings for this study came in the form of student interviews and showed that students with a higher SRI level liked READ 180 but did not find it interesting or challenging. The students with a lower SRI level felt that READ 180 was challenging for them and sometimes felt it was too challenging. Several students shared that having a teacher work with them directly in a one-to-one manner was very effective. Students shared that they also felt that having choice in selecting reading materials was positive and that having time to work on their individual needs related to struggling with literacy was also helpful (Vogel, 2013).

The teacher was also interviewed as a part of this study and shared that she felt that the READ 180 testing was not accurate compared to other standardized tests. The instructor also thought that READ 180 was a very basic program and was not challenging enough for students

who were not at the Basic or Below Basic level. The teacher concluded that READ would best serve students who were at least three grade levels behind in reading skills.

Vogel (2013) also used quantitative data in this study to measure the effectiveness of the READ 180 program. This study looked at the SRI (Scholastic Reading Inventory) portion of the program and reports that 9 of the 21 students raised their SRI level during the 16-week period. Also, students took 147 reading quizzes and passed 86. This study also signifies that the READ 180 program was effective in treating students who read far below grade level however, this study does not make a comparison to see if this growth in Lexile scores translates into these students passing standard high school courses which was the purpose of the proposed study.

Vogel's 2013 study showed that the READ 180 program was useful for at-risk high school students that were struggling readers if the instructor properly followed the READ 180 model. Further, the study showed students were successful in making gains in their reading abilities using READ 180. This study attributed many of the successes of READ 180 to the fact that the program has a very large one-to-one component (Vogel, 2013).

A similar study was conducted by Rajana (2012) examining the effectiveness of the READ 180 program including nine district high schools. The district had been using READ 180 as their primary intervention tool for 6 years at the time of this study. The results of this study suggest that over two-thirds of the participants in the READ 180 intervention had significant Lexile growth during this one-year study. Specifically, the results showed that high school students were the group that gained the least in Lexile growth throughout this district. Gains were still achieved however not as strong as the gains made at the middle schools and alternative schools from this district that participated in the study.

Rajana (2012) also concluded that the READ 180 intervention was a valuable and effective tool for high schools when the program itself was followed and the appropriate time was allocated by instructors; however, this study did not make a connection to the success of students reading growth and the achievement of credits in standard high school curriculum.

Gober highlighted the depth and reach of Scholastic's READ 180 program in her 2014 dissertation that studied the effects of the READ 180 program on non-English speaking students. Gober stated, "According to Scholastic (2013b), READ 180, is implemented in over 40,000 classrooms, serves more than one million students, and is the most thoroughly researched and documented reading intervention program in the world" (p. 26). The findings are mostly positive with regards to the effectiveness of the READ 180 intervention in treating struggling readers as well as being used as a diagnostic tool.

Gober (2014), in her continued analysis of the READ 180 program and how interventions such as this program are necessary for school districts to reach struggling students, suggested that programs like READ 180 are becoming a necessity and no longer can districts rely on what has worked in the past as working in the future. Gober (2014) suggested that districts that truly want to be successful in reaching all their students and creating successful pathways for everyone need to collect and analyze their own data and make proper consideration about programming that would be most effective for their students. The next step in scholarly findings is to address the effectiveness of the READ 180 program as a tool that allows these struggling readers to earn credits in standard high school courses. Currently, research has shown the effectiveness of READ180, but little-to-no research has examined whether participation in the intervention promotes academic achievement in standard curriculum. Studies have compared READ180 with

standard curriculum, but it is clear they did not look to see how students who had exposure to READ180 performed academically in content areas.

Conclusion

For high schools to have students graduate and be college or career ready, schools are now required to not only properly identify which students are struggling with literacy, but also create programs and interventions that will close any gaps in literacy. Scholastic has created an online program that completes both of these tasks. READ 180 allows schools to properly collect and analyze data that provides statistical information on individual student's literacy rates and provides a computerized learning model to allow struggling readers, identified through the collected data, to obtain grade-level reading ability with the goal of earning credits in standard high school curriculum.

Twelve studies were reviewed that have significantly contributed to the field of youth literacy and the need for schools to identify struggling readers and implement appropriate programs to remediate these conditions. Each of these twelve studies assessed the effectiveness of the READ 180 literacy program. Many of these studies did that by comparing a control group of students who received their district's standard English curriculum versus the experimental group of students who received the READ 180 intervention. Haslam, et al (2006), Lang. et al (2008), Loadman, et al (2010), Ranjana (2012), Rakestraw (2013), Vogel (2013) were all studies conducted in this manner that did find that the READ 180 program had a statistically significant impact on increasing literacy rates among high school students. Further, each of these studies also found the READ 180 program had an even greater effect on student's growth in literacy when those students were classified as struggling readers or disadvantaged.

Conversely, Smith (2012), who conducted a similarly formatted study, found the READ 180 program did not significantly impact student's literacy rates and further found that the cost of the READ 180 program made it prohibitive. It is important to note that Smith (2012) also stated that the implementation strategy that the READ 180 program requires was not followed, which could have had an impact on the findings of this study.

McWhorter (2009) concluded that there was not enough of a statistical finding that would lead to either the READ 180 program or the standard district English curriculum being more superior than the other. However, McWhorter (2009) did find that the READ 180 program had a significant impact on students' Lexile growth who were labeled as struggling readers. Loadman, et al. (2010), Ranjana (2012), and Rakestraw (2013) also found that struggling readers who were involved in the READ 180 program did in fact have significant Lexile growth while for students who were considered as proficient readers, the impact or growth was less.

Scholastic Research (2008), Holland et al (2013), and White (2005) conducted studies that directly compared the READ 180 program with an alternative but similar reading intervention program. Scholastic (2008) and White (2005) found that the READ 180 intervention program out performed by a statistically significant amount the other program in this comparison. It is important to note however, that Scholastic owns and has developed the READ 180 program. Holland et al. (2013) were unable to determine if the READ 180 program or its counterpart performed better but did again note that when it came to looking specifically at the growth of struggling readers, READ 180 allowed for the greatest growth on student's reading scores.

A common element to each of these studies was that each study that properly followed the READ 180 directions for program implementation found at a minimum, a degree of success.

The studies that noted the district did not follow the instruction provided by READ 180 all noted that there were not significant gains. Many of these same districts were not able to provide appropriate professional development and training for the teachers or provide the appropriate amount of support staff to properly conduct the program, and these are potential reasons they noted the program's lack of success.

According to Scholastic Research and Validation (2006) the intervention program has seen much success. The findings from most of the studies in this literature review agree with that point. However, there is a lack of literature that gathered on the effectiveness of READ 180 in not only helping students achieve grade-level reading skills but also to determine if that growth translates into these same students earning credits in their high schools. The purpose of this study was to evaluate the effectiveness of the READ 180 reading intervention program on students' overall learning in a standard high school English course.   In Chapter Three the methodology used to conduct this research, the research question and design, as well as the cite population will be discussed.

CHAPTER 3: METHODOLOGY

The problem this study addressed was that little research has been done to identify the impact the READ 180 program has on students' overall ability to meet the standards in other disciplines such as a standard high school English curriculum. The READ 180 intervention is designed to quickly improve the literacy skills of struggling learners with the specific purpose of, after obtaining better literacy skill, being capable of achievement in standardized curriculum. The purpose of this study was to examine, using historical data, the effectiveness of the READ 180 reading intervention program on students' overall learning in a standard high school English course. The researcher looked at the correlation between the growth in SRI scores in the READ 180 intervention program and student achievement of credits in a standard high school Freshmen English class. Ultimately, this study examined if the READ 180 intervention program is a suitable program to allow students who read below grade level to become proficient readers, and establish if this intervention, as it is currently presented, allows for these students to earn credits in standard high school curriculum. The goal of READ 180 is to increase student fluency in the domains of comprehension and general literacy achievement. Results that show a positive growth model in both the READ 180 intervention in the form of students progressing to a level of proficiency and attainment of passing grades in Freshman English would be an indication that the READ 180 intervention is an effective response to intervention.

This study was a quantitative causal-comparative design that determined if there was a correlation between the growth in SRI scores in the READ 180 intervention program and student achievement of credits in a standard high school Freshmen English class. According to Scholastic, growth in Lexile scores after the READ 180 intervention is implemented will give struggling readers the skills to not only read at grade level, but also be able to complete standard

curriculum. This study specifically looked at the 9th grade entry level Lexile scores of CHSNE's lowest reading freshman and track their progress through their entire first year of high school in which they had been enrolled in both the READ 180 intervention as well as CHSNE's Freshman English course. The data collected, in the form of SRI test results from the entire 9th grade school year as well as the final grades of these same students at the completion of each trimester. The research looked to determine if there was a correlation between the results from each student's SRI test and the grades they receive in Freshman English. Judgement sampling was used to collect data which allowed the researcher to effectively analyze a specific sample size that possess a certain characteristic or trait and target directly the population of interest. Specific to this study, the students that receive the READ 180 intervention have significant reading limitations as defined by READ 180 and the Scholastic Reading Inventory (SRI) test.

This chapter explores the choice of using a causal-comparative design as the methodology for this research because it allows for secondary data previously collected to be analyzed to determine the cause and effect relationship of specific data. A complete review of the research design, site information and population, sampling methods, instruments, and analysis techniques will be presented in this chapter as well as any ethical consideration for this study.

Research Question and Hypothesis

The research question for this study was: To what extent does academic achievement in standard high school Freshmen English differ for students who participate in the READ 180 intervention and those who do not participate in the intervention?

Research Design

Quantitative causal-comparative research was selected as the appropriate methodology to conduct this study because the study examines if there was a relationship between the independent variable (READ 180) and the dependent variable (standard high school curriculum, in this case Freshmen English at CHSNE) (Salkind, 2010, p. 6). The researcher collected historical data on 40 students who received the READ 180 reading intervention while also enrolled in a standard Freshman English course and determined if there was a correlation between growth in Lexile scores and the achievement of passing grades for these students in a standard high school freshmen English course. Specifically, the goal of READ 180 is to increase student fluency in the domains of comprehension and general literacy achievement. Results that show a positive growth model in both the READ 180 intervention in the form of students progressing to a level of proficiency and attainment of passing grades in Freshman English would be an indication that the READ 180 intervention is an effective response to intervention (RtI).

Null Hypothesis

There will not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention.

Site Information and Population

CHSNE serves some of the wealthiest and poorest students and families in the state. The premise behind utilizing programs such as this reading intervention program is to educate students who attend CHSNE from various sending schools and very different socio-economic backgrounds. Specifically, CHSNE has roughly 20% of its student population who qualify for

free and reduced lunch. CHSNE also services a large transient population. Historically, students from one specific sending school, have not achieved at the same rate as other students at CHSNE. This lack of achievement is represented in the form of below average reading scores and high failure and dropout rates. The students from this same sending school are also the largest percentage of socioeconomically disadvantaged students attending CHSNE. Therefore, roughly a decade ago, CHSNE began to create pathways to specifically focus on these struggling learners. These students historically have represented the students who were most likely to drop out of high school (Wissick, 2010).

CHSNE is a cooperative high school located in New England. The student population is 1,100 students, and there are 125 certified teaching staff and close to 100 support staff. CHSNE has the largest socio-economic gap of any school in its state as it serves some of the wealthiest and poorest families in the state. CHSNE administers the Scholastic Reading Inventory (SRI) to all students three times each year. The purpose of the SRI is to measure all students' reading growth throughout their high school career and to inform administration of the specific population of students that do not read close to the high school level. Students who score at the Below Basic level on the SRI are determined eligible to receive the READ 180 intervention. This causal-comparative study compared the SRI scores previously collected over the 2018/2019 school year with the grades earned in Freshmen English for students who received the READ 180 intervention and determine if there was a direct correlation in the increased Lexile scores and the obtainment of credit in a standard high school Freshmen English class. The students selected for this study are fourteen to fifteen years and the students who receive the READ 180 intervention have all entered high school reading far below grade level and have received an SRI score in the Below Basic range.

Conducting a study about this population posed some potential ethical concerns. Traditionally, the majority of students at CHSNE who score at the Below Basic level come from the same sending school, which is in one of the poorest communities in the state. It is possible that conducting a study involving this population of students could also have some effect on their sending school administration and teaching population. However, choosing this population for the study could have long-term and potentially positive effects for the students who come from a community whose students have traditionally performed poorly at this high school, which outweighs any potential negative implications of the study. Access to the data for this study has been granted by the Superintendent of Schools by authorization of the School Board for CHSNE.

Sampling Methods

A Judgement Sampling, also known as Purposeful Sampling, is used often in quantitative research studies to identify and select information rich participants with limited resources (Creswell, 2013). This involved identifying and selecting the individual students at CHSNE that are furthest below the 9th grade level (Cresswell, 2013). Further, the availability of these students to be participants in this study also lead to using Judgment Sampling to conduct this study. This method allowed for the researcher to effectively analyze a specific sampling size that possesses a certain characteristic or trait and target directly the population of interest. Specifically, the researcher identified 40 students who scored Below Basic on the SRI test during the Fall of 2018, participated in the READ 180 intervention and were enrolled in Freshmen English and an equal number of Freshmen English takers who scored Basic on the SRI test and therefore, did not participate in the READ 180 intervention. Below Basic and Basic scores are classified by READ 180 as below grade level. The records used for this study included the SRI test scores and the Freshmen English class grades for both populations. All participants were

freshmen in 2018/2019 however using a matching method which allowed for the control group and the treatment group to have the same number of male and female students as well as other critical demographic information that limited the variables of this research. Creswell (2013) stated that judgement or purposeful sampling is often used in quantitative research and is helpful in the identification and selection of data. Based on this criterion, it was hoped the data collected on these students will be able to answer the study's research question.

Instrumentation and Data Collection Procedures

The Scholastic Reading Inventory (SRI) data in the form of individual student Lexile scores was collected from the student records. The SRI is an interactive, computer-based adaptive assessment tool that is designed to measure individual student reading levels through a variety of texts with multiple reading levels. "This psychometrically valid assessment instrument can be used as a diagnostic tool to place students at the best level in the program so they can read with success" (Scholastic, 2008, para 6). The SRI is a research-based program that has been the subject of six different validation studies ranging from a norming study that included over 500,000 students to an analysis of gender and race. The results of the SRI define a student's level of readability as either *Advanced, Proficient, Basic*, or *Below Basic*. For the purposes of this study, all freshmen students who scored in the Below Basic category on the SRI and are not identified as Special Education and an equal number of students who scored Basic were included. The records of approximately 40 students in each group were used in this study. Below Basic and Basic scores are classified by READ 180 as below grade level. Once identified, the same students' grades in Freshmen English were examined and analyzed to determine if there was a correlation between growth in the SRI test and passing Freshman English.

A further, deeper analysis was also conducted to assess the correlation between READ 180 and the comprehension and literacy standards associated with both the READ 180 curriculum and the curriculum of the standard high school Freshman English course at CHSNE. CHSNE measures student success in four standards; reading, writing, speaking and listening, and research and these are the basis for the Common Core kindergarten through twelfth grade English/Language Arts Standards. READ 180 uses reading, language, speaking and listening, and writing as there standards and promotes their alignment with the Common Core and many state standards. The READ 180 program specifically looks to target students critical reading abilities focusing on key ideas, literary elements, navigating texts, and point of view. Together, these elements represent the areas in which READ 180 collects diagnostic details to build their individualized intervention plan for each struggling reader with the express intention of growing these skills which will lead to student achievement in standard course work. CHSNE standards include reading, writing, speaking and listening, and research. Within those standards are sub standards which also possess alignment with the READ 180 and Common Core standards. Specifically, CHSNE measures academic growth in Freshman English with growth in the sub standards of informative and literature reading, research, speaking, technology, and argumentative, informative, and narrative writing. Growth in Lexile scores at six times the rate in which READ 180 states is acceptable should lead to the attainment of credit in standard high school English class at CHSNE when the curriculum for that course is directly aligned with the diagnostic settings of the intervention itself as well as the Common Core Standards.

SRI scores are stored on a separate server at the high school, and the Superintendent has granted the researcher access to that data for all students eligible to be a part of this study from the 2018/2019 school year. Course grades in Freshmen English for these students are stored at

the high school through the student data collection program called Power School. Access to this data has also been granted by the Superintendent. The data was analyzed to measure the impact of READ 180 on overall student achievement in a high school Freshmen English course for students who score Below Basic on the READ 180 Scholastic Reading Inventory (SRI) and participated in the READ 180 intervention versus those who scored Basic on the SRI and did not receive the READ 180 intervention.

Data Analysis

This study was a quantitative causal-comparative study that examine if there was a relationship between growth in Lexile scores from the READ 180 intervention and the successful completion of high school Freshmen English between students receiving a literacy intervention and those that have not. A causal-comparative study allowed for the examination of a program and seeks to find relationships between independent variables after an action, such as an intervention, has occurred (Creswell, 2013). Data was collected from the SRI server at the high school which identified the number of students whose records were included in this study who were part of the READ 180 reading intervention program. After identifying the population for this study, a comparison of their SRI results (Lexile scores) and overall success in a high school Freshmen English class determined the success of the READ 180 intervention to prepare students for standard high school courses. Further, data on an equal number of students not receiving the READ 180 intervention program since they scored beyond Below Basic on the Fall of 2018 SRI test but also enrolled in Freshmen English was also compared to measure growth from their SRI test versus grades in the same Freshmen English class. Overall success was measured by grades earned in Freshmen English class versus student growth on the SRI. The results from the SRI test and the grades in the Freshmen English class were analyzed using a

Statistical Package for the Social Sciences (SPSS) designed by IBM which allows for the

measurement and linear correlation between two variables as well as overall collection and

organization of data.

Assumption testing for normality of distribution was conducted by using the Shaprio-

Wilk test and a visual examination of the findings allowed the researcher to examine data for any

outliers. Levene's Test for Equality of Variances was also used to test for the assumption of

equal variances and determine whether there was a difference between the control groups,

students who never took READ 180, and the experimental group, students who took READ 180.

The data was analyzed at an alpha level of .05 which, according to Gall, Borg, and Gall, (1996),

using an independent sample t test is effective and appropriate when the researcher is analyzing

the means of a dependent variable to determine if there is a difference between groups.

Limitations of the Research Design

There were a few perceived limitations to this type of study. First, all the students who

received the READ 180 intervention, whose records are included in this study, all come from the

same sending school and therefore, the same town. These students represent the reason why

CHSNE has instituted the READ 180 intervention. The students who come from this sending

school represent the greatest number of Below Basic readers that enter 9th grade at CHSNE. This

cohort of struggling readers never have access to the diverse curriculum that CHSNE offers

because they are required to take many intervention programs, such as READ 180. The students

that enter CHSNE from this sending school with major reading difficulties also represent the

largest population of students that eventually drop out of CHSNE.

Another potential limitation was that there are two different teachers who teach the

READ 180 intervention at CHSNE. Therefore, the consistency of the delivery of instruction to

the forty students could be in question although both teachers were trained simultaneously in the READ 180 programming. The variety of student learning styles could also be a limiting factor in this study as well as student attendance, tardiness, and suspension.

Internal and External Validity

Validity was used to examine the accuracy and trustworthiness of the findings from the researcher, participants, or reader's point of view (Creswell, 2013). The researcher employed specific strategies and corroborated all findings associated with this study including the utilization of multiple resources (Creswell, 2013). One potential threat to the validity of this study was that random assignment was not possible in a causal-comparative study.

Ethical Issues in the Study

This study used secondary data for the 2018/2019 school year of a group of roughly eighty high school students. All personal information for these students was not a part of this study, which includes their SRI scores and their grades in Freshmen English. The school and name as well as the district name were also withheld for the purposes of this study. There are a few potential ethical considerations within this study. First, the findings could potentially highlight poor teaching practices within one specific sending school within one specific town or these students require greater academic support such as being identified to receive Special Education or assistance under Section 504. Certainly, that could bring to light potential negative information to Central Office staff and community members. In addition, the findings could suggest that there are some students who participated in this study who are not Special Education identified and should be so identified.

Conclusion

This section discussed the population, procedures, and participants that were included in this study as well as the methodology and research question. A quantitative causal-comparative research design was selected as the appropriate methodology to conduct this study because it provided the researcher the ability to study cause and effect relationships with secondary data and to study dat within a specific area of research. Further, a quantitative case study, when applied appropriately, can become a valuable way for a researcher to evaluate programs and develop theories (Creswell, 2013). Specifically, the researcher was able to examine if the READ 180 Response to Intervention is an effective tool to for struggling high school readers gain critical literacy skills that will allow them the ability to earn credit in a standard high school English class.

Targeted reading interventions allow for schools to make informed decisions on individual student data and create programs to support student achievement in specific areas of weakness. Literacy rates of students at CHSNE have been the focal point of such interventions for close to the last decade, and the specific data points have been identified that have factored into the decision-making process of school administration to create programs and plans for the students who struggle the most completing high school level curriculum. This data has led to identifying student literacy as a specific area of weakness at CHSNE.

> Reading may be the single most important skill for children to learn, as it's a portal to the world of knowledge. Despite major efforts to help improve literacy levels, the percentage of struggling readers has barely decreased over the last decade. (Helman & Burns, 2012, para 3)

CHSNE believes student literacy is of the utmost importance for student success to take place and to allow the high school to adhere to its mission that all high school students will leave CHSNE college- and career-ready. This targeted intervention is part of the process that allows CHSNE to achieve this goal. The next section will discuss data collection and data analysis.

CHAPTER 4: RESULTS

Chapter four consists of four sections: research question and purpose, analysis methods, results, and results summary. The null hypothesis is provided in the first section of this chapter as well. The second section contains the data analysis methods used to gather data in Microsoft Excel ™ and export to IBM's Statistical Package for Social Sciences (SPSS) ™ to analyze if there was a direct correlation between growth in Lexile scores and student's achieving passing grades in a standard high school Freshman English course. The data will be examined to determine if there is a connection between the content standards in Freshmen English and the Combined Critical Reading Scores (CCRS) in the READ 180 intervention. Both the standards in Freshmen English at CHSNE and the CCRS from READ 180 are derived directly from the Common Core State Standards and are aligned with the state standards for the state in which CHSNE resides. The last two sections share the results of the analysis and a summary of those results.

Research Question

The purpose of this study was to use historical data to examine the effectiveness of the READ 180 reading intervention program on students' overall learning in a standard high school Freshman English course. The researcher looked at the correlation between the growth in SRI scores in the READ 180 intervention program and student achievement of credits in Freshmen English. Ultimately, this study examined if the READ 180 intervention program was a suitable Response to Intervention (RtI) program to allow students who read below grade level to become better readers, and establish if this intervention, as it is currently presented, allows for these students to earn credits in a standard high school Freshman English course.

The research question that provided the framework for this study was:

To what extent does academic achievement in standard high school Freshmen English differ for students who participate in the READ 180 intervention and those who do not participate in the intervention? The treatment, READ 180, is only given to the Below Basic group. The Below Basic group also takes the standard high school Freshman English course while the Basic group, not receiving the treatment, only takes the standard high school Freshman English course. The null hypothesis for this study suggested that there will not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention.

Data Analysis Methods

Historical data from the 2018/2019 school year was used for analysis in this study. Specifically, the Scholastic Reading Inventory (SRI) scores of eighty students (n=80) were collected for the purposes of this study. Forty of those scores represented Below Basic readers and forty were from readers who were classified as Basic readers. Also collected for this study were the grades of each of these eighty students throughout the course of one school year in a standard high school Freshman English class. CHSNE has a trimester scheduling system. These variables were collected and organized in Microsoft Excel ™ and then exported to IBM's SPSS ™ to determine if there was a direct correlation between growth in Lexile scores and student's achieving passing grades in a standard high school Freshman English course.

Assumption testing for normality of distribution was conducted by using the Shaprio-Wilk test and a visual examination of the findings allowed the researcher to examine data for any outliers. Levene's Test for Equality of Variances was also used to test for the assumption of equal variances and determine whether there was a difference between the control group, students who never took READ 180, and the experimental group (students who took READ

180). The data was analyzed at an alpha level of .05. According to Gall, Borg, and Gall, (1996), using an independent sample t test was effective and appropriate when the researcher was analyzing the means of a dependent variable to determine if there was a difference between groups.

Historical data was gathered from the eighty unidentifiable students who tested either at the Below Basic or Basic level as determined by the SRI test. Below Basic scores fall in the range of 750 or below and are measured in a unit called a Lexile. Basic scores range from 751 to 899. The SRI test was administered during the 2018/2019 school year to these eighty students four times each during the course of this school year. The grades of each of these eighty students in their Freshmen English course during the 2018/2019 school year were also gathered for analysis for the purposes of this study. CHSNE uses a trimester scheduling system which provided three grading periods for each student that was a part of this study. This data also served to make determination of the accuracy of the null hypothesis which stated there would not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention.

Demographics

This study only used historical data from the school year 2018/2019. The data analyzed for this study included 80 participants from CHSNE. Forty of these students were classified as Below Basic readers and forty students as Basic readers as determined by the READ 180 Scholastic Reading Inventory (SRI) test that was administered in the fall of 2018. Below Basic readers score 750 or lower on the SRI test. Table 1 shows the complete scoring range for each high school grade level with corresponding Lexile score (Scholastic, 2015).

Table 1. *Lexile Score Chart*

Grade	Below Basic	Basic	Proficient	Advanced
9	0-750	751-999	1000-1,250	1,251 & Above
10	0-900	901-1,149	1,150-1,300	1,301 & Above
11/12	0-950	951-1,099	1,100-1,350	1,351 & Above

Results

The data gathered for this study was used to address both the research question and the null hypothesis. For the purposes of comparison, an independent t-test was used to analyze the dependent and independent variable. The researcher compared the growth in Lexile scores of 40 Below Basic students who received the READ 180 reading intervention, the dependent variable, and their performance in Freshmen English, the independent variable, compared to the performance of 40 Basic students enrolled in the same Freshmen English class but who did not receive the intervention, the control group as they tested on grade level. The result of the independent t test to measure the mean difference of the variables had a p value of 0.01 which considered highly significant.

Once the significance level of less than 0.05 was confirmed in IBM's SPSS ™ program, the t-test was conducted to confirm or reject the null hypothesis that there would not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention. Therefore, the null hypothesis should be retained. Table 2 shows the descriptive statistics from the READ 180 SRI Test Results used in this study.

Table 2. *Descriptive Statistics*

READ 180 SRI Test Results - Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
1st test	80	327	998	744.61	178.368	31815.278
2nd test	80	103	1074	805.14	200.532	40213.082
3rd test	80	351	1351	875.91	180.962	32747.195
4th test	80	411	1266	934.81	169.536	28742.407
T1	80	1	5	2.15	1.415	2.003
T2	80	1	5	2.39	1.373	1.886
T3	80	1	5	2.64	1.362	1.854
FINAL	80	1	5	2.34	1.368	1.872
Valid N (listwise)	80					

READ 180

The Null Hypothesis was then tested to determine the correlation between SRI growth and achievement of credits in a standard high school English class.

Null Hypothesis: There will not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention.

To determine if READ 180 was an effective Response to Intervention (RtI) program at CHSNE with the purpose of understanding to what extent does academic achievement in standard high school Freshmen English, differ for students who participate in the READ 180 intervention, and those who do not participate in the intervention, two comparison tests were used. First, correlation testing was used to determine the strength of the relationship between the dependent and independent variables. Correlation testing was done for the first SRI test for all 80 SRI scores and the corresponding grades. A second correlation test was completed for the final SRI test and final grades for the Freshmen English course. Using a two tailed Pearson Correlation, it was determined that there was a positive, uphill correlation for both tests. The first test showed a strong correlation between variables at .704 and the second test showed a moderate correlation between variables at .561. These results allow for the rejection of the null hypothesis for this study, which stated that there will not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention. Tables 3 and 4 shows these results.

Table 3. *Correlation results, SRI Test 1 and Trimester 1 Grade*

Correlations

		1st test	T1
1st test	Pearson Correlation	1	.704**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	2513406.987	14043.650
	Covariance	31815.278	177.768
	N	80	80
T1	Pearson Correlation	.704**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and	14043.650	158.200

	Cross-products		
	Covariance	177.768	2.003
	N	80	80

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4. *Correlation results, SRI Test 4 and Final Grade*

Correlations

		4th test	FINAL
4th test	Pearson Correlation	1	.561**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	2270650.188	10272.063
	Covariance	28742.407	130.026
	N	80	80
FINAL	Pearson Correlation	.561**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	10272.063	147.888
	Covariance	130.026	1.872
	N	80	80

**. Correlation is significant at the 0.01 level (2-tailed).

Next, a comparison between the mean growth in Lexiles per each of the four tests given to each of the eighty students was compared between the Below Basic and Basic groups. The Below Basic group mean growth per test was 77.1 Lexiles while the Basic group's mean growth was 49.4 Lexiles. These results were then compared to the historical grades earned in their Freshman English course for each the Below Basic group to those of the grades in the Basic group. The previous comparison of mean Lexile growth showed that the Below Basic group gained almost twice as many Lexiles per test than that of the Basic group however, of the 160

grades assigned to each of the 40 students in the Below Basic group, only 26% earned a passing grade and only 8 students earned a final passing grade. The same comparison was tested for the Basic group where 93% of students earned passing grades. Table 5 shows the results of average Lexile growth for Below Basic students versus the average Lexile growth of Basic students during the three different testing periods during the 2018/2019 school year.

Table 5. *Average Lexile Growth*
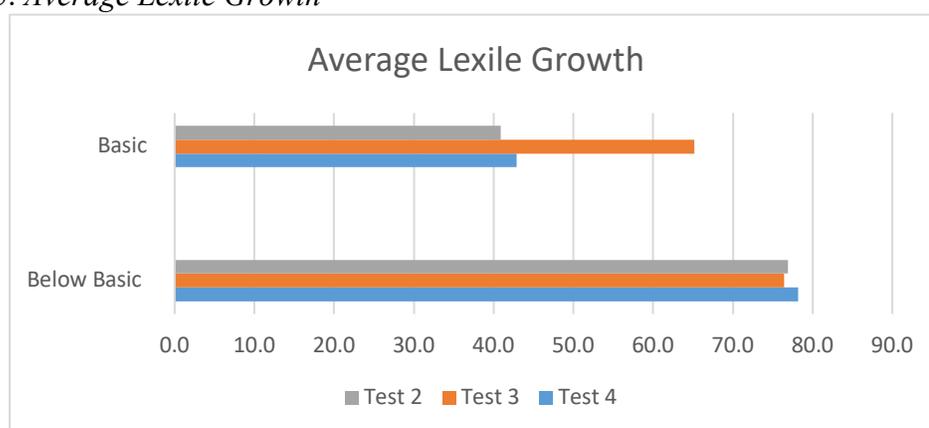
Results Summary

Chapter 4 presented the findings in this study which indicate that the READ 180 reading intervention program does not provide students at CHSNE who are identified as Below Basic readers, an appropriate method to gain enough Lexile growth in a year to earn credits in a standard high school Freshmen English class. The null hypothesis for this study, which stated that there will not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention was retained. This finding was based on the fact that students in the Below Basic group gained almost twice as many Lexiles per trimester at CHSNE compared to

students in the Basic group however, this growth in Lexiles for Below Basic readers did not lead to a significant growth in earning a passing grade in the standard Freshmen English course.

The average Lexile score of the Below Basic group at CHSNE at the time of the first SRI test at the start of the school year was 608 versus that of the Basic group which was 880. According to Scholastic, each of these average scores are considered below grade level. Throughout the course of the 2018/2019 school year at CHSNE, and three subsequent SRI tests, students in the Below Basic group gained an average of 77 Lexiles per trimester and the students in the Basic group averaged almost 43 Lexiles per trimester. According to Scholastic's Demographic Characteristics Growth Chart, 9th grade students the US average a growth rate of 43 Lexiles in a school year (Scholastic, 2015). Students at CHSNE in the Basic group are averaging a growth rate of three times that and the Below Basic group is gaining almost six times the average Lexile rate that Scholastic indicates is appropriate yet students in the Below Basic group are not earning credit in a standard Freshman English class which was the original intent of the implementation of the READ 180 program (Scholastic, 2015).

Table 6. *Demographic Characteristics Growth Chart*

Grade Level	African American %	Hispanic %	White %	Asian %	Other Ethnicity %	Free/Red. Lunch %	ESOL[a] %	ESE %	Male %
3	28	24	38	3	7	52	17	24	52
4	27	24	40	3	7	49	11	25	52
5	26	24	41	3	6	48	8	24	51
6	28	23	40	3	7	47	5	23	52
7	27	22	43	3	5	43	5	21	51
8	28	23	42	2	5	42	6	21	51
9	29	21	43	2	4	36	6	15	51
10	28	20	44	2	4	32	7	12	50
All	28	23	41	3	5	44	8	21	51
U.S. Public Schools[b]	17	21	56	5	1	43	11	13	51[c]

Twenty states in the U.S. have aligned their state assessments with Lexile frameworks and many states have gone further by aligning their state standards with those of READ 180 which are currently aligned with the Common Core State Standards. This is the case for the state in which CHSNE is located. Scholastic and READ 180 attempts to align the growth in Lexiles to that of achievement at grade level for students who participate in their intervention program.

Normative data was developed from linking studies conducted with the Lexile Framework for Reading. One study consisted of a sample of 512,224 students in a medium-to-large state. These linking studies with the Lexile Framework are designed to provide information on how a given student performed in relation to other students of the same age or grade (using units such as percentiles, stanines, or Normal Curve Equivalents to make comparisons). (Scholastic, 2015, p.6)

Throughout the course of the 2018/2019 school year in which the data for this study was collected, 160 grades were collected for both the Below Basic and Basic groups. CHSNE grades students on a trimester basis and a final grade, the average of the three trimesters, is then assigned giving a total of 160 grades per each group available for this study. Of the 160 grades earned from the 40 students' in the Below Basic group in this study, only 42 passing grades were recorded or 26% of all grades. Of the 160 grades recorded for the 40 students who represent the Basic group used in this study, 149 passing grades (93%) were achieved by the Basic group.

Students in the Below Basic group ended the 2018/2019 school year with an average Lexile score of 840 while the students in the Basic group began the same school year with an average Lexile score 40 points higher at 880. However, only twenty students in the Below Basic group managed to earn a passing grade in their highest Lexile score trimester at the end of the 2018/2019 school year while 36 students in the Basic group earned a passing grade in their

lowest scoring Lexile trimester at the start of the year at CHSNE. This data suggests that even though the READ 180 intervention is surpassing expectations in raising Lexile levels of these Below Basic students at CHSNE, this intervention is not adequate in allowing these students to earn credit in a standard high school English course. This is further defined because the standard Freshman English curriculum at CHSNE is aligned directly with state and Common Corse Standards which are also aligned with the READ 180. Specifically, CHSNE measures student success in four standards; reading, writing, speaking and listening, and research which are the basis for the Common Core kindergarten through twelfth grade English/Language Arts Standards. READ 180 uses reading, language, speaking and listening, and writing as there standards and promotes their alignment with the Common Core and many state standards.

Looking further into the lack of connection between increased Lexile scores and attainment of passing grades for the Below Basic students at CHSNE, the READ 180 program specifically looks to target students critical reading abilities focusing on key ideas, literary elements, navigating texts, and point of view. Together, these elements represent the areas in which READ 180 collects diagnostic details to build their individualized intervention plan for each struggling reader with the express intention of growing these skills which will lead to student achievement in standard course work. CHSNE standards include reading, writing, speaking and listening, and research. Within those standards are sub standards which also possess alignment with the READ 180 and Common Core standards. Specifically, CHSNE measures academic growth in Freshman English with growth in the sub standards of informative and literature reading, research, speaking, technology, and argumentative, informative, and narrative writing. Growth in Lexile scores at six times the rate in which READ 180 states is acceptable should lead to the attainment of credit in standard high school English class at

CHSNE when the curriculum for that course is directly aligned with the diagnostic settings of the intervention itself as well as the Common Core Standards.

These results caused further, deeper analysis to determine if there was a connection between the common standards of READ 180 and the Freshman English course at CHSNE. Those common elements within the like standards appear in Table 7:

Table 7. *Common Elements of Standards*

READ 180 Standard	CHSNE Freshman English Standard
Literary Elements	Informative and Literature Reading
Navigating Texts	Argumentative/Informative/Narrative Writing
Point of View	Speaking

There is clear alignment between the READ 180 standards and the standards aligned in the standard Freshman English class at CHSNE. The results of this comparison between common standards for the Below Basic group revealed scores that were close to or in the passing range according to READ 180 standards however, this group's scores in the common CHSNE Freshman English course were at a below passing level. Table 8 shows a specific breakdown of these scores revealing that even though the READ 180 intervention and CHSNE marks growth for the Below Basic group within these common standards during the 2018/2019 school year, there is clearly a discrepancy in what should lead to attainment of skills to pass a standard high school English course. The assessment of standards at CHSNE are determined by classroom teachers and students are assigned a numerical grade for each standard.

Table 8. *READ 180 Standards vs CHSNE Standards (Common Standards) - Below Basic Group*
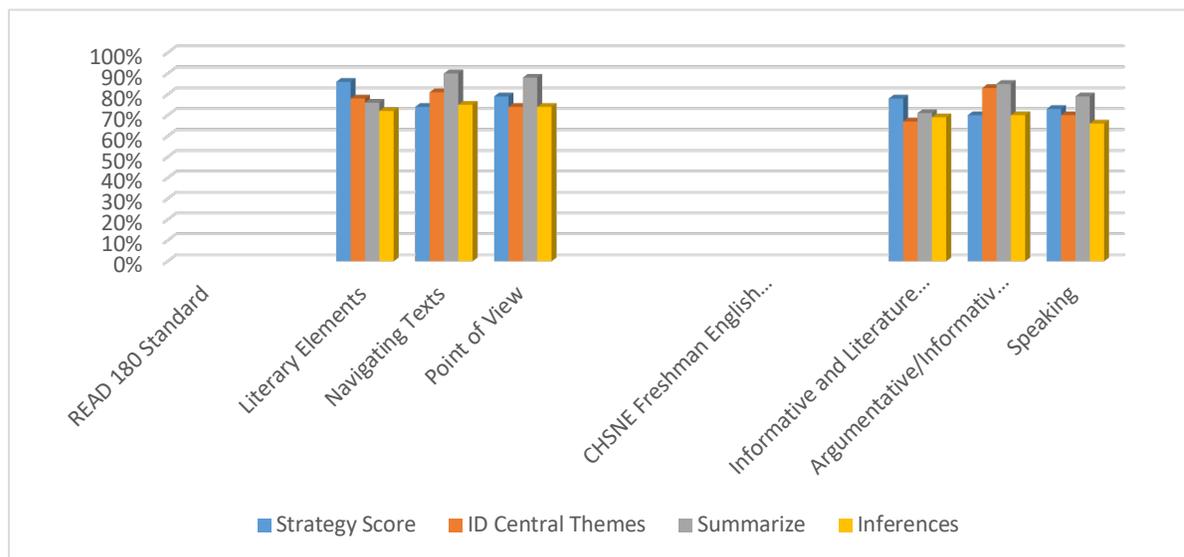
Completing a similar analysis for the Basic group of readers also revealed similar

findings and therefore, a similar discrepancy between READ 180 scoring and CHSNE within

common standards.   Table 9 shows results for the Basic group that were comparable to the

results of the Below Basic group in that, by the completion of the 2018/2019 school year, the

Basic group were also scored higher by READ 180 scoring of like standards than CHSNE.

Table 9. *READ 180 Standards vs CHSNE Standards (Common Standards) - Basic Group*
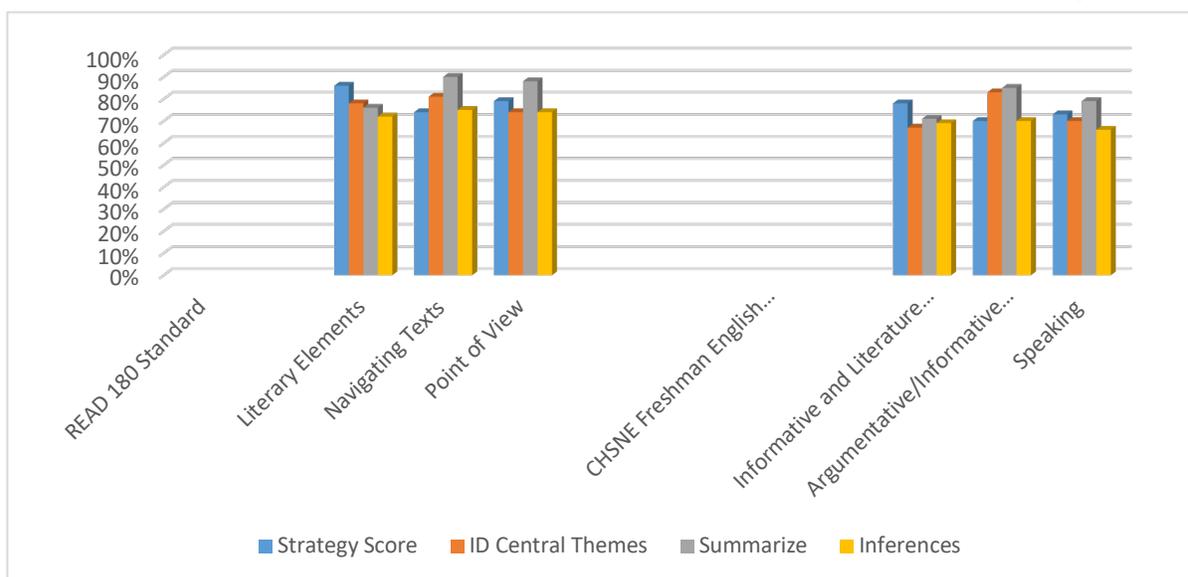
Below Basic readers at CHSNE see Lexile growth at a rate of almost two to one compared to Basic readers yet these two groups see a similar grading pattern when assessed on the standard high school English class standards at CHSNE. This data supports that even though there is direct alignment of CHSNE standards and READ 180 standards which are both derived from the Common Core state standards, growth in Lexile scores does not have a direct link to attainment of credit in a standard high school Freshman English course at CHSNE.

Chapter 5 further discusses the findings of the study, implications that it may have, recommendations for action and further study, and conclusions.

CHAPTER 5: CONCLUSIONS

The purpose of this study was to examine historical data to measure the effectiveness of the READ 180 reading intervention program on students' overall learning in a standard high school English course. The researcher looked directly at the correlation between the growth in scores on the READ 180 Scholastic Reading Inventory (SRI) test and student achievement of credits in Freshmen English with further analysis of the aligned, specific skills and standards associated with both the intervention and the English class. Ultimately, this study examined if the READ 180 intervention program is a suitable program to allow students who read below grade level to become better readers, and established if this intervention, as it is currently presented, allows for these students to earn credits in standard high school curriculum. Further, any potential curriculum or substantial program change should be done with caution and should not be completed based solely on the results of standardized test scores (Mertler, 2014).

Ultimately, this study examined a single research question and corresponding null hypothesis which determined if the READ 180 reading intervention program is a suitable and effective Response to Intervention (RtI) program for below grade level readers at Cooperative High School of New England (CHSNE). There have been many hours spent developing and implementing such RtI programs at CHSNE as well as throughout the US and the amount of funds spent on acquiring and executing such programs requires school district personnel to carefully evaluate the effectiveness of such programing (Sparks, 2015). The No Child Left Behind (NCLB) act of 2002 required that all students in the US would be proficient in reading by 2014 (National Center for Learning Disabilities, 2017). However, NCLB did not take into account the varied needs of students with learning disabilities or the social-emotional learning (SEL) requirements of many of the students who read so far below grade level whereas, the

current Every Student Succeeds Act (ESSA) that replace NCLB places more onus and power within each state's local control (Carlson, 2019). Regardless of the act or mandate that is in place, schools are required an expectation of rigor and allow students access to grade level learning.

Scholastic's READ 180 reading intervention program has been the RtI program that CHSNE has used to diagnose and treat high school students who read below grade level for the more than a decade. READ 180 tests students reading ability through their Scholastic Reading Inventory (SRI) test and CHSNE tests all students a minimum of three times each academic year with the very first school year test taking place the first week of school. Ninth grade students who score Below Basic on the SRI test are placed in the READ 180 reading intervention program as well as assigned to CHSNE's standard high school Freshman English class. CHSNE has these students take the intervention and the standard class in an attempt to quickly increase these struggling reader's SRI scores with the belief that once these students achieve a proficient reading score, they will be successful in obtaining credit.

This study looked to evaluate the effectiveness of the READ 180 program for CHSNE. Specifically, with regard to the research question, this study assessed the correlation between the growth in Lexile scores for Below Basic readers at CHSNE and these same student's attainment of credit in a standard high school English class at CHSNE. Further, once that correlation was established, this study determined there was a direct alignment of standards associated with both CHSNE's standard Freshman English course and the standards of the READ 180 program and further determined that both sets of standards were derived from the Common Core state standards. While this study's results are only applicable at a single institution from which all

data was gathered from, similar studies conducted at other demographically similar schools like CHSNE could enable a deeper understanding of the results.

Interpreting the Findings

This study sought to answer the research question: To what extent does academic achievement in standard high school Freshmen English differ for students who participate in the READ 180 intervention and those who do not participate in the intervention?

The READ 180 intervention program was the treatment and was only given to the Below Basic group. The Below Basic group also takes the standard high school Freshman English course while the Basic group, not receiving the treatment, only takes the standard high school Freshman English course. The null hypothesis for this study suggested that there will not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention. Historical data from the 2018/2019 school year was gathered from the eighty unidentifiable students who tested either at the Below Basic or Basic level as determined by the SRI test. Forty students were in the Below Basic group and forty students in the Basic group. Data was gathered collected and organized in Microsoft Excel ™ and then exported to IBM's SPSS ™ to determine if there was a direct correlation between growth in Lexile scores and student's achieving passing grades in a standard high school Freshman English course. This data served to make determination of the accuracy of the null hypothesis which stated there would not be a significant difference in achievement in the Freshmen English course for students who received the READ 180 intervention compared with students who did not receive the READ 180 intervention.

Assumption testing for normality of distribution was conducted by using the Shaprio-Wilk test and Levene's Test for Equality of Variances was also used to test for the assumption of equal variances. These tests determine there was a strong correlation between the control group, students who never took READ 180, and the experimental group (students who took READ 180). According to Gall, Borg, and Gall, (1996), using an independent sample t test was effective and appropriate when the researcher was analyzing the means of a dependent variable to determine if there was a difference between groups.

Based on the analysis of the data from the SPSS instrument, these results state that even with direct alignment of standards between the READ 180 program and the standard Freshman English class at CHSNE, students who see growth in Lexile scores do not obtain passing grades in this standard course. Further, the students represented in the Below Basic group who received the READ 180 intervention and the standard Freshman English course gained Lexiles at a rate of three to one compared to their counterparts in the Basic group during the 2018/2019 school year but were still six times less likely to earn credit in the standard Freshman English course. For this research question and null hypostasis, it can be concluded that the READ 180 intervention program is not a suitable RtI program for the students at CHSNE when the specific purpose of READ 180 is to rapidly increase below grade level reader's Lexile scores with the express purpose of these students obtaining credits in grade level subject matter.

Limitations

This study had a few limitations. First, most students who received the READ 180 intervention in the 2018/2019 school year came from the same sending school and the same town; therefore, they may not be representative of students from other sending schools. Second, there are two different teachers who teach the READ 180 intervention at CHSNE as well as six

different teachers who teach the standard high school freshmen English class. Although both

READ 180 teachers were trained simultaneously in the READ 180 programming, the

consistency of the delivery of instruction to the students could be in question. Further, the six

different Freshman English teachers, although they work as a team to determine pace and scope

of curriculum, have various and different teaching styles. The forty students that were part of the

Below Basic group were enrolled in four of the six teacher's Freshman English class.

The sample size of this study is also a limitation and while this study's results are

pertinent at CHSNE, similar studies conducted at other demographically similar schools like

CHSNE could enable a deeper understanding of the results. Also, only using the grades and

standards from the standard Freshman English course was a limitation to this study. Future

studies could expand and include writing courses or other general elective courses with similar

standards to those aligned with the READ 180 program. Further, the variety of student learning

styles could also be a variable in this study as well as student attendance, tardiness, and

suspension rates.

Implications

Statistically, 82% of 6th grade students who have failed an English class will not graduate

from high school (Bryan & Kerns, 2018). Students who struggle with literacy in middle school

have those issues compounded in each subsequent year and therefore, fall further and further

behind as they are socially promoted to high school. School leaders need to use appropriate

Response to Intervention tools to aid in assessing student needs but not solely rely on these

singular tools to get struggling students back to performing at grade level. In fact, many of these

students who need the intervention have never been at grade level. Rather, using appropriate RtI

tools and programs to diagnose struggling students needs and then using these same tools as part

of the larger intervention program would allow schools to continue with successful diagnosis but would allow schools to create appropriate and personalized learning plans that could ultimately accomplish the goal of remediating students who are a larger culture of failing.

> RTI has the potential to meet the challenges of increasing diversity in student populations and the need for increasingly complex systems of instructional design. Three fundamental shifts in understanding systems and systems change must ground RTI policy and implementation work. First, RTI must be seen as an activity system nested within a larger system of influences and practices. Second, change is context-sensitive and, therefore, systems must invest in multiple strategies for implementing RTI. Third, local education agencies (LEAs) and state education agencies (SEAs) must invest in system and school improvement so that RTI aligns at multiple levels of the system to bridge the significant gap between research and practice. (Kozleski & Huber, 2010)

For the purposes of this study, CHSNE has spent over a decade using a well regarding RtI platform to diagnose and treat a population of incoming freshmen who read well below grade level. Over this ten-year span of using the READ 180 program, CHSNE has spent almost $750,000 on the software components of READ 180, program materials, and training of staff yet this population of struggling readers still do not graduate from CHSNE. Rather than using the READ 180 program as the whole Response to Intervention, READ 180 should be part of a multi-tier intervention program in which the whole student is treated rather than just the deficit in reading ability.

The Common Core standards were implemented to help create a generation of learners in this country that would leave high school college and career ready however, statistics suggest that high school graduates in this country are not prepared for college.

Today, far less than half of U.S. 12th graders are college ready. Never mind those who have already dropped out of high school. The National Assessment Governing Board estimates not quite 40 percent are college ready. The ACT folks estimate 26 percent are college ready across the four subjects that comprise their suite of questions. (Finn, 2015)

This data clearly suggests that high school graduates are not prepared for the rigors of the curriculum colleges offer. If these students are not prepared after receiving the standard high school curriculum, then there is no way students that enter high school with a 5th grade reading level will never meet this standard.

Finn (2015) suggested in order to counterbalance the inequity in the diploma system there needs to be a radical shift in the system itself in this country. However, if districts implement such a strategic shift in programming there needs special attention paid to making sure a minimum standards diploma does not limit access to regular programming for these students and the possibility of advancement is still achievable (Kahlenberg, 2015). Programming of this type is not meant for the lower half of struggling students but rather, the lowest 5% in each school that cannot access any standard high school curriculum (Kahlenberg, 2015).

Recommendations for Action

The results of this study suggest there is clear evidence that there is a population of students who enter CHSNE who read well below the ninth grade reading level and these students are not able to earn passing grades in CHSNE's standard high school Freshman English course even though these students receive CHSNE's RtI program. CHSNE, which offers a single intervention for these struggling learners, should offer more comprehensive programming with the specific intent of targeting this population's needs. Creating a larger, more comprehensive, student centered RtI program students who enter CHSNE at such an academic deficit would

foster a culture caring about the whole student while creating positive pathways to successful attainment of a diploma. Further programing needs to be created at CHSNE to create this pathway to student's success. Clearly, the current curricular offerings of CHSNE are not appropriate for this population of struggling learners. A skills-based curriculum should be developed for this population of students that while allowing them access to the state standards they are required to demonstrate proficiency in prior to graduating are still met, the process of obtaining them is presenting in a more manageable manner. Further, CHSNE should re-align staffing needs and budgetary considerations to meet the teaching requirements this curricular shift would necessitate. CHSNE should continue to use the READ 180 intervention program as an effective tool for diagnosis but should only use the intervention software as a single part of the intervention and no longer as the whole intervention.

In order to assist with the implementation of the actions of this study, the results need to be disseminated to other school leaders and district personnel. The researcher had previously agreed to make copies of this study available to the principal of CHSNE as well as the district's superintendent, assistant superintendent, the executive director of pupil services, and the school board. The results of this study could assist these people in implement potential changes at CHSNE. Further, this study will be made public through the University of New England online dissertation data base called DUNE and therefore will be assessible by other researchers and the findings of this study can be expanded. Submitting this study to DUNE enables the researchers to contribute to the topics related to this study both on the local level as well as throughout the country.

Recommendations for Further Study

Throughout this study, several themes for potential future study became apparent. First, given the significant gap in the mean difference in results of student growth in Lexiles in the Below Basic group and these same students attainment of passing grades in a standard Freshman English class, even though there is direct alignment of the standards that define both the course and the READ 180 intervention program, it is apparent that a future study is needed focusing on the relationship between Lexile scores and the READ 180 standards. Further, additional studies that are similar to this study but focusing on students of a different high school with a similar demographic would also expand and contribute to this topic. Also, completing a similar study with more historical data would enrichen this topic.

Another recommendation for future research would be to replicate this study in future years with the exact same population of student's at CHSNE through the lens of Every Student Succeeds Act (ESSA) versus that of No Child Left Behind Act (NCLB). ESSA has placed a greater onus and therefore more power, with local school districts and states to implement appropriate curriculum and interventions with the end goal of better performance on standardized tests (Carlson, 2019). Further, repeating this study at CHSNE in future years could also be an assessment of the Recommendations for Action that this study offered and were implemented by CHSNE.

Lastly, researchers who look to expand on the findings of this study should conduct their work focusing on the relationship common standards of the READ 180 intervention and those of more than just the standard high school Freshman English course. Specifically, with the repeal of NCLB in 2015 and the implementation of ESSA, schools are redefining the standards that they evaluate their students on to determine the attainment of credit. Further, many schools are

moving to a competency-based model of evaluating student success. Completing a study that assessed Lexile growth compared to competencies instead of grades and the currently aligned standards the at are shared between the READ 180 intervention and CHSNE would be a valuable addition to the research on this topic.

Conclusion

Schools need to become personalized to meet the ever-varying requirements of their most disadvantaged learners. In the last decade this personalized learning shift has been evidenced in the creation of ESSA and the repeal of NCLB allowing for more local control of how to best educate the whole student. Once, the popular movement was for schools to introduce specific RtI programs to work with below grade level students. Programs, such as READ 180 were introduced to school districts as an all in one approach to quickly bring struggling learners to grade level so they could access appropriate grade level curriculum. Now, schools are instituting a more personalized approach for individual students at all levels and this has appeared in the forms of competency-based evaluation systems, differentiated instructional model of teaching, and the clear and constant communication of student's individual goals and needs (Pane, Steiner, Baird, Hamilton, & Pane, 2020).

Creating learning profiles, personal learning paths, competency-based progression, and a flexible learning environment allows schools to meet students where they are when they enter and build a systematic approach of educating the whole child rather than trying to continuously get these struggling learners to engage a traditional learning approach that has failed these students in previous years. Implementing this personalized approach starts with individual plans based on students' greatest areas of need and should end with school systems creating a diploma

system that resembles this approach. This determination could still come from using effective RtI tools such as READ 180 but the intervention plan cannot stop there.

Current research shows that, rather than creating intervention programs based on a common areas of student deficit, the creation of personalized learning plans has both short and long-term growth benefits.

> In both mathematics and reading, cumulative growth over the two years is evident. Students started significantly below national norms, gained ground after one academic year, and gained further ground the second academic year, placing them above (though not statistically significantly above) national norms at the end of two years. The largest gains on average appeared to occur in the second year. This suggests that PL systems may require some experience before operating at their fullest potential. (pane et al, 2020).

Creating programs around the needs of students has shown direct growth for students who were below the national average and put these students back on track after two school years. CHSNE has used READ 180 for over a decade and has found significant growth in student Lexile scores but this growth has not translated into students achieving in the classroom at the same level as their peers. Personalized learning has replaced traditional methods of teaching and learning and has been determined to be the most effective way to educate students currently and therefore, it makes sense that personalized learning should also be the method of intervention for the next generation of struggling students. It is important to note that these findings and conclusions are limited directly to this study. Additional research along this topic or expansion of this topic would prove beneficial in advancing the scholarly findings surrounding this topic.

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