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A Quantitative Study of AVID Implementation and Its Sustainability in a Small Rural South Carolina School District

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A QUANTITATVE STUDY OF AVID IMPLEMENTATION AND ITS SUSTAINABILITY IN A SMALL RURAL SOUTH CAROLINA SCHOOL DISTRICT

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Approval Page

This dissertation was submitted by Brandon Lee Dixon under the direction of the persons listed below. It was submitted to the Gardner-Webb University College of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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Abstract

A QUANTITATIVE STUDY OF AVID IMPLEMENTATION AND ITS SUSTAINABILITY IN A SMALL RURAL SOUTH CAROLINA SCHOOL DISTRICT. Dixon, Brandon Lee, 2024: Dissertation, Gardner-Webb University. According to the content found on its website, AVID has conducted studies to evaluate the academic performance of AVID students when compared to their non-AVID peers. A distinct research endeavor was undertaken to evaluate the impact of introducing AVID Elementary within a small rural school district. This study focused on student academic achievement as measured by the South Carolina College and Career Readiness (SCREADY) assessments. This study also examined the effects of attending AVID Elementary schools as students transition to middle school. An independent *t* test was conducted to compare the scale scores of AVID Elementary and non-AVID Elementary students on the state assessment. The examination of the study findings revealed that there was no substantial disparity in student achievement averages as indicated by SCREADY scale scores. Nevertheless, it is worth noting that in numerous cases, students attending the AVID Elementary school exhibited higher mean scale scores in SCREADY assessments for both English language arts and mathematics. The study also put forth recommendations for future research.

Keywords: AVID Elementary, SCREADY, South Carolina assessment, college, career

Table of Contents

Page

Tables

Figure

Chapter 1: Introduction

Introduction

America's schools place a high priority on preparing students for 21st century life. There has been an increase in the quantity of high school graduates who do not possess the necessary skills or qualifications required for success in college and employment. One in five high school graduates who take the American College Testing (ACT) exam find themselves unprepared for biology, science, English composition, and college algebra (ACT, 2018). Additionally, approximately one in four students who receive a high school diploma is unprepared to successfully enroll in and complete college coursework in core subject areas. Many of the rapidly growing job positions require knowledge and skills that closely resemble those of individuals beginning their college journey for the first time (ACT, 2018).

Insufficient preparedness for college impacts the overall readiness of individuals for their careers within society. According to ACT (2018), between 2017 and 2018, scores in reading, math, and science all experienced a decline. Building readiness skills can help students today prepare for collegiate and career success.

Students deemed as college and career ready possess the capability to apply fundamental principles from mathematics, English, and science to their college-level studies. Those leaving high school with the designation of being college ready are in a more advantageous position to navigate postsecondary education and ultimately achieve graduation and obtain a degree. Moreover, high school graduates with a solid grasp of 21st century skills are better equipped to meet the requirements of a diverse workforce, whether in traditional physical workplaces or virtual settings. Despite notable success

stories, it is important to acknowledge a continuing decrease in college readiness levels in the United States. English and math readiness levels have steadily decreased since 2014, according to ACT (2018). Additionally, there have been variations in reading and science readiness levels, with no discernible patterns (ACT, 2018).

In America, it is becoming more difficult to earn a living wage (Ausman, 2008). Generating individuals with lower skill levels in society presents challenges for educators, employers, and those seeking employment. Students transition into the next stage of their lives unprepared, lacking the skills necessary to maintain a reasonable standard of living. High school graduates attempt to enhance their productivity by taking on minimum wage and part-time positions, often unaware that this is insufficient for achieving true independence or providing for a family and enjoying an improved quality of life. When working full-time, millennial college graduates make approximately $17,500 more per year than their contemporaries with only a high school diploma (Kurtzleben, 2014).

A larger number of students must enhance their readiness skills to foster increased prospects for an improved quality of life following both secondary and postsecondary education. By nurturing these skills, students enhance their prospects of successfully completing college and thriving in a career that provides a sustainable income. One could consider the idea of equipping our students and school stakeholders with the essential principles of a supplementary resource like Advancement via Individual Determination (AVID), to increase the proportion of students prepared for college and career. AVID's goal is to minimize the achievement gap and to guarantee that students are adequately ready for college and/or career (AVID, 2021a).

Established in 1980, AVID is a nonprofit organization dedicated to education. Nationally, AVID has had a substantial impact on the performance of numerous scholars. In total, the program has been implemented in thousands of schools spread across nearly all states in the United States. AVID has also been adopted by various organizations within and outside of the United States. Today, AVID trains over 80,000 educators annually. The training encompasses well-researched strategies for best instructional practices crafted to enhance involvement or foster greater participation, prepare students for postsecondary education and the workforce, and ensure an understanding of skills needed to be successful. Educators receive training on how to guide the implementation of the AVID curriculum for students across the school and within the AVID Elective class in secondary schools. According to AVID (2022a), in 6 years, 42% of first-generation AVID students from low socioeconomic backgrounds complete a 4-year degree. Compared to their non-AVID peers during the same time period, this is four times higher (AVID, 2022a).

The success of AVID also brings benefits to local school districts. In South Carolina, there are over 100 AVID sites serving tens of thousands of students. One hundred percent of seniors in the AVID program successfully graduated from high school, and 99% met the admission criteria for colleges and universities.

Statement of the Problem

Minority students often lack adequate preparation in today's institutions of higher education. Completing high school with inadequate preparation places students at a disadvantage in their future pursuits. Melzer and Grant (2016) explained that even though they are very resilient and determined to go to college, underprepared students still

perform worse in both academics and social skills than their more prepared peers. Educational institutions bear the responsibility of preparing individuals for both college and career success, yet there is a concerning trend of underperformance among minority students in higher education. We have not adequately prepared students for the next level if they lack the readiness for both college and career pursuits.

Compared to their more prepared peers, underprepared children are more susceptible to becoming dropouts. These students also have lower grade point averages (Melzer & Grant, 2016). Students who are the first to attend college in their families, come from lower socioeconomic statuses, and identify as minorities are more likely than other groups to be labeled as underprepared (Melzer & Grant, 2016).

Educational institutions should maintain their commitment to enhancing the readiness of minority students to ensure they do not graduate without the essential 21st century skills. Over time, many school districts have concentrated their resources on students facing the most significant challenges, including those with disabilities. The No Child Left Behind Act (NCLB) is where this first appeared. For school districts with a population at or above proficiency, NCLB did not include any mandates or incentives (Kenney, 2007). Additionally, NCLB provided little incentive for children performing at or above grade level due to its historically intense emphasis on students who are achieving below their expected grade level. Kenney (2007) went on to say that despite pressure to shift resources and focus to NCLB's requirements, representatives from various organizations have conveyed that gifted programs remain a top priority in certain regions.

The Every Student Succeeds Act (ESSA) was passed in 2015 and superseded

NCLB. Despite differences in the two laws, they share some characteristics (Jones, 2019). States and school districts are required by ESSA to have a strategy for assisting institutions with high dropout rates, ongoing difficulties, or a particular group of struggling students (Jones, 2019). The determination of the assistance offered is made by the state, local school districts, and individual schools; however, ESSA mandates that states aid these struggling schools and students with evidence-based strategies (Jones, 2019).

Due to the implementation of ESSA, schools have the means to access resources aimed at bolstering the academic performance of minority students (Jones, 2019). Districts can harness the potential afforded by ESSA to address any skill deficiencies in students, thereby ensuring their future success. AVID can play a pivotal role in mitigating this challenge by expanding chances for marginalized students to achieve their highest potential in school. Achievement in these academic areas can pave the way for college success and equip students for career readiness. According to Ausman (2008), another crucial element contributing to the success of AVID among minority students is its emphasis on providing social and emotional support to these academically driven individuals. According to AVID (2022a), social and emotional learning is a central component of AVID's best practices. AVID is dedicated to enhancing the relationship between educators and students and promoting safe learning environments. To develop the ability to form relationships and show respect for diverse perspectives, students need to acquire collaborative skills within a culturally relevant educational environment, as outlined by AVID (2020). Culturally sensitive learning environments facilitate the development of leadership, self-advocacy, and the expression of student voices (AVID,

2020). AVID is seamlessly integrated with the Collaborative for Academic, Social, and Emotional Learning (CASEL), providing an exemplar for the social and emotional development of students. These competencies encompass five key areas: self-awareness, self-management, social awareness, interpersonal skills, and responsible decision-making, as outlined by CASEL (2019). These core competencies are consistently nurtured within the AVID program. AVID strategies, rooted in research, have been proven to assist students in cultivating confidence in these core competencies.

The AVID program places emphasis on more than just academics. For students to succeed in life, they need more than just test results. Students must also possess the ability to collaborate effectively "Developing the competences is equally important for kids to excel in school, work, and life and must be complemented by the focus on academics, according to overwhelming evidence" (Aspen Institute National Commission on Social, Emotional, and Academic Development, 2019, p. 17). AVID reflects this belief and impacts the social-emotional development of the students as a result.

Purpose of the Study

The objective of this research was to assess the endurance of the AVID program within a small rural school district by contrasting student achievement levels on high-stakes reading and math assessments. Schools in the study included elementary schools with similar demographics, with one implementing the AVID program. The study compared test scores of AVID students and students not in AVID to determine the program's sustainability in the district.

Research Questions

This study employed a quantitative research approach with the goal of

determining the impact of AVID's implementation on performance in the areas of reading and math in a rural district in South Carolina. The study addresses the following research questions:

1. What effect has the implementation of AVID had on elementary school English language arts scores in an AVID-trained school as compared to a non-AVID-trained school?
2. What effect has the implementation of AVID had on elementary school math scores in an AVID-trained school as compared to a non-AVID-trained school?
3. How are AVID successes/failures sustained over time in the first year of transition to middle school?

Theoretical Framework

The constructivist learning theory primarily guided the research for this study. This included the subsets of the theory as well. The learning theory comprises elements that are linked to the AVID program and influence student learning within AVID schools. Exploring the constructivist learning theory offered a deeper comprehension of its relevance and importance within this study.

The schools in this study are part of the same small rural school district. Each school implemented the state curriculum using the state learning standards. Every school is tasked with the responsibility of conducting state assessments in accordance with established standards. These assessments gauge student knowledge and what they have acquired throughout the academic year. Each school year, students are taught a curriculum that aligns with state standards. Consequently, one could argue that this method of learning is closely linked to the constructivist theory.

This holds particular importance within this study as I scrutinized the impact of student performance on state-standardized assessments in reading and math. As students progress in their metacognitive development, the collective results are reflected in their aggregated test scores. Livingston (2003) explained how metacognition research has aided in our comprehending the cognitive processes linked to learning and revealed the factors that distinguish successful students from their less-accomplished peers. This study compared the results of five elementary schools. One elementary school has implemented AVID Elementary, and the others have not.

Assumptions

This study was based on the following theoretical and empirical assumptions.

Theoretical

1. Instructional strategies implemented in a school can impact student achievement.
2. The choice of academic programs made by a school has the potential to impact student achievement.
3. Advancement in high-stakes assessments acts as a dependable indicator of student accomplishment for a school, carrying significant implications for their prospective achievements in college or the workforce.

Empirical

AVID educators received thorough training and consistently introduced students to AVID strategies and methods with unwavering commitment to the program.

Definitions

Academic Achievement

This indicator of the standardized assessment, as well as the end-of-course assessment (EOCEP) results, measures proficiency for students in reading and math. EOCEP areas for academic achievement include Algebra 1 for math and English 2 for English. This indicator applies to schools at each level (South Carolina Education Oversight Committee, 2022).

Average Students

Most students in the school fall into the category of average achievers. The school district's policies do not classify these pupils as either gifted and talented or learning handicapped. The majority of the students receive grades of Bs and Cs, which are typically in the middle of the achievement spectrum (AVID, 2021a).

AVID

The name AVID comes from the Latin word avidus, which means “hungry for information.” For students who are underachieving and/or underprivileged, AVID prepares students for college. AVID is focused on changing school-wide domains and having an impact on the entire school. During the summer institute program and throughout the academic year, school staff receive training in AVID path training to reinforce the AVID approaches pertaining to their subject areas (AVID, 2021a).

AVID Domains

Four areas that concentrate on employing AVID approaches to reform schools make up the AVID domains (AVID, 2021a). The domains include leadership, systems, culture, and instruction.

AVID Elective

The AVID Elective consists of students who receive daily in-class assistance for advanced critical thinking and problem-solving skills, facilitated through specific best practices techniques, questioning methods, and tutorial sessions. Students receive additional scaffolds to assist in their school's advanced courses (AVID, 2022b).

AVID Elementary

AVID Elementary is the elementary-geared program for AVID. The goal of this program is to make an impact on school-wide structures by being integrated into the curriculum of all classes in the elementary school (AVID, 2022a).

AVID Site Team

The AVID Site Team includes educators who receive training in AVID strategies and methodologies and work in multi-person core academic teaching teams. The team may also include administrators, instructional facilitators, school counselors, and other support staff. By integrating AVID throughout their school, these people collaborate to improve preparedness for college and career (AVID, 2017a).

Collaborative Study Groups

Students in cooperative study groups select a particular item from a subject area, work together to grow and expand their knowledge through Socratic questioning, and then use their newly acquired knowledge to improve performance in class (AVID, 2017b).

College and Career Readiness

AVID's college and career readiness framework offers a comprehensive, evidence-based strategy for closing opportunity gaps and fostering college and career

readiness in all students (AVID, 2017b).

English Learners' Progress

The metric assesses students who learn English as a second language. ESSA mandates that each state track the progress of learners toward English proficiency. This indicator applies to schools at all levels (South Carolina Education Oversight Committee, 2022).

Executive Function

The executive function refers to the processes used by students to guide, manage, and direct their learning. It also refers to how they manage their behavior and respond to certain situations (Wilson et al., 2021).

Graduation Rate

"By accounting for students who transfer into or out of the cohort after the ninth grade, this indicator calculates the percentage of students who enter the ninth grade and graduate within four full years" (South Carolina Education Oversight Committee, 2022, p. 74).

Preparing for Success

This statistic measures how well a school is doing academically in the subject of science. These evaluations are taken into account by the indicator: Grades 4 and 6 SCPASS science; Biology I end-of-course exams; for pupils with severe cognitive difficulties, assessments in science or social studies. This indicator applies to all schools (South Carolina Education Oversight Committee, 2022).

School Climate

This indicator measures the stakeholder perception of the school's climate and

beliefs. This indicator applies to all schools (South Carolina Education Oversight Committee, 2022).

State Assessment Data

Students in South Carolina complete the South Carolina College and Career Readiness (SCREADY) assessments for reading and math. Questions on tests are boosted by technology. Additionally, to gauge their critical thinking skills, students taking the English language arts test complete writing responses that involve text-dependent analysis. South Carolina students take the SCPASS science and social studies exams. Progress in fundamental subject areas can be gauged as time elapses (South Carolina Department of Education, 2022).

Student Progress

A school's lowest-performing 20% of students are tracked in comparison to their peers who score at similar levels (South Carolina Education Oversight Committee, 2022).

Writing, Inquiry, Collaboration, Organization, and Reading

The principles and methods of AVID instruction are encapsulated by the acronym WICOR. They are composed of writing, inquiry, collaboration, organization, and reading, which are essential elements used throughout the school by teachers with AVID training. The AVID instructional domain includes WICOR. These methods lay the groundwork for AVID students to develop college and career readiness abilities (AVID, 2022a).

Significance of the Study

This research contributed to the current body of knowledge on the efficacy of the AVID program by conducting an achievement comparison and assisted in identifying effective programs in Title I schools. Additionally, it expanded the current body of

literature on the effectiveness of the program when implemented in elementary schools. Furthermore, this study enhanced the understanding of the impact of the AVID program on student outcomes within a small South Carolina school district. Furthermore, it made a valuable contribution to research focusing on program implementation in school districts aiming to elevate the preparedness of students for postsecondary education and the workforce.

Organization of the Study

The first chapter presented the study and offered a concise rationale for the necessity of an efficient academic program like AVID in addressing achievement and opportunity disparities and ensuring preparation for postsecondary education and the workforce. Chapter 1 also implied that the study holds broader importance in addressing the overarching questions of the AVID program's influence on educational outcomes. This chapter supplied context for the issue by offering a more comprehensive exploration of the research queries with regard to the sustainability of the AVID program.

Chapter 2 furnishes supplementary context and an examination of the literature associated with AVID. This chapter encompasses a thorough analysis of how the AVID program tackles the challenge of closing achievement and opportunity disparities while also equipping students for readiness in college. Furthermore, it delineates the initiatives undertaken by a small rural school district in the southern region to confront the issue of low student performance in schools with a predominantly minority population.

Chapter 3 elaborates on the research study's structure, methodology, and the variables incorporated into the study. It also furnishes additional details about the participants, the school district's population, and the measures taken to uphold the study's

validity. Chapter 4 provides an in-depth exploration of the study's findings. Chapter 5 delves into the implications of the study's findings.

Chapter 2: Literature Review

Overview

The literature presented in this chapter focuses on the approach to learning known as the constructivist theory. Since the beginning of modern-day education, student learning has been researched and discussed. Current trends have shifted from teacher-centered instruction to student-centered learning. This chapter is centered on this shift and how it has caused changes to what have long been identified as instructional best practices in hopes of closing the opportunity gap, ensuring preparation for college and the workforce, and increasing student achievement.

AVID supports schools in adopting a more student-centered strategy while also changing lives. AVID provides training to school staff members to achieve its mission to reduce the opportunity gap and ensure the preparedness of all students for college, careers, and life. AVID offers schools the scaffolded assistance that teachers and students require to promote college preparation and career success (AVID, 2021a).

Conceptual Framework

AVID emphasizes student learning by incorporating best practices for program implementation. Learning has been the center of education since the invention of modern schooling. Learning is the act of receiving and processing sensory data, encoding that data as memories within the neural networks of our brains, and retrieving those memories for use later (Walters 2018). Since the advent of education, researchers have looked into how students learn. Walters (2018) explained all learning occurs within the brain, and as our understanding of the brain's underlying structures and processes grows, we can begin to apply that knowledge to improve the design of learning environments. The

constructivist theory is grounded in the idea of constructivism.

Clark (2018) explained, “Constructivism, considered by some educational theorists to be a branch of cognitivism, is the study of a learner’s own construction of knowledge” (p. 180). Advocates for implementing this view felt learners have a better understanding when they are able to infer from their learning activities. The belief of constructivists is that individuals learn best when they use information learned to construct their own meaning (Clark, 2018). In order to fully understand constructivism, one must understand where the theory derives.

Constructivism is used in a variety of contexts and disciplines (Candy, 1991). The opposing view of this learning process is known as an objectivist view of knowledge. The learner and the context of learning are the focus of constructivist learning theories (Walters, 2018). The constructivist theory is used in various learning contexts including educational and work settings and in society (Walters, 2018).

Constructivist theories focus on more than traditional aspects of schooling. They emphasize nontraditional learning to differentiate it from conventional learning (Bolhuis, 2000; Resnick, 1987). An example would be the cognitive apprenticeship model, which is described as being a model for learning outside the school setting (Resnick, 1987). According to Walters (2018), in the past, apprenticeship meant a student would learn the necessary skills of a career while working in the field and partnering with other fellow apprentices. In short, learning would happen in a real-life context. Resnick (1987) believed that the apprenticeship system for cognitive learning should be developed. Additionally, he believed the basis of previous apprenticeship programs should be reestablished to teach students how to think, learn, and problem solve. This model

focused on the student as the learner and the teacher as the facilitator of knowledge. Cognitive constructivism was classified into eight principles (Savery & Duffy,1995):

1. Relate all tasks to a broader and more complex objective.
2. Assist students in assuming responsibility for their learning objectives.
3. Create genuine assignments.
4. Create real-world assignments and learning environments that reflect the future workplace.
5. Allow students control over their learning.
6. Challenge and support student thinking.
7. Foster the cultivation of novel ideas and perspectives.
8. Encourage student reflections in every stage of learning.

Constructivism is a student-centered model. Students develop understanding from acquired knowledge; educators facilitate this through critiques and intentional questioning (Clark, 2018). Many who subscribe to this model advocate for a shift from teacher-centered learning to student-centered learning. “Learners process, or construct, new information by relating it to their experiences, attitudes, and beliefs as reference” (Clark, 2018, p. 3).

Bruner (discovery), Vygotsky (social development), and Piaget (cognitive development) are examples of constructivist theorists. Students must conduct their own research to discover facts and relationships (Clark, 2018). This discovery learning differs from teacher-centered instruction. Teachers do not provide direct instruction for the duration of the lesson. Instead, students are provided with scaffolded support and resources to engage and make connections with the content (Clark, 2018). Bruner

believed the concept of discovery learning assisted students with remembering concepts and recalling information. Clark (2018) identified five features of discovery learning that proponents believe are effective: promote participation, ensure students are motivated, foster autonomy and responsibility, provide opportunities for creativity and problem-solving, and provide individualized and personalized learning experiences.

Not all theorists are proponents of discovery learning. Clark (2018) explained that critics find fault with several aspects of discovery learning and possess their own beliefs about the negative effects on learning. Clark believed critics of discovery learning find that it creates cognitive overload. This refers to a situation in which one is given too much information at once or given too many simultaneous tasks. Clark went on to explain that critics of discovery learning believe it leads to potential misunderstandings. This happens when teachers are not available to correct student misconceptions. When students work independently or collaboratively, it is difficult for teachers to identify problems and misconceptions (Clark, 2018).

Another example of constructivism is Vygotsky's social development theory. According to the theory, "social interactions come before cognitive development" (Clark, 2018, p. 181). Allowing students to interact socially supports them in developing a conceptual understanding of the information presented. The teacher acts as a facilitator, intervening when needed. This concept is known as the zone of proximal development.

The zone of proximal development is defined as the difference between what a student understands and the potential to understand at a more advanced level that results from social interactions with other people (Clark, 2018). Teachers scaffold instruction to assist struggling students where needed. Clark (2018) defined scaffolding as providing

students with support at the right time and level of complexity to facilitate their successful progress within the zone of proximal development. Scaffolding could be utilized in a variety of ways by the teacher. Scaffolding can be provided in several ways. Teachers can scaffold through discussion, assistance with a task, and assignments that provide appropriate help and support to students (Clark, 2018). Gordon (2008) characterized this type of learning as genuine – one characterized by discovery and surprise.

The discovery and surprise allow learners to become in tune with their own learning. This is known as metacognition. Metacognition is the ability to direct one's own cognitive processes (Walters, 2018). Metacognitive knowledge and regulation have been shown in research to play important roles in successful learning.

Various activities implemented in schools are considered metacognitive. Larson (2009) identified activities like students planning how to complete tasks, teachers monitoring comprehension, and later evaluating the progress of comprehension. Metacognitive activities in the classroom provide challenges to students. Students are challenged to explain their thinking and provide reasoning. Educators need to possess knowledge of metacognition and strategies to foster metacognitive skills within the classroom.

Metacognition plays a role in reading comprehension (Larson, 2009). Because school learning is structured, student outcomes are heavily influenced. Teachers can train students to use metacognitive strategies throughout classroom instruction. Self-checking, repeated readings, and goal-setting are all examples of metacognitive strategies that can be employed throughout the classroom (Larson, 2009). All teachers, regardless of the

content area, should be trained to assist students with reading comprehension. Larson (2009) explained the knowledge of the instructor in each classroom is a critical part or the ability of the educators to guide the metacognitive process.

According to Piaget's cognitive development theory, student experiences shape their learning. Piaget's theory included the concept of schema (Stevens-Fulbrook, 2020). Schema implies students develop mental patterns to understand their surroundings. According to Piaget, a child can adopt various templates or patterns and apply them in conjunction with their own schema, which they created from their own experiences (Stevens-Fulbrook, 2020).

The cognitive development theory developed by Piaget is divided into four stages. The first stage, the sensorimotor stage, covers children from the time of birth until they are 2 years old. During this time, babies develop an awareness of their surroundings through their senses (Stevens-Fulbrook, 2020). This allows them to explore the world through their physical movements. At this age, children discover qualitative characteristics of people and objects, make connections with their senses, and begin to understand their emotions.

The second stage, the preoperational stage, describes children from ages 2 to 7. In this stage and each stage after, children develop language skills and are able to think abstractly (Stevens-Fulbrook, 2020). This is accomplished through imitating, drawing, imagining, and verbalizing their thoughts.

The concrete operational stage is the third stage and describes children from 7 to 11 years old. Children's thinking becomes more concrete and logical at this stage. According to Stevens-Fulbrook (2020), children become more rational and are able to

understand aspects such as conversation. Children are able to make connections and understand that objects retain their shape, size, height, and volume even if those characteristics change.

The final stage is known as the operational stage and describes children from 11 years old to adulthood. According to Stevens-Fulbrook (2020), this is the operational stage in which children are able to problem solve, reason logically, and understand abstract concepts. Children of this age can analyze situations, use their prior knowledge, and use the knowledge to create solutions.

Growth Mindset Theory

The growth mindset theory (Dweck 2000, 2006) examines people's underlying assumptions regarding fundamental human attributes. The growth mindset holds that your attributes are something you can cultivate through your efforts, strategies, and the assistance of others (Dweck, 2006). Wilson and Conyers (2000) explained that mindsets and resultant learning behaviors have consequences on academic results. Students who possess a growth mindset believe their attributes can evolve. Students who have a fixed mindset believe the characteristics are unwavering and permanent. The mindsets explain why students who are able to do certain things have different goals and behaviors. Students who possess a fixed mindset emphasize goals based on performance such as appearing brilliant and demonstrating their abilities. Students with a fixed mindset steer clear of challenges. Growth mindset students prioritize objectives such as becoming smart and improving abilities. Students who have a growth mindset value effort and see setbacks as learning opportunities.

Mindsets can be changed through the use of various interventions (Rissanen et al.,

2019). Interventions have a long-term impact on the willingness of students to work hard and on their achievement. Dweck (2012) explained the primary goal of intervention is to provide information regarding the brain's ability to change and reorganize in response to learning. Teachers are crucial in these interventions. The way teachers view their students' behaviors as well as their mindset have a strong influence on their own behavior and interactions with students (Ronkainen et al., 2018). By using subtly conveyed indications through their language, teachers can affect student motivation and achievement as well as their impressions of their own talents (Cimpian et al., 2007).

A growth mindset is frequently linked with process focus. Behaviors can be attributed to cognitive and related factors (Rissanen et al., 2019). Individuals with a fixed mindset focus on traits and translate actions related to their aptitude (Chiu et al., 1997). Supporting the ability of students to process is imperative for teachers who understand that the cognitive processes, situational factors, and instructional practices influence student learning and may impose hurdles to motivation and learning; recognizing these hurdles and supporting students in overcoming them is the job of the teacher (Rissanen et al., 2019).

Teachers possessing a fixed mindset are inclined to categorize their students in comparison to those possessing a growth mindset. Teachers possessing a growth mindset devote more time to interacting with students, learning their likes and dislikes, and providing them with personalized learning and support (Rissanen et al., 2019). As a result, in growth mindset teaching, teachers focus on incorporating differentiation into instruction. Process-focused teaching promotes mastery in the classroom. Teachers of this method focus on how much progress students make and if they are meeting their

academic goals. This means that formative rather than summative assessment is prioritized.

In process-focused pedagogy, learners are not encouraged to be in competition or make comparisons to their peers. They are encouraged, however, to assess their own progress. Rissanen et al. (2019) discovered teachers with a fixed mindset design academic objectives and instructional lessons to the interests of their students. These teachers seek and evaluate student achievement in a fair and concise manner.

Teachers who possess a growth mindset are also persistent (Rissanen et al., 2019). This means that teachers adhere to stringent principles and do not allow students to develop habits that do not lead to a growth mindset. Teachers expect good behavior and insist that students work hard in class. Persistent teachers believe the role of the teacher is to develop study habits and promote good citizenship and character. According to Rissanen et al. (2019), fixed mindset teachers comforted students as they provided feedback. Fixed mindset teachers perceive their students to be weak and attempt to protect them from challenges and criticism. Teachers who have a growth mindset provide more courageous support with the feedback given to students. These teachers use words like “not yet,” which leave room for growth, and provide words of encouragement to continue (Rissanen et al., 2019).

Some individuals may possess false growth mindsets (Wilson & Conyers, 2020). The false growth mindset means that people can develop their abilities without fully embracing all the factors that can enable those advancements. To avoid providing a false growth mindset, Wilson and Conyers (2020) recommended that the following should be avoided:

- *Telling students they can "do anything*." A growth mindset means you are receptive to the idea that you can develop your knowledge and skills, however, not all objectives are attainable for every individual. Encouraging students to pursue their aspirations without providing them with effective strategies may create an unrealistic perception that success comes effortlessly, potentially leading to disappointment. A teacher's role is to show students how to develop the necessary skills and access the resources that will be useful to them as they pursue a specific goal. That will be far more effective and meaningful to them than empty platitudes that don't convey what it takes to develop and grow throughout life.
- *Having positive qualities such as open-mindedness or flexibility.* While these are positive traits, educators should understand that being open-minded is not the same thing as putting in the effort to develop their own abilities and those of their students.
- *Praising effort without linking to other strategies necessary for success*. While it's true hard work is important to learning, praising someone's effort without tying it to other learning strategies- like focus and perseverance- does not reinforce the necessary connections. The best way for teachers to give feedback is to praise students for hard work and link the praise to the outcome and the strategies they used to get there. (p. 89)

When motivated by a growth mindset, students are able to put forth greater effort when faced with academic challenges. Educators who embrace a growth mindset are well-positioned to assist students in boosting their motivation, investing effort, and

employing strategies that will guide them toward improved academic achievements. Motivation and effort are two critical components that can drive anyone, including low-performing students, to learn and achieve (Wilson & Conyers, 2020).

Wilson and Conyers (2020) described how a growth mindset can motivate students through goals and feedback. Motivation can be distinguished from common cognitive functioning. It can help to describe increases in performance that are separate from intelligence measurements (National Academies of Sciences, Engineering and Medicine, 2018). Motivation can further be defined as activating and sustaining behavior to achieve goals that are important for education and attainment throughout life (National Academies of Sciences, Engineering and Medicine, 2018). Motivation is vital to student success in school and all parts of life (Anderman & Sayers, 2020).

Wilson and Conyers (2020) explained motivation can occur in many different forms, from being inspired to create a set of broad goals or objectives to having the drive to accomplish a difficult task. Researchers discovered that motivated students demonstrate their learning by producing high-quality work and performing well academically (Hennessey, 2016).

Teaching students how to set appropriate goals empowers them to adopt a growth mindset, own their learning, and achieve higher levels of success (Wilson & Conyers, 2020). When students are taught how to set and achieve personal goals, they can choose what they want to think and learn about, improve, and achieve. According to Wilson and Conyers (2020), the process of setting goals encourages them to determine a long-term vision of what they want to do and the short-term motivation to keep them energized so they will work hard along the way. Additionally, Wilson and Conyers outlined the main

benefits of student goal setting. Goal setting increases and focuses student attention on the project or activity at hand. It energizes and increases student effort levels. Student goal setting also helps persistence over time. Students who set goals are able to create strategies and alternative routes to achievement.

Setting challenging learning goals is key to motivation and sustaining learning (Wilson & Conyers, 2020). Student objectives should be intrinsically motivating, achievable, and challenging. Wilson and Conyers (2020) provided strategies for setting and reaching growth goals. Educators should advise students to define their goals by identifying in clear terms what they hope to accomplish. This allows students an opportunity to clearly define the goals that have been set.

Wilson and Conyers (2020) explained that educators should assist students with thinking through processes of accomplishing goals from beginning to end with measurable plans for success. Educators should also remind students that big goals are achieved by planning and working through a series of smaller, more manageable steps. This will encourage students to keep making progress. Wilson and Conyers also explained that educators should begin all new units and projects by having students complete graphic organizers. The use of goal setting and graphic organizers will promote student learning.

Goal setting increases the motivation levels of students (Wilson & Conyers, 2020). Instructors who implement goal setting with students provide students with choices in the content of their projects, materials, and activities when possible. Instructors can assist students with putting their goals in writing and posting them where they will be able to see them each day. This will help students identify what they will be studying, the

relevance and why it is important, and the steps required to reach the goals.

Student Achievement

Student achievement underpins nearly every facet of education. According to Guskey (2012), it directs all educational improvement efforts, serves as the foundation for education accountability programs, and is the primary outcome variable in the majority of educational research studies. Guskey observed that defining, quantifying, and measuring student achievement is difficult. The most common measurement of student achievement is the performance on achievement tests in the core academic areas. Standardized testing such as SAT, ACT, and NAEP, and statewide exams are some examples.

Since the advent of modern-day education, student achievement has remained a hot topic. The Coleman Report derived from the Civil Rights Act of 1964 (Hanushek, 2021). This gave the United States Office of Education a timeline to create a report. The focus of the report was the inequity in American schools. American student achievement disparities were highlighted in the report. According to Hanushek (2021), the report demonstrated the disparities of older Black children, who performed at comparable levels to young White children. This, along with other data measures, according to Hanushek, never received the attention it deserved.

A Nation at Risk (National Commission on Excellence in Education, 1983) drew attention to American students' poor mathematics and science achievement in comparison to students in other economically advanced countries. The education secretary established the National Commission on Excellence in Education (1983) to evaluate the American educational system. According to the report, the commission was established in response

to the apprehension of the negative public perception of the American education system (National Commission on Excellence in Education, 1983). The charter of the commission focused on each of the following:

- evaluating the standard of teaching within the country's schools
- comparing the quality of U.S. schools to other developed countries
- researching the correlation between admission criteria for colleges and the academic accomplishments of high school students
- identifying educational initiatives that create student success in college
- evaluating how the effects of changes in society and education have influenced student achievement
- identifying problems to address to ensure educational excellence

The report indicated various risks faced by the American educational system. The risks included

- American student achievement continues to lag behind other developed nations.
- Millions of American adults are identified as illiterate, failing to pass basic literacy assessments.
- Illiteracy among American youth continues to trend upward.
- Student achievement scores among high school students are lower than in the previous 2 decades.
- No correlation exists between identified gifted students and their student achievement performance.
- There is a continuous decline in SAT performance among students.

- Assessment scores in physics and English continue to trend downward.
- Fewer students achieve superior SAT scores.
- Students lack higher order thinking skills and are unable to successfully solve multi-step mathematical equations.
- Achievement scores in science have fallen consistently each school year.
- More students are having to enroll in remedial math courses than ever before.
- College graduates have lower achievement scores.
- Companies, organizations, and government officials spend excessive amounts of money on providing remedial education to their employees and staff members.

Three basic findings by the commission's report were discovered. In comparison to other countries, American students devote significantly less time to schoolwork. Other industrialized nations with higher student achievement scores have spent substantially more time in classrooms. The National Commission on Excellence in Education (1983) also discovered that time spent in the classroom and on homework was frequently wasted. Finally, the National Commission on Excellence in Education (1983) discovered schools should put forth more effort to assist students in developing effective study habits.

A Nation Still at Risk

Years after the initial meeting of the Commission, the panel reconvened to declare the country was still in danger. According to the National Commission on Excellence in Education (1998), our country is not in danger of falling behind other industrialized nations economically or technologically; however, our children's education is

significantly inferior in comparison to those nations.

At the time *A Nation Still at Risk* was published in 1998, seniors from U.S. high schools ranked lower than most other nations when completing the Third International Math and Science Study assessment. American students also ranked near the bottom in math and 16th in science compared to other industrialized nations. Students classified as advanced performed even worse, finishing last in physics. The National Commission on Excellence in Education (1998) explained this suggests that our students lag significantly behind the rest of the industrialized world in subjects critical to our future.

The data presented in *A Nation Still at Risk* highlighted the academic performance of minority student populations. The National Commission on Excellence in Education (1998) cited the percentage of African American students between the ages of 16 and 24 and not enrolled in school as 13%. The students also do not possess a high school credential. Similar trends were observed for other minority student populations, according to the data. First-generation Hispanic students did not complete high school at a percentage rate of 17%.

American students perform well at the elementary school level. Their academic performance decreases at the middle school level, and students eventually fall behind in high school (National Commission on Excellence in Education, 1998). The National Commission on Excellence in Education (1998) found that American students are the only ones to see achievement decreases the longer they remain in school. The report of the National Commission on Excellence in Education (1998) emphasized the consequences for college-age students. A high percentage of students entering college require remediation in reading, writing, and math courses (National Commission on

Excellence in Education, 1998).

The National Commission on Excellence in Education (1998) emphasized student academic performance has long-term implications for the economy and labor market. Employers cite challenges in hiring workers with the qualities and necessary skills required for more advanced positions, according to the National Commission on Excellence in Education (1998). According to the National Commission on Excellence in Education (1998), companies such as Silicon Valley advocated for higher immigration levels in order to recruit qualified personnel. This further highlighted other countries outperforming American students.

A Nation Still at Risk (National Commission on Excellence in Education, 1998) highlighted America's test of its commitment to equitable educational opportunities for students. According to the National Commission on Excellence in Education (1998), this test was to determine the true purpose of education: to educate all students or have students remain in a school for a designated number of years. The National Commission on Excellence in Education (1998) also sought to determine whether low academic performance is acceptable for most students while a select few excel. The National Commission on Excellence in Education (1998) further highlighted the plight of disadvantaged and minority students. Many students from underserved populations were not challenged in schools (National Commission on Excellence in Education, 1998).

The National Commission on Excellence in Education (1998) explained that when they require instruction and guidance from highly qualified teachers, students are left to fend for themselves. Furthermore, the National Commission on Excellence in Education (1998) explained many students were left to sink or swim from grade to grade. The

National Commission on Excellence in Education (1998) explained that many students were promoted throughout the system without ever learning to read. This is in spite of the fact that best instructional practices of reading are now widely known. This further highlighted the quality of education received by these identified minority students.

The National Commission on Excellence in Education (1998) highlighted strategies for change in improving education for all students. The first strategy focused on standards, assessments, and accountability. The premise behind this strategy was every student, school, and district must be held to high learning standards (National Commission on Excellence in Education, 1998). The strategy also discussed how parents should be fully informed about their child's progress and school.

The second strategy for change mentioned is pluralism. Pluralism refers to competition and choice. The National Commission on Excellence in Education (1998) recognized the importance of being open to educational alternatives. Stakeholders had varying preferences and priorities, and educators had varying areas of strength and interests (National Commission on Excellence in Education, 1998).

The National Commission on Excellence in Education (1998) provided strategies to assist students in being prepared for the next century. The changes were meant to be put in place to enhance and improve student academic performance in all demographics. The 10 breakthrough changes identified were

1. America requires strong national academic standards and standards-based assessments that are created independently from politics and other cultural fads.
2. People must be empowered to make the best choices that impact their lives

and the lives of their children in a free society.

3. States require laws that impact charter schools to allow schools freedom and flexibility and provide adequate resources to all charter schools.
4. School choice should consist of worthwhile options.
5. Schools must not endanger their students.
6. Teachers should be knowledgeable of the subjects they teach.
7. School systems should seek alternative route certification programs to employ other well-educated individuals outside of the traditional teaching route.
8. High hopes for great educators—and no pay for inept ones.
9. Provide a safe space that allows students to master academic content and teachers to take risks.
10. Build collaborative relationships with parents and other community stakeholders.

America competes with other international entities in every industry, according to the National Commission on Excellence in Education (1998). As a result, schools in America must prioritize ensuring the success of all students in order to prepare them for college and career readiness. While the United States may be proud of what its schools and colleges have historically accomplished and contributed, the country's and society's educational foundations are currently in danger of erosion due to an increase in inferiority that intimidates the nation's and people's future (National Commission on Excellence in Education, 1998). As a result, the educational attainments of other countries matched or exceeded those of the United States.

NCLB

Following years of reports highlighting poor academic performance, the legislation known as NCLB became law in 2001. The passage of NCLB is seen as a turning point for additional federal government input in education. According to Hayes (2008), the original law's goal was to guarantee that every child in school achieved proficiency at the grade level in the fundamental subjects crucial for all forms of learning. The goal of the law is to ensure that every child in America attains elevated academic benchmarks, regardless of their demographics (Hayes, 2008).

According to Hayes (2008), the federal government no longer attempted to help only special education students but rather to ensure that all children received an equal education. Following the passage of the law, all states were required to administer federally approved tests in reading and math in Grades 3-8. According to Hayes, for a comprehensive assessment of the performance of diverse students in a school district, test scores should be reported across eight distinct subgroups. Ethnic groups must report test results. Students receiving free or reduced lunch, identified as having limited English proficiency, and those who qualify for special education services all have separate reporting requirements.

NCLB had additional consequences for schools and school districts in terms of accountability reporting. Hayes (2008) explained the results of all the tests, including the scores of each subgroup, must be made known to the public. According to Evers and Walberg (2004), education is one of the top domestic policy issues of the day, and testing and teaching effectiveness are among the top issues in education.

Increased awareness of accountability has brought greater attention to school

reporting. More than ever, parents wanted to know about their children's academic progress and how their childrens' schools compared to other schools or standards, according to Evers and Walberg (2004). Testing and evaluating the teaching outcomes of districts, schools, and staff members are therefore ongoing challenges (Evers & Walberg, 2004). While accountability reporting has increased, Evers and Walberg acknowledged achievement test scores do not reveal all of the important outcomes of education, nor do they provide a comprehensive index of teaching quality.

South Carolina Education Accountability System

The South Carolina legislature has laws that govern education and accountability in the state. The Education Accountability Act of 1998 placed South Carolina in the mainstream of education reform (South Carolina Education Oversight Committee, 2022). The General Assembly votes on the laws that govern the state to include those pertaining to education. The South Carolina General Assembly emphasizes the responsibility of South Carolinians to focus on improving public education and maintaining high expectations for all students (South Carolina Education Oversight Committee, 2022).

The South Carolina General Assembly placed an increased focus on accountability by implementing a system based on performance. All South Carolina students who graduate from public high schools should be prepared for success in college, careers, and daily life in the global, digital, and knowledge-based world of the 21st century in order to conform to the descriptors of expectations set for South Carolina graduates (South Carolina Education Oversight Committee, 2022). The Education Accountability Act exists for a variety of reasons.

The purpose of the Education Accountability Act is to employ academic

achievement standards to encourage schools and children to perform better by tying together policies and criteria for performance standards, accreditation reporting school awards, and targeted support. It also synchronizes the South Carolina state assessment to those standards and functions to furnish parents and the broader public with an annual report card containing performance indicators that are logical, equitable, and technically sound, offering clear and detailed insights into both the academic and overall performance of the school and district.

Districts must create local accountability systems in accordance with the Education Accountability Act in order to promote teaching and learning that is effective and of high quality and to provide strategies and support to underperforming schools. Additionally, it offers tools for enhancing classroom teaching and learning procedures in order to raise student achievement and close achievement disparities. The Education Accountability Act promotes educator professional development as a crucial component of enhancing the actual job of teachers and school staff members. It also exists to increase the capacity for system evaluation and to carry out in-depth investigations into the execution, effectiveness, and efficiency of academic development initiatives.

South Carolina’s accountability system is built on the premise of an academic growth model. Growth is the improvement in a student's or group's academic performance over two or more time points, according to Castellano and Ho (2013). These models are comprised of multiple factors that condense student performance data from two or more time periods, offering insights regarding students, their classes, teachers, and schools (Castellano & Ho, 2013). Growth models rely on test reliability and validation.

The accuracy of the data needs determines the integrity of the growth model.

This, according to Castellano and Ho (2013), is particularly crucial to take into account when the growth model calls for cut scores or vertical scales because standard setting and even scaling, albeit to a lesser extent, involve subjective judgments. Vertical scales and performance level categories that are not clearly specified are not taken into account in growth model calculations. Data on student performance from two or more time points are used in growth models (Castellano & Ho, 2013).

An estimate of a student's growth can be given using a growth model. Particularly in the context of accountability and evaluation, practitioners are frequently more interested in group-level descriptions of academic advancement (Castellano & Ho, 2013). Calculating the average growth values at the student level for a specific group of students yields group-level summaries. Group-level summaries are frequently associated with accountability and evaluation decisions (e.g., teacher effectiveness and school accountability).

According to Castellano and Ho (2013), there were various ways to create benchmarks for expected or sufficient growth. The selection of a growth standard performance can be evaluated using norms or by a defined group of peers. As a result, this may lead to percentage-based decisions, such as identifying certain subsets of populations to include students, teachers, and schools (Castellano & Ho, 2013).

Castellano and Ho (2013) provided examples of data requirements for growth models. Vertical scales, proficiency cut scores articulated across grade levels, multiple cut scores articulated across grade levels, the number of students, multiple years of data, and meaningful controls and covariates are among the data requirements.

Vertical Scales

A vertical scale serves to connect the reporting test score scale across different grade levels, enabling meaningful comparisons between test scores from one grade and those from subsequent or prior grade levels (Castellano & Ho, 2013). To guarantee meaningful and consistent content progress across different grade levels, vertical scales necessitate rigorous design specifications in test development. Vertical scales play a crucial role in gain-based models and are inherent in the understanding of intuitive growth concepts. In certain instances, vertical scales may not be officially endorsed but are instead indirectly and informally put into practice.

Proficiency Cut Scores Articulated Across Grades

Castellano and Ho (2013) explained some growth models allow for growth forecasts, frequently implying future standards such as proficiency or college and career preparedness as development trajectories. These models demand that students be on track to proficiency. The majority of growth models reference the cut score even if they do not require it to make a prediction. Model predictions in these cases necessitate clear-cut score definitions across different grade levels. This refers to proficiency cut scores that follow a regular pattern of relative rigor or grading rigor. Cut scores of this nature are determined via standard-setting processes in which a committee defines the knowledge and skills that students need to demonstrate in order to be deemed proficient. The committee then establishes cut scores by taking into account the qualitative description of proficiency, item content and difficulty levels, and test scale features. Lack of articulation results in erratic correlations between the level of standards and the entering grade, the time frame for competency, and the target year for standards achievement.

Multiple Cut Scores Articulated Across Grades

Some evaluation and accountability policies place a strong emphasis on students achieving a certain level of competency. Descriptors for student achievement levels may include below basic, basic, proficient, and advanced. These cut scores are determined through standard-setting procedures, which also provide further detail on each performance level's descriptors. To prevent unexpected outcomes, for any growth model utilizing multiple cut scores to signify growth, it is imperative to establish clear and consistent standards across various grades.

Large Numbers of Students

In order to generate dependable assessments, many growth models necessitate a large number of students. The student growth percentile (SGP) model requires the estimation of numerous parameters and the involvement of a substantial number of students to ensure that SGPs effectively support accurate interpretations. The general rule of thumb for the minimum sample size for SGP estimation is 5,000 students. While many state-level datasets are at ease with this value, certain states experience instability if SGPs are computed for specific districts, grades, or subgroups.

Multiple Years

In order to enable value-added inferences, growth models frequently need to account for multiple years' worth of test score data for the same teacher. Each classroom's students need test results from previous years. As the importance of utilizing growth model results increases, it becomes imperative to augment the volume of student data to enhance the precision of estimations.

Meaningful Controls/Covariates

All conditional status and value-added models, as well as other models that create empirical expectations based on particular factors, are best read when the entire collection of variables that were utilized to do so is fully understood (Castellano & Ho, 2013). Understanding how many prior scores have been taken into account as well as which other student, teacher, and school-level variables have been added is necessary for an accurate interpretation of the findings. The proportion of students from low-income households, the cultural and racial diversity of the school and classroom, and the number of pupils with limited English proficiency are a few examples of variables.

State education agencies are mandated to create and distribute annual state reports and Local Education Agency report cards that adhere to the minimal standards outlined in federal law under ESSA. South Carolina report cards are made up of various indicators to gauge the performance of a school and district. Academic achievement, preparing students for success, English learner progress, student progress, graduation rate, college and career readiness, and school climate are the indicators included on the report cards. South Carolina Department of Education's (2022) Oversight Committee provided an accountability manual to further provide information on each component.

College and Career Readiness

In addition to increased attention to student achievement, there has been more focus on college and career readiness at all levels of schooling. Modern schools must provide a variety of curricula and educational options that give pupils the chance to build comprehensive skills and competences to meet the needs of the workplace in the 21st century if they are to guarantee their students' future job success (Curry & Milsom,

2017). Curry and Milsom (2017) also discussed how recent college and career readiness data reflect achievement and opportunity gaps for minorities and individuals from lower socioeconomic groups.

AVID

The college and job readiness program AVID exists to provide students and schools with high expectations, quality instructional strategies, peer collaboration, and safe spaces to foster learning (AVID, 2021c). AVID programs are designed for all levels of public school: elementary, middle, and high. The goal of AVID is to close the opportunity gap by educating all students for success in a global society and college preparedness (AVID, 2021c).

The history of AVID clearly illustrates that the success of AVID students is the result of collaborative efforts. In 2018, almost 92% of AVID students throughout the U.S. said they intended to enroll in a postsecondary institution, and 78% said they had taken at least one challenging course. In 2018, more than 94% of students enrolled in the AVID program met the 4-year prerequisites for college admission (AVID, 2021b). By delving into AVID's historical context, its mission to bridge educational disparities, the integration of the AVID Elective at secondary schools, and the adoption of AVID at the school-wide level, one can acquire a more comprehensive understanding of how the program effectively supports over two million students.

History of AVID

In reaction to the inflow of underprivileged minority pupils in her San Diego suburb high school, Mary Catherine Swanson founded AVID. The initiative was developed to entice minority students to sign up for challenging classes. The AVID

Elective course was created to aid recognized students in acquiring the learning techniques and organizational tools required for success in a college setting. Swanson believed that rigor without support is a recipe for failure, and support without rigor is a tragic waste of potential (Swanson, 2000). Her philosophy's ultimate objective was to educate underprivileged and disadvantaged pupils for entry into 4-year colleges and universities (Swanson, 1989). Swanson required students to maintain an AVID binder and taught academic practices like Cornell Note Taking, a methodical note-taking approach, in order to achieve her goal (Swanson, 1996). The binder served as the organization tool. Swanson also concentrated on supporting her AVID students to acquire skills to master writing at the level expected in college; she called this approach "writing to learn" (Swanson, 1996, p. 24).

Due to the growing popularity and the continued push for college readiness, Swanson developed a curriculum for AVID in 1996. The curriculum was created with the help and backing of the state department and released in 1996. Focusing on professional development for educators to help schools and districts implement the AVID curriculum was another element of the AVID program (Swanson, 1996). In California, AVID had reached almost 600 schools by the year 2000. Tens of thousands of middle and high school students were exposed to the program.

AVID Elective Implementation

The AVID Elective class is a course designed to support the average student completing advanced placement and honors courses. The implementation of the AVID Elective course begins with establishing an AVID site team. The site team is made up of the instructors who teach the AVID Elective courses, one or more school counselors,

school administrators, and representatives from each subject area.

The school sends this group of educators to an AVID summer institute during the summer months for extensive training to effectively implement the program. The institute consists of a 3-day conference which is held in select cities across the country. Each conference provides schools with a variety of strands and courses to select and immerse themselves into practice and implement in their respective schools. Site teams are able to register and attend training each summer as long as funding allows. If funding is a challenge, schools can schedule and arrange smaller, cost-effective training known as path training. Training can be located closer to the school site.

The AVID path training is an abbreviated version of the summer institute. The training lasts for 2 days. During their time at the AVID summer institute, site team members receive instruction on various aspects including accessing the AVID curriculum, employing best instructional practices, choosing program participants according to the AVID student profile, and establishing a lasting college-bound culture. After completing their training, the site team members devise a site-specific plan for implementation during the school year, following a continuous improvement cycle. The continuous improvement cycle is used to monitor the progress of the AVID Elective for the entirety of the school year.

AVID School-Wide Implementation

When a successful AVID system improves a school's four domains, assuring college readiness for all AVID Elective students and enhanced academic achievement for all students due to increased possibilities in the school, AVID is considered school-wide (AVID, 2021c). Instruction, systems, leadership, and culture are the four AVID domains.

AVID achieves a school-wide presence by educating and training as many staff members as feasible. This is made possible with commitment from the building leadership to implement AVID strategies and methodologies across the campus.

School-wide implementation becomes apparent when there are established systems that facilitate the curriculum and instruction, data collection and analysis, professional development, as well as student and parent outreach, all with the aim of ensuring college readiness (AVID, 2021c).

Because it establishes the vision and tone that encourage a college and career environment and high standards for all students and employees in the school, leadership is essential to AVID as a whole. The school principal assumes a crucial leadership role by collaborating with both the administrative team and the AVID site team to guarantee faithful and consistent implementation (AVID, 2021c).

Culture in schools can be defined by what we permit or encourage. The AVID concept gradually modifies the system of assumptions and actions, increasing the likelihood that all students will satisfy the criteria for college preparedness. This process is known as AVID school-wide culture. Garnering stakeholder buy-in is imperative to the success of the program. Gaining support and commitment from all stakeholders for the transition to AVID school-wide implementation can pose challenges rooted in a preexisting culture of failure.

AVID utilizes the AVID coaching and certification instrument to measure the progress of AVID school-wide implementation. On the coaching and certification instrument continuum of AVID, site of distinction is the highest level of certification a school may receive. Additional lower levels of school-wide implementation include a

noncertified site, a certified site, and an emerging school-wide site (AVID, 2021c).

AVID Elementary Implementation

By preparing all students for college, careers, and success in a global society, AVID Elementary helps elementary schools close the opportunity gap by using the same guiding principles as AVID Secondary. AVID Elementary teachers have an impact on later grades by instilling academic behaviors and higher-order thinking at a young age (AVID, 2022a). Another purpose of AVID Elementary is to motivate students in underserved populations (Mehan et al., 1996). AVID Elementary is embedded throughout daily instruction in each classroom at the elementary level.

In an engaging and age-appropriate manner, AVID Elementary helps students form behaviors that will lead to success at all levels of school. Participating schools impart organization, study techniques, communication, and self-advocacy to their students. AVID Elementary students take detailed notes, provide thoughtful responses, and pose challenging inquiries (AVID, 2022a).

To assist students in considering their college and career goals, AVID Elementary also places a strong emphasis on creating a culture of college attendance. Schools display banners and pennants from colleges on their walls, and teachers talk about their time in college (AVID, 2022a). Teachers give students the academic foundation they need to be on the path to success in both college and the workforce. Colleges and careers are no longer foreign concepts. According to AVID (2022a), implementing AVID Elementary closes the opportunity gap before it even exists.

Implementation of AVID Elementary is similar to implementation of the AVID Secondary program. Schools can launch AVID Elementary by educating teachers in one

grade level or across the entire campus. The select group of educators participate in an AVID summer institute training or path training. Successful implementation also consists of the creation of an AVID site team at the elementary level.

AVID provides its partner schools with resources to ensure successful implementation. Examples of resources include professional development, resources to support curriculum and instructional strategies, and ongoing coaching visits to support school leaders with implementation. AVID coaches conduct classroom walkthroughs and observations utilizing the feedback tools created by AVID to monitor the implementation of best instructional practices. AVID schedules various path trainings geared toward the various AVID methodologies. The purpose of the trainings is to assist those new to AVID with implementation. AVID hosts an AVID summer institute each summer in various cities. This is an opportunity to recognize AVID schools, educators, and students. Session strands are geared toward classroom teachers, instructional leaders, and district administration.

AVID Studies

Portland Public Schools (2015) conducted a program evaluation to evaluate the effectiveness of AVID implementation in the school district in conjunction with the University of Portland and Northwest Evaluation Association. The study's objectives were to review the AVID literature and evaluate the success of AVID implementation in elementary, middle, and high schools (Portland Public Schools, 2015). Primary research demonstrated that schools enhanced their performance on state assessments by one level after 2 to 3 years of implementing the AVID program. Additionally, AVID-implemented schools saw increases in graduation rates and persistence rates into the second year of

college. Students also reported their AVID high school experience had a positive effect on their performance in college. Based on some research studies, the study discovered contradictory results for state testing achievement levels (Portland Public Schools, 2015).

A small percentage of elementary schools implement AVID; however, one school district in Florida implemented AVID at the middle and high school levels and added AVID to the elementary school (Valero, 2015). The district made the decision to bring AVID to the elementary level after observing the success of students enrolled in the program at the middle and high school levels in terms of academic achievement and college attendance. One elementary school began using AVID with its fifth graders. The program focused strongly on college and career options. Fourth grade was added the following year, and third grade was added the year after that. The program director claimed AVID implementation at the elementary level differed from that at the middle and high school levels in that it targets grade levels or an entire school rather than elective classes.

According to Huerta et al. (2013), the AVID program's implementation had an effect on the curriculum and school courses. They found a link between the implementation of AVID and more demanding course offerings using survey methodology. The full potential of AVID is not utilized without the demanding course offerings and advanced classes. As a result, middle schools face the additional challenge of integrating rigor for AVID students into the existing curriculum (Huerta et al., 2013).

Peak (2010) examined how AVID affected middle school math test results in Colorado in a separate study. In order to determine whether or not there was a noticeable difference in math test scores between AVID Elective students and non-AVID students, a

comparative study of middle school students was conducted. Additionally, the study contrasted non-AVID Elective students with AVID Elective students in the same courses taught by AVID-trained instructors. There was no significant difference between AVID students enrolled in the AVID Elective course and non-AVID students taking courses from an AVID teacher. Students enrolled in AVID courses improved significantly on their assessment scores.

Results from the Peak (2010) study showed that students who were not enrolled in the AVID Elective but were being taught by AVID-trained teachers still benefited in some ways. This study's limitation was it could not be assumed that instructors who had received AVID training used the program's teaching methods. The study did not look into how much the students in the non-AVID control group might have learned in other classes from instructors who employed AVID techniques or had been influenced by peers who did.

In another study, Watt et al. (2007) found due to an increase in mid-level student academic performance, AVID schools saw an increase in a number of school-wide success indicators. The 4-year study involved 12 Texas high schools with AVID programs in seven different districts. Gains in enrollment in advanced courses, grade point average, and attendance were seen in several schools across the district. Two study schools discontinued their AVID initiatives due to financial constraints, according to Watt et al., but eight of the remaining schools saw an improvement in their state accountability ratings. Some schools went from being rated as low performers to acceptable, while others went from acceptable to exemplary. Additionally, AVID schools saw an increase in the percentage of students graduating from high school, and 93% of

seniors received advanced graduation honors.

According to Hodges (2013), the implementation of AVID Elective cohorts in schools caused an "AVID effect," in which the academic performance of traditionally underprivileged students enrolled in AVID directly affects school-wide changes. In order to participate in AVID, students must complete advanced coursework. Even if they are not enrolled in the AVID Elective, students still gain from the teachers' instruction. Hodges also discovered statistically significant variations between the academic performance levels of AVID and non-AVID students. According to the study, AVID methodologies and teaching techniques significantly raised the mean test scores of AVID students in Algebra 1 over the course of the semester.

The literature reviewed in this section demonstrates the effects of implementing the AVID program at various schools. The studies highlighted differences between implementation at the elementary grade level compared to students enrolled in middle and high schools. Schools implementing AVID demonstrated improvement in their state-standardized assessment scores after several years of implementation. Schools implementing AVID have also found increases in graduation rates and higher levels of persistence into the second year of college. While implementation has found success stories in schools, the literature emphasizes schools must be intentional with implementation to ensure rigor for students throughout the existing curriculum.

A 2020 AVID Elementary study (Johnson, 2020) focused on the implementation of the AVID program at the elementary level. The study observed academic language acquisition in English learners. The researcher chose to focus on AVID due to the program’s support for closing the opportunity gap of all students, including English

learners. Because AVID emphasizes culture and equity, its approach advances and supports learning for all students (Watt et al., 2007).

Johnson (2020) found AVID creates opportunities to build relationships. Students enrolled in AVID were able to understand how their school works. Because AVID fosters collaboration, students were also able to build relationships with their peers. Staff members were able to implement college and career readiness initiatives; students were able to learn about various professions and received information about college including the application process, financial aid, and enrollment procedures.

In Johnson's (2020) study on English learners, few students were classified as meeting proficiency in English. Even fewer were classified as college and career ready. Johnson noted the importance of English learners achieving English proficiency prior to enrollment in high school. It was concluded that this was why AVID implementation at the elementary level was necessary, as the program could provide a framework for supporting English learners with academic language and social and cultural competence to succeed in high school. Johnson sought to identify the extent to which the implementation of AVID Elementary impacted academic language acquisition for English learners.

Johnson (2020) provided several reasons for English learners' lack of progress toward English proficiency. Johnson cited reasons for the lack of progress as students going for significant periods of time with no language development. Additionally, it is noted in the study that elementary schools do not have the proper curriculum and materials to support the needs of English learners.

The Johnson (2020) study also utilized a quantitative research methodology. The

method was chosen to examine the effect of the implementation of AVID Elementary on the academic language outcomes for English learners. State assessments were used as a benchmark to gauge academic language proficiency. Johnson utilized the student information system to extract the data for the study. Multiple regression was used to determine the effectiveness of AVID Elementary implementation for English learners.

Johnson (2020) found that being enrolled in AVID Elementary for several years had a positive correlation for elementary English learner students. Johnson's results at the elementary level for AVID implementation were consistent with the implementation for secondary schools. Results showed a positive correlation of implementation on student achievement levels. The research, however, did not clarify AVID's impact on language acquisition for English learners, as there was no significant statistical difference in student achievement results for non-English learners.

Wilson et al. (2021) conducted a study to observe the effects of implementing AVID at the middle school level. The purpose of their study was to observe the effects of program implementation on the executive function of the students. Wilson et al. utilized the term executive function to refer to processes that students use to guide, manage, and direct their thinking, behavior, and responses. The researchers explained when students were able to put these skills into practice, they were more likely to stay focused, set goals, and possess higher levels of frustration (Wilson et al., 2021). Wilson et al. found teachers trained in AVID implement best practices including teaching students to organize their materials and providing direct step-by-step instruction when teaching new skills to students. The study sought to distinguish between the behavior regulation index score for students enrolled in AVID in comparison to the behavior regulation index of

those students not enrolled in AVID.

The AVID students in the study met with their teacher 3 days a week. The teacher attended AVID curriculum and methodology trainings to ensure implementation of the AVID strategies in an effective manner. To ensure fidelity with implementation, the AVID teacher was observed by an AVID expert utilizing forms created by AVID. The researchers utilized student state-standardized assessment scores from the current and previous year to identify the academic achievement levels of the students. The instrumentation used by the researchers was the BRIEF2 Teacher Form. The form has a total of 63 items. Each survey response has three options: never, sometimes, and often. Wilson et al. (2021) found that by implementing AVID, students were provided a structure to increase their executive function as measured by the behavior regulation index.

Chapter 2 focused on the research related to the topic. Theories grounded in constructivism were highlighted throughout the chapter to focus on the different ways students learn. The history of the AVID program was also discussed to explain the benefits of student-centered learning and how the program contributes to students possessing a growth mindset. The chapter also explained the accountability system used in South Carolina to measure the academic performance and college and career readiness of schools in the state.

Chapter 3: Methodology

This research project employed a quantitative design with the objective of assessing whether students attending an elementary school with the AVID Elementary program exhibited variations in their academic performance, specifically in the subjects of reading and math, compared to students who have never attended a school with the program as measured by SCREADY assessments. The purpose of this quantitative study was to examine the sustainability of the AVID program in a small rural school district by comparing student achievement levels on high-stakes assessments in reading and math.

The research design sought to address the following research questions:

1. What effect has the implementation of AVID had on elementary school English language arts scores in an AVID-trained school as compared to a non-AVID-trained school?
2. What effect has the implementation of AVID had on elementary school math scores in an AVID-trained school as compared to a non-AVID-trained school?
3. How are AVID successes/failures sustained over time in the first year of transition to middle school?

This chapter provides an introduction to the study's participants, the setting and geographical location, the methodologies employed, and the instrument used for evaluating student academic performance in reading and math.

Hypotheses

Null Hypothesis H1: There will be no statistically significant difference in student performance for English language arts as measured by SCREADY assessments between elementary students enrolled in the AVID program and elementary students never

enrolled in the AVID program.

Null Hypothesis H2: There will be no statistically significant difference in student performance for mathematics as measured by SCREADY assessments between elementary students enrolled in the AVID program and elementary students never enrolled in the AVID program.

Alternative Hypothesis HA1: There will be a statistically significant difference in student performance for English language arts as measured by SCREADY assessments between elementary students enrolled in the AVID program and elementary students never enrolled in the AVID program.

Alternative Hypothesis HA2: There will be a statistically significant difference in student performance for mathematics as measured by SCREADY assessments between elementary students enrolled in the AVID program and elementary students never enrolled in the AVID program.

Participants

A sample of students participating in the AVID Elementary program and a comparison group of students who have never been part of the AVID Elementary program were chosen from a small, rural public school district located in South Carolina, where I currently work. The AVID participants selected were those students enrolled in third grade for the 2017-2018 academic year. The students served as a cohort, as their data were reviewed for each of the sequential school years. The 2017-2018 school year served as the baseline, as this was the year AVID Elementary was piloted in the selected district. The non-AVID students were chosen based on demographic information from non-AVID elementary schools in the target district. Elementary cohort participants were

matched for race, gender, Title 1 status, socioeconomic status, and grade level (Gall et al., 2020).

In addition to one middle school, one high school, and one career and technology center, the target school district has five elementary schools. The student population for the district is 2,373. The demographic data for the selected school district are as follows: 84.3% African American, 13% White, 1.9% multiple races, 0.4% Asian, 0.3% Pacific Islander, and 0.1% Native American or Alaskan Native. Of those numbers, 2.3% are English language learners, 15.1% enrolled identified as Special Education students, and 5.9% identified as Homeless.

Participants in this study completed SCREADY assessments in the academic years 2017–2018 and 2018–2019. Additionally, students participated in the AVID elementary program for a full academic year. The 2019-2020 school year data were unavailable, as students did not complete state standardized assessments that year due to the COVID-19 pandemic. Test data from 2020-2021 were also not included. Assessment data from 2021-2022 were included. This will track data for students as they matriculate through their elementary tested grades (3-6).

The comparison group of students was chosen to match the target participants for demographics and socioeconomic status, as measured by eligibility for free and reduced lunch, in order to reduce the risk to the validity of the non-random selection of participants. For several years, disaggregated data on SCREADY assessment scores in the target district show a clear disparity between elementary school students in the district compared to elementary schools statewide (South Carolina Department of Education, 2022). Based on their analysis of 10 research studies investigating how poverty affects

children, Gall et al. (2020) came to the conclusion that poverty is often associated with the negative academic outcomes of students.

When examining the variations in self-efficacy perceptions among students in various grade levels, Deci and Ryan (2000) discovered that a student's grade level has a notable influence on this perception. According to Deci and Ryan, self-efficacy served as a fundamental component of self-determination theory, which was the theoretical basis for the program elements of AVID; therefore, taking into account different grade levels is important when assessing student performance. The research study's findings might be unclear if these factors had not been controlled.

To mitigate the potential influence of the AVID effect, which could pose a threat to the study's validity, the comparison group was selected from three elementary schools within the district that closely resembled the AVID elementary school but had never implemented an AVID program (Watt et al., 2007). Watt et al. (2007) explained that the AVID effect was created when trained AVID teachers utilized AVID strategies in non-AVID environments.

Setting

The location of this study was a small public school district in South Carolina with 2,300 students enrolled in prekindergarten through Grade 12**.** Prekindergarten begins with students aged 3. The following information was listed on the district's website regarding student demographics: All students qualify for free or reduced lunch, 87% of the students are classified as non-White or minorities, and 2.3% of the students are ESL students. The specified school district was comprised of five elementary schools, one middle school, and one high school.

The AVID students were chosen from a target elementary school that had the most AVID experience in the target school district and was recognized as an AVID-certified school. The school also obtained the status of being an AVID demonstration school. The traits of a demonstration school are described by AVID (2022a); these schools serve as models for the program and exhibit the best AVID methodologies and strategies. The school's most recent demographic information included 93% minority students, 0% English language learners, and 12% exceptional children students.

The only other AVID schools in the target district are the middle school and high school. The target school district is located in a rural part of South Carolina. Schools within the district are primarily located within one town, with three elementary schools located in outlying towns within the district. The AVID Elementary school was the most rural of all the schools, is found in an area with little to no commerce, and is approximately 15.9 miles from a major city. The non-AVID comparison group was chosen from the non-AVID elementary schools with the most comparable demographics to the AVID demonstration school in order to increase the validity of the research study.

The target district has not developed a district-wide instruction model or framework; however, all teachers in the district have an opportunity to provide feedback for all curriculum mapping activities in all content areas. Teachers are expected to follow the curriculum maps and instruct students using the South Carolina academic standards. Although no educational experience can be completely compared to another, the target district used the same curriculum and curriculum maps for instruction.

Students enrolled throughout the district have the same equitable technology resources. Each student from prekindergarten through Grade 12 has their own electronic

device. Students in child development grades have access to iPads; all other students are assigned a Chromebook. Each classroom in the district is equipped with a ClearTouch panel to enhance instruction with technology integration. The district employs one technology instructional coach who is responsible for offering instructional guidance to all teachers within the district, with a particular emphasis on implementing technology effectively according to best practices.

Instead of the content of the lessons, the difference between AVID and non-AVID students was in the instructional support they received. Students in the AVID program for elementary school utilized strategies such as Cornell notes to review and condense information. They also engaged in Socratic Seminars to methodically investigate concepts they found challenging (AVID, 2022a). AVID students participated in AVID celebrations to enhance the culture of the classroom and school. By developing and posing higher order questions, students were anticipated to assume responsibility for their own learning and were given support in doing so. A growth mindset was expected of every student. Although AVID does not impart academic course content, it offers a system of academic support to supplement what is covered in academic courses.

Instrumentation

SCREADY was used to assess college readiness and academic success. The SCREADY assessment program, according to the South Carolina Department of Education (2022) is "a statewide assessment in English Language Arts (ELA) and mathematics administered to students in grades 3-8 as required by the Education Accountability Act" (para. 1). The assessments were administered in the English language.

SCREADY assessment items evaluate student proficiency in meeting the state's academic standards. These assessment items were designed in accordance with the standards for reading and math. The test questions aligned with the standards set for each grade level and subject. These standards specified what teachers were required to teach and what students were expected to learn, as outlined by the South Carolina Department of Education (2022). The requirements for students to meet the grade-level standards include indicators, which are declarations of the particular cognitive processes, content knowledge, and skills that students must exhibit (South Carolina Department of Education, 2022). SCREADY assessments for math and English language arts were designed to evaluate the abilities and subject matter expertise outlined in the academic standards and indicators.

SCREADY assessment results are reported as scale scores and performance levels and by standard (South Carolina Department of Education, 2022). According to the South Carolina Department of Education (2022), performance levels were helpful for assessing the general effectiveness of a school because they show the range of knowledge and abilities displayed by students. This is reflected in each school's accountability results. SCREADY assessment results are one measure used in calculating the district and school report card and accountability ratings.

To depict student competence and proficiency in the knowledge and skills specified by the state's academic standards, four performance levels are established for reporting the results of the assessment (South Carolina Department of Education, 2022). The four performance levels of SCREADY assessments are does not meet expectations, approaches expectations, meets expectations, and exceeds expectations. Table 1 further

explains the performance levels as defined by the South Carolina Department of Education (2022).

Table 1

Performance Levels of SCREADY Assessments as Defined by the South Carolina Department of Education

Performance level	Definition
Does not meet expectations	The student does not meet the grade-level content standards
Approaches expectations	The student approaches grade-level expectations.
Meets expectations	The student meets the grade-level expectations.
Exceeds expectations	The student exceeds the grade-level expectations.

The South Carolina Department of Education (2022) further explained,

- A student who falls short of meeting the expected level of knowledge and skills for their grade necessitates substantial academic assistance.
- A student who comes close to meeting the expected level of knowledge and skills for their grade requires supplementary academic support.
- A student is considered prepared for the next grade and on the path to college and career readiness when they meet the standards set for the current grade level.
- A student is exceptionally prepared for the next grade and for college and career readiness when they exceed the expected level for their current grade.

Students were exposed to a variety of types of test items on SCREADY assessments. Assessments in math and English language arts include multiple-choice questions of varying degrees of difficulty. The English language arts test consisted of selected responses and evidence-based response items (South Carolina Department of Education, 2022). A writing assignment linked to a reading passage was part of the test's

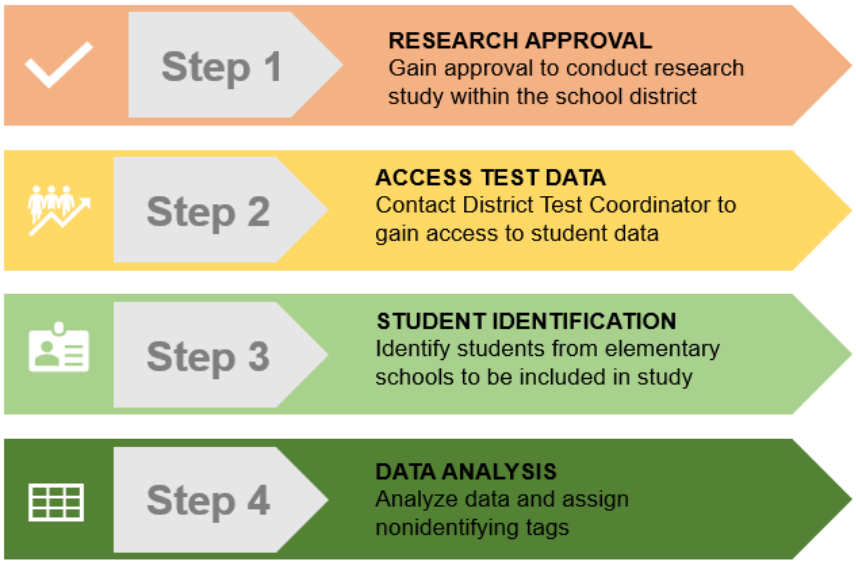
text dependent analysis. The math exam consisted of multi-select, technology-enhanced, and multiple-choice questions. The technology-enhanced items encompass various question formats, including drag-and-drop, hot spots, drop-down lists, keypad input, and constructed responses.

Procedures

The figure demonstrates the procedures I followed in order to conduct the study.

Figure

Flowchart to Identify Research Processes



I completed the IRB application for a quantitative study from Gardner-Webb University. Following the IRB process, the target school district was contacted to obtain permission for me to utilize student data for research purposes. As a district employee, I had access to student data through district resources such as Enrich, PowerSchool, and Schoolzilla. I had access to the school rosters from previous school years for the study. The list included the student's race, gender, and grade level. I requested the SCREADY assessment scores for each school involved in the study for the previous school years.

Utilizing the aforementioned resources, I was able to disaggregate the student population from the AVID elementary school by grade level, race, gender, and other varying demographic information. The list included the SCREADY assessment scores for 2017-2018 and 2018-2019. The school district did not assess students in the 2019-2020 school year, and 2020-2021 assessment results were not factored into district and school report cards, as not all students completed the assessments.

To safeguard the identities of the participants, the data were encoded numerically. Each participant's SCREADY score was determined once they were all compared. I compared the two sets of information to see if there was a statistically significant difference in SCREADY assessment scores between the AVID participants and their non-AVID counterparts.

Research Design

Because the study relied on previously established groups rather than manipulating student participation in the AVID program, a comparative research design was chosen. Randomly assigning student participants to a testing group and a control group for experimental purposes would have been unfeasible because AVID Elementary is used throughout the entire school. A comparable methodology was employed by Fitzgerald et al. (2013), who compared historical information from the Academic Excellence Accountability System of the Texas Education Association. Fitzgerald et al. compared the mathematics placement scores of incoming freshmen students to the high school courses they took using a causal comparative research design.

SCREADY assessment scores, specifically reading and math, were used as a quantitative measure in the research's quantitative design. A difference between students

who participated in the AVID Elementary program and those who did not was compared in the study, along with the sustainability of the AVID program across the district as students transitioned from elementary to secondary education.

Data Analysis

The data from the two levels of the independent variable, students enrolled in AVID Elementary schools and students never enrolled in AVID Elementary schools, was evaluated using an independent *t* test for the dependent variable, SCREADY assessments. Three distinct *t* tests were conducted to assess the hypotheses. The selection of an independent *t* test was based on the independence of the two levels of the independent variable from each other.

Van Voorhis and Morgan (2007) recommended that researchers consider the necessary number of participants to ensure sufficient statistical power when determining the appropriate sample size for their research study, especially when employing statistical methods designed to identify differences. The recommended minimum power for a typical study is 30 participants per cell, which, for a medium to large effect size, should result in about 80% power.

Procedures to Ensure Validity

The authors of SCREADY assessments have vetted the student academic performance indicators to determine validity and reliability. To further ensure the validity of the research, I included a control group. The control group included elementary schools within the district that have not yet implemented the AVID Elementary framework.

Chapter 3 provided an overview of the methodology used in the research. The

chapter reviewed the research questions used to guide the study. The hypotheses and the alternate hypotheses were provided in this section. Chapter 3 summarized the participants and gave a description of the target district. The data collection and analysis procedures were described as well as the instrumentation used to provide an answer for each research question.

Chapter 4: Results

Introduction

Within this chapter, I provide the results of the data analysis discussed in Chapter 3, focusing on the connection between the AVID Elementary program and the academic achievements of elementary students in the school district under consideration. The primary aim of this research was to assess the enduring impact of the AVID program in a small, rural school district by comparing student achievement levels in critical reading and mathematics assessments. This investigation delved into the program's overall effectiveness and its potential to bridge the achievement gap, accomplished through a comparative analysis of data from students enrolled in an AVID Elementary school and those from non-AVID Elementary schools.

Within this chapter, I outline the research inquiries, elaborate on the dataset, and provide an in-depth analysis of the data. The study comprised 60 elementary school students drawn from a rural school district in South Carolina. These students represented four elementary schools within the same district. Specifically, one of the elementary schools had implemented the AVID Elementary program, while the other three had not adopted this program.

Throughout this chapter, the research journey has been directed by a set of research questions, and the outcomes are presented accordingly. Following each analysis, I arrive at a decision regarding the acceptance or rejection of the null hypotheses The research questions were

1. What effect has the implementation of AVID had on elementary school English language arts scores in an AVID-trained school as compared to a non-

AVID-trained school?

2. What effect has the implementation of AVID had on elementary school math scores in an AVID-trained school as compared to a non-AVID-trained school?
3. How are AVID successes/failures sustained over time in the first year of transition to middle school?

Findings

The data collected in this research study indicated that there were no statistically meaningful variances in academic achievement between students enrolled in elementary schools with the AVID Elementary program and those in elementary schools without the program. The main aim of this quantitative research was to investigate if there were any differences in student performance on state standardized assessments among students attending elementary schools without the AVID program.

This chapter functions as a recap of the results obtained through the quantitative research approach used in the data collection process. The data were sourced from the testing coordinator's office within the school district, situated in the curriculum and instruction department. The focus of the analysis was on data related to reading and math. Data reflected the scores of third-grade students who were sampled from four elementary schools beginning in the 2017-2018 academic year. This year was used as a baseline. The data of the students were analyzed each subsequent year. Data from the 2017-2018 and 2018-2019 school years were subjected to analysis; however, data for the 2019-2020 and 2020-2021 academic years were not accessible due to South Carolina receiving a testing waiver in response to the COVID-19 pandemic. The study also compares the student achievement level of each cohort as they transitioned to middle school. As a result, the

assessment results from the 2021-2022 school year were also analyzed.

Description of the Sample

The schools selected for this study are situated within a small rural school district in South Carolina. The student achievement data for English language arts and mathematics encompassed the performance of students from the commencement of the 2017-2018 academic school year. All students in the study were classified as third-grade students during this academic year. Student achievement data for English language arts and math were also analyzed for the 2018-2019 academic year.

There was a total of 60 total students sampled for this study. Of this total, 15 students represent the student population that was enrolled in an AVID Elementary school. The remaining 45 students in the study never enrolled in an AVID Elementary school. Because there were only 15 students enrolled in the AVID Elementary school's third-grade classes, there were 15 students randomly sampled from three other non-AVID Elementary schools. If there was a change in enrollment in any of the four elementary schools (AVID Elementary and non-AVID Elementary), a random sample selection was conducted to ensure equal participants.

Table 2

Breakdown of the Total Number of Participants for Each Year Analyzed

Year	School A AVID Elementary School	School B	School C	School D	Total
2017-2018	15	15	15	15	60
2018-2019	14	14	14	14	56
2019-2020	0	0	0	0	0
2020-2021	0	0	0	0	0
2021-2022	9	9	9	9	36

All students involved in the random sample for a given year had an available test score for reading and math. The total number of participants for each academic year was based on the enrollment of School A, which serves as the only AVID Elementary school in the participating school district. The hypotheses were formulated to assess whether there exists a comprehensive impact of the AVID Elementary program implementation on student performance metrics. As a result, an equitable number of participants were chosen from each school to participate in the assessment study. Because the study sought to track cohorts of students, each participant group was only as large as the total number of participants in the smallest school's baseline grade level. To facilitate the visualization of each study group, a comprehensive breakdown of demographic information for each school can be found in Table 3.

Table 3

Demographic Information of Participating Schools for the 2017-2018 School Year

Participating school	Students in research group	Total number of students in research group grade level	Total number of students enrolled in school (tested grades only)
School A (AVID Elementary school)	15	15	75
School B	15	23	101
School C	15	41	150
School D	15	63	265

There was a decline in enrollment in the target district's student population. As a result, the numbers for the participants had to be adjusted as the AVID school lost one student from the cohort. To facilitate the visualization of each study group, a comprehensive breakdown of demographic information for each school can be found in

Table 4.

Table 4

Demographic Information of Participating Schools for the 2018-2019 School Year

Participating school	Students in research group	Total number of students in research group grade level	Total number of students enrolled in school (tested grades only)
School A (AVID Elementary school)	14	14	70
School B	14	20	92
School C	14	40	145
School D	14	62	205

Table 4 provides a visualization of the decline in student enrollment in the target district. As a result of the decline, the participants were arranged to keep an equal number of students in each sample. The students from School B, School C, and School D were randomly selected to create the cohort for the 2018-2019 academic year.

Research Question 1: State Assessments (English Language Arts)

To investigate the initial research question, which involves a comparison of the academic performance on SCREADY assessments between students who attend AVID Elementary schools and those who do not, I conducted an independent *t* test for means. In the subsequent sections, I present the outcomes of the *t* tests that were specifically carried out to assess whether there were any statistically significant distinctions between students enrolled in AVID Elementary schools and those not enrolled in an AVID Elementary school. Detailed statistical results and data analysis are provided in the tables accompanying each analysis.

2017-2018 Assessment Analysis

The independent *t* test (see Table 5) to compare the AVID Elementary school (School A) to the first non-AVID Elementary school (School B) showed no statistically significant difference between the two schools. Since the *p* value, 0.66, is greater than *a*=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 5, the AVID Elementary school had a slightly lower mean scale score than School B on the reading assessment; however, it was not significant.

Table 5

t-Test Results of the AVID Elementary School (School A) and School B (Reading)

	School A	School B
Mean	410.666667	432.4
Variance	11965.2381	13890.5429
Observations	15	15
Pearson correlation	-0.4457859	
Hypothesized mean difference	0	
df	14	
t Stat	-0.4355391	
P(T<=t) one-tail	0.33490559	
t Critical one-tail	1.76131014	
P(T<=t) two-tail	0.66981117	
t Critical two-tail	2.14478669	

The independent *t* test (see Table 6) to compare the AVID Elementary school (School A) to the second non-AVID Elementary school (School C) revealed no statistically noteworthy distinction between the two schools. Since the *p* value, 0.91, is greater than *a*=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 6, the AVID Elementary school had a slightly higher mean scale score than School C on the reading assessment; however, it was not significant.

Table 6

t-Test Results of the AVID Elementary School (School A) and School C (Reading)

	School A	School C
Mean	410.666667	406.8
Variance	11965.2381	8470.74286
Observations	15	15
Pearson correlation	-0.0181064	
Hypothesized mean difference	0	
df	14	
t Stat	0.10383528	
P(T<=t) one-tail	0.45938645	
t Critical one-tail	1.76131014	
P(T<=t) two-tail	0.9187729	
t Critical two-tail	2.14478669	

The independent *t* test (see Table 7) to compare the AVID Elementary school (School A) to the third non-AVID Elementary school (School D) showed no statistically significant difference between the two schools. Since the *p* value, 0.28, is greater than *a*=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 7, the AVID Elementary school had a higher mean scale score than School D on the reading assessment; however, it was not significant.

Table 7

t-Test Results of the AVID Elementary School (School A) and School D (Reading)

	School A	School D
Mean	410.666667	381.933333
Variance	11965.2381	7690.78095
Observations	15	15
Pearson correlation	0.49738635	
Hypothesized mean difference	0	
df	14	
t Stat	1.1065832	
P(T<=t) one-tail	0.14356325	
t Critical one-tail	1.76131014	
P(T<=t) two-tail	0.28712651	
t Critical two-tail	2.14478669	

In two of the three *t* tests conducted for the 2017-2018 academic year, the AVID Elementary school (School A) had a higher mean than two of the non-AVID Elementary schools (Schools C and D). Only School B had a higher mean than School A; however, in each *t* test, the *p* value was greater than a=0.05. As a result, we reject the alternative hypothesis and accept the null hypothesis in each scenario.

2018-2019 Assessment Analysis

The independent *t* test (see Table 8) to compare the AVID Elementary school (School A) to the first non-AVID Elementary school (School B) demonstrated no statistically notable disparity between the two schools. Since the *p* value, 0.17, is greater than a=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 8, the school implementing AVID had a slightly lower mean scale score than the school not implementing AVID on the reading assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by one student in this academic year. Since the student population changed, it

was reflected across the non-AVID Elementary schools.

Table 8

t-Test Results of the AVID Elementary School (School A) and School B (Reading)-Year 2

	School A	School B
Mean	478.5	534.5
Variance	8046.73077	13264.8846
Observations	14	14
Pearson correlation	0.02245197	
Hypothesized mean difference	0	
df	13	
t Stat	-1.4511859	
P(T<=t) one-tail	0.08521449	
t Critical one-tail	1.7709334	
P(T<=t) two-tail	0.17042898	
t Critical two-tail	2.16036866	

The independent *t* test (see Table 9) to compare the AVID Elementary school (School A) to the second non-AVID Elementary school (School C) indicated no statistically meaningful variation between the two schools. Since the *p* value, 0.77, is greater than a=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 9, the AVID Elementary school had a slightly higher mean scale score than School C on the reading assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by one student in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 9

t-Test Results of the AVID Elementary School (School A) and School C (Reading)-Year 2

	School A	School C
Mean	478.5	464.285714
Variance	8046.73077	19197.1429
Observations	14	14
Pearson correlation	-0.2696598	
Hypothesized mean difference	0	
df	13	
t Stat	0.28866137	
P(T<=t) one-tail	0.38869598	
t Critical one-tail	1.7709334	
P(T<=t) two-tail	0.77739196	
t Critical two-tail	2.16036866	

The independent *t* test (see Table 10) to compare the AVID Elementary school (School A) to the third non-AVID Elementary school (School D) revealed no statistically meaningful distinction between the two schools. Since the *p* value, 0.07, is greater than *a*=0.05, we reject the hypothesis and accept the null hypothesis. Based on the mean in Table 10, the AVID Elementary school had a higher mean scale score than School D on the reading assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by one student in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 10

t-Test Results of the AVID Elementary School (School A) and School D (Reading)-Year 2

	School A	School D
Mean	478.5	428.142857
Variance	8046.73077	9939.51648
Observations	14	14
Pearson correlation	0.47244381	
Hypothesized mean difference	0	
df	13	
t Stat	1.92949365	
P(T<=t) one-tail	0.0378927	
t Critical one-tail	1.7709334	
P(T<=t) two-tail	0.0757854	
t Critical two-tail	2.16036866	

In two of the three *t* tests conducted for the 2018-2019 academic year, the AVID Elementary school (School A) had a higher mean than two of the non-AVID Elementary schools (Schools C and D). Only School B had a higher mean than School A. The enrollment in the School A cohort decreased, which caused a change in each of the schools' cohorts; however, in each *t* test, the *p* value was greater than $a=0.05$. As a result, we reject the hypothesis and accept the null hypothesis in each scenario.

2019-2020 Assessment Analysis/ 2020-2021 Assessment Analysis

In light of the COVID-19 pandemic during the spring of 2020, the South Carolina Department of Education requested a waiver from assessment, accountability, and reporting for the 2019-2020 academic year. The waiver was approved, and no schools in the state completed SCREADY assessments during this academic year.

As a result of the persistent COVID-19 pandemic in the spring of 2021, the South Carolina Department of Education once again requested a waiver from assessment,

accountability, and reporting for the 2020-2021 academic year. The waiver, however, was denied by the United States Department of Education, and the state was to move forward with assessing students on SCREADY assessments. Parents and legal guardians were able to still opt their children out of testing. As only five students completed the assessment from the AVID Elementary School cohort (School A) during the 2020-2021 academic year, there is not enough data available to test the hypothesis for the school year.

Research Question 2: State Assessments (Mathematics)

To investigate the second research question, which involved a comparison of the academic performance on SCREADY assessments between students who attend AVID Elementary schools and those who do not, I conducted an independent *t* test. In the following sections, I present the outcomes of the *t* tests that were specifically conducted to assess whether there were any statistically significant disparities between students enrolled in AVID Elementary schools and those not enrolled in an AVID Elementary school. Detailed statistical results and data analysis are provided in the tables accompanying each analysis.

2017-2018 Mathematics Assessment Analysis

The independent *t* test (see Table 11) to compare the AVID Elementary school (School A) to the first non-AVID Elementary school (School B) showed no statistically significant difference between the two schools. Since the *p* value, 0.40, is greater than a=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 11, the AVID Elementary school (School A) had a slightly higher mean scale score than School B on the math assessment; however, it was not significant.

Table 11

t-Test Results of the AVID Elementary School (School A) and School B (Math)

	School A	School B
Mean	465.6	432.733333
Variance	7633.11429	9979.78095
Observations	15	15
Pearson correlation	-0.2616853	
Hypothesized mean difference	0	
df	14	
t Stat	0.85469726	
P(T<=t) one-tail	0.2035537	
t Critical one-tail	1.76131014	
P(T<=t) two-tail	0.4071074	
t Critical two-tail	2.14478669	

The independent *t* test (see Table 12) to compare the AVID Elementary school (School A) to the second non-AVID Elementary school (School C) showed no statistically significant difference between the two schools. Since the *p* value, 0.39, is greater than *a*=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 12, the AVID Elementary school had a slightly higher mean scale score than School C on the math assessment; however, it was not significant.

Table 12

t-Test Results of the AVID Elementary School (School A) and School C (Math)

	School A	School C
Mean	465.6	436.066667
Variance	7633.11429	6853.78095
Observations	15	15
Pearson correlation	-0.1752059	
Hypothesized mean difference	0	
df	14	
t Stat	0.87671883	
P(T<=t) one-tail	0.19771723	
t Critical one-tail	1.76131014	
P(T<=t) two-tail	0.39543447	
t Critical two-tail	2.14478669	

The independent *t* test (see Table 13) to compare the AVID Elementary school (School A) to the third non-AVID Elementary school (School D) showed a statistically significant difference between the two schools. Since the *p* value, 0.04, is less than *a*=0.05, we accept the null hypothesis and reject the alternative hypothesis. Based on the mean in Table 13, the AVID Elementary school also had a slightly higher mean scale score than School D on the math assessment.

Table 13

t-Test Results of the AVID Elementary School (School A) and School D (Math)

	School A	School D
Mean	465.6	405.266667
Variance	7633.11429	9866.78095
Observations	15	15
Pearson correlation	0.35067114	
Hypothesized mean difference	0	
df	14	
t Stat	2.18723674	
P(T<=t) one-tail	0.0230957	
t Critical one-tail	1.76131014	
P(T<=t) two-tail	0.0461914	
t Critical two-tail	2.14478669	

2018-2019 Mathematics Assessment Analysis

The independent *t* test (see Table 14) to compare the AVID Elementary school (School A) to the first non-AVID Elementary school (School B) showed no statistically significant difference between the two schools. Since the *p* value, 0.40, is greater than a=0.05, we reject the hypothesis and accept the null hypothesis. Based on the mean in Table 14, the AVID Elementary school (School A) had a slightly lower mean scale score than School B on the math assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by one student in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 14

t-Test Results of the AVID Elementary School (School A) and School B–Math (Year 2)

	School A	School B
Mean	480.571429	509.142857
Variance	4202.87912	11299.6703
Observations	14	14
Pearson correlation	-0.0163542	
Hypothesized mean difference	0	
df	13	
t Stat	-0.8524322	
P(T<=t) one-tail	0.20470226	
t Critical one-tail	1.7709334	
P(T<=t) two-tail	0.40940452	
t Critical two-tail	2.16036866	

The independent *t* test (see Table 15) to compare the AVID Elementary school (School A) to the first non-AVID Elementary school (School C) showed no statistically significant difference between the two schools. Since the *p* value, 0.71, is greater than *a*=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 15, the AVID Elementary school (School A) had a slightly lower mean scale score than School C on the math assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by one student in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 15

t-Test Results of the AVID Elementary School (School A) and School C–Math (Year 2)

	School A	School C
Mean	480.571429	494
Variance	4202.87912	11548.4615
Observations	14	14
Pearson correlation	-0.1345275	
Hypothesized mean difference	0	
df	13	
t Stat	-0.3784595	
P(T<=t) one-tail	0.35559881	
t Critical one-tail	1.7709334	
P(T<=t) two-tail	0.71119763	
t Critical two-tail	2.16036866	

The independent *t* test (see Table 16) to compare the AVID Elementary school (School A) to the third non-AVID Elementary school (School D) showed no statistically significant difference between the two schools. Since the *p* value, 0.14, is greater than *a*=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 16, the AVID Elementary school (School A) had a slightly higher mean scale score than School D on the math assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by one student in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 16

t-Test results of the AVID Elementary School (School A) and School C–Math (Year 2)

	School A	School D
Mean	480.571429	438.214286
Variance	4202.87912	8438.18132
Observations	14	14
Pearson correlation	0.18023339	
Hypothesized mean difference	0	
df	13	
t Stat	1.5470767	
P(T<=t) one-tail	0.0729179	
t Critical one-tail	1.7709334	
P(T<=t) two-tail	0.1458358	
t Critical two-tail	2.16036866	

2019-2020 Assessment Analysis/ 2020-2021 Assessment Analysis

Reacting to the outbreak of the COVID-19 pandemic in the spring of 2020, the South Carolina Department of Education sought an exemption from conducting assessments, accountability measures, and reporting for the 2019-2020 academic year. The waiver was granted, and as a result, no schools in the state-administered SCREADY assessments during this academic year.

Due to the ongoing COVID-19 pandemic in the spring of 2021, the South Carolina Department of Education once again requested a waiver from assessment, accountability, and reporting for the 2020-2021 academic year. The waiver, however, was denied by the United States Department of Education, and the state was to move forward with assessing students on SCREADY assessments. Parents and legal guardians were able to still opt their children out of testing. As only five students completed the assessment from the AVID Elementary school cohort (School A) during the 2020-2021

academic year, there is not enough data available to test the hypothesis for the school year.

Research Question 3: State Assessments

To investigate the third research question, which involved comparing the academic performance on SCREADY assessments between students who attended AVID Elementary schools and those who did not, an independent *t* test was conducted. The ensuing sections present the outcomes of these *t* tests, which were specifically carried out to ascertain whether there were any statistical distinctions between students who attended AVID Elementary schools and those who did not. Detailed statistical results and data analysis are provided in the tables accompanying each analysis. It is important to note that the 2021-2022 academic year marked the students' first enrollment in middle school courses (Grade 7).

2021-2022 Reading Assessment Analysis

The independent *t* test (see Table 17) to compare the students who attended an AVID Elementary school (School A) to the students who attended the first non-AVID Elementary school (School B) showed no statistically significant difference between the two schools. Since the *p* value, 0.68, is greater than a=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 17, the students who attended an AVID Elementary school (School A) had a slightly higher mean scale score than School B on the reading assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by several students in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 17

t-Test results of the AVID Elementary School (School A) and School B–Reading

	School A	School B
Mean	619.333333	599.333333
Variance	12739.75	4922.25
Observations	9	9
Pearson correlation	-0.1407716	
Hypothesized mean difference	0	
df	8	
t Stat	0.42541959	
P(T<=t) one-tail	0.34087182	
t Critical one-tail	1.85954804	
P(T<=t) two-tail	0.68174364	
t Critical two-tail	2.30600414	

The independent *t* test (see Table 18) to compare the students who attended an AVID Elementary school (School A) to the students who attended the second non-AVID Elementary school (School C) showed no statistically significant difference between the two schools. Since the *p* value, 0.26, is greater than *a*=0.05, we reject the alternative hypothesis and accept the null hypothesis. Based on the mean in Table 18, the students who attended an AVID Elementary school (School A) had a slightly higher mean scale score than School C on the reading assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by several students in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 18

t-Test Results of the AVID Elementary School (School A) and School C–Reading

	School A	School C
Mean	619.333333	552.555556
Variance	12739.75	12500.2778
Observations	9	9
Pearson correlation	-0.0868468	
Hypothesized mean difference	0	
df	8	
t Stat	1.20955305	
P(T<=t) one-tail	0.13048905	
t Critical one-tail	1.85954804	
P(T<=t) two-tail	0.26097811	
t Critical two-tail	2.30600414	

The independent *t* test (see Table 19) to compare the students who attended an AVID Elementary school (School A) to the students who attended the third non-AVID Elementary school (School D) showed no statistically significant difference between the two schools. Since the *p* value, 0.08, is greater than *a*=0.05, we accept the null hypothesis. Based on the mean in Table 19, the students who attended an AVID Elementary school (School A) had a slightly higher mean scale score than School D on the reading assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by several students in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 19

t-Test Results of the AVID Elementary School (School A) and School D–Reading

	School A	School D
Mean	619.333333	514.555556
Variance	12739.75	16623.7778
Observations	9	9
Pearson correlation	-0.4648746	
Hypothesized mean difference	0	
df	8	
t Stat	1.51772276	
P(T<=t) one-tail	0.08378099	
t Critical one-tail	1.85954804	
P(T<=t) two-tail	0.16756197	
t Critical two-tail	2.30600414	

2021-2022 Math Assessment Analysis

The independent *t* test (see Table 20) to compare the students who attended an AVID Elementary school (School A) to the students who attended the first non-AVID Elementary school (School B) showed no statistically significant difference between the two schools. Since the *p* value, 0.94, is greater than a=0.05, we accept the null hypothesis. Based on the mean in Table 20, the students who attended an AVID Elementary school (School A) had a slightly lower mean scale score than School B on the math assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by several students in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 20

t-Test Results of the AVID Elementary School (School A) and School B–Math

	School A	School B
Mean	519.111111	521
Variance	3920.86111	5694.25
Observations	9	9
Pearson correlation	0.20634579	
Hypothesized mean difference	0	
df	8	
t Stat	-0.0647245	
P(T<=t) one-tail	0.47499076	
t Critical one-tail	1.85954804	
P(T<=t) two-tail	0.94998151	
t Critical two-tail	2.30600414	

The independent *t* test (see Table 21) to compare the students who attended an AVID Elementary school (School A) to the students who attended the second non-AVID Elementary school (School C) showed no statistically significant difference between the two schools. Since the *p* value, 0.73, is greater than a=0.05, we accept the null hypothesis. Based on the mean in Table 21, the students who attended an AVID Elementary school (School A) had a slightly higher mean scale score than School C on the math assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by several students in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 21

t-Test Results of the AVID Elementary School (School A) and School C–Math

	School A	School C
Mean	519.111111	509
Variance	3920.86111	4156.75
Observations	9	9
Pearson correlation	0.04402931	
Hypothesized mean difference	0	
df	8	
t Stat	0.34518516	
P(T<=t) one-tail	0.36942776	
t Critical one-tail	1.85954804	
P(T<=t) two-tail	0.73885552	
t Critical two-tail	2.30600414	

The independent *t* test (see Table 22) to compare the students who attended an AVID Elementary school (School A) to the students who attended the third non-AVID Elementary school (School D) showed no statistically significant difference between the two schools. Since the *p* value, 0.42, is greater than *a*=0.05, we accept the null hypothesis. Based on the mean in Table 22, the students who attended an AVID Elementary school (School A) had a higher mean scale score than School D on the math assessment; however, it was not significant. It should be noted that enrollment in the AVID Elementary cohort decreased by several students in this academic year. Since the student population changed, it was reflected across the non-AVID Elementary schools.

Table 22

t-Test Results of the AVID Elementary School (School A) and School D–Math

	School A	School D
Mean	519.111111	482.777778
Variance	3920.86111	7566.44444
Observations	9	9
Pearson correlation	-0.4702303	
Hypothesized mean difference	0	
df	8	
t Stat	0.84575573	
P(T<=t) one-tail	0.21113154	
t Critical one-tail	1.85954804	
P(T<=t) two-tail	0.42226308	
t Critical two-tail	2.30600414	

Summaries of Research Questions

Summary: Research Question 1

The first research question compared the English language arts student performance on SCREADY assessments for students attending an AVID Elementary school to students not attending an AVID Elementary school. The study focused on a cohort of third-grade students from a total of four elementary schools in a rural South Carolina school district. An independent *t* test was conducted to compare the results of each school. While results for the assessments were not statistically significant, the scale score means varied on the assessments for the AVID Elementary students when compared to non-AVID Elementary students. Four of the six *t* tests, or 67%, showed AVID Elementary students having a higher mean scale score than non-AVID Elementary students. Again, the findings are not statistically significant.

Summary: Research Question 2

The second question to guide this research study compared the math student achievement levels on SCREADY assessments for students whose elementary schools implemented AVID Elementary to students whose elementary schools did not. The study focused on a cohort of third-grade students from a total of four elementary schools in a rural South Carolina school district. An independent *t* test was conducted to compare the results of each school. While results for the assessments were not statistically significant (except for the 2017-2018 academic year for School A and School D), the scale score means varied on the assessments for the AVID Elementary students when compared to non-AVID Elementary students. Four of the six *t* tests, or 67%, showed AVID Elementary students having a higher mean scale score than non-AVID Elementary students. Again, the findings are not statistically significant.

Summary: Research Question 3

The third research question sought to compare the successes/failures of AVID implementation as students transitioned to middle school by contrasting levels of student accomplishment on SCREADY assessments for students who attended an AVID Elementary school to students who did not attend an AVID Elementary school. The study focused on a cohort of third-grade students from a total of four elementary schools in a small South Carolina school district as they transitioned to middle school. An independent *t* test was conducted to compare the results of each school's performance in reading and math. While results for the assessments were not statistically significant, the scale score means varied on the assessments for the AVID Elementary students when compared to non-AVID Elementary students. Five of the six *t* tests, or 83%, showed

students who attended AVID Elementary students continued to have a higher mean scale score than non-AVID Elementary students as they transitioned to middle school. Again, the findings are not statistically significant.

Chapter 5: Discussion

In this quantitative research endeavor, I performed an analysis aimed at evaluating the influence of the AVID Elementary program on student achievement. The study focused on evaluating data collected from third-grade students in South Carolina across four elementary schools in the same rural school district. Among these schools, one had implemented the AVID Elementary program, while the remaining three had not. The analysis encompassed student performance on SCREADY assessments, specifically in the areas of reading and math. The data examined in this study encompassed assessment scores from the academic years spanning 2017-2018, 2018-2019, and 2021-2022.

The primary objective of this study was to assess the efficacy of the AVID Elementary program in enhancing the academic performance of elementary school students. Furthermore, this research aimed to investigate the academic trajectories of students as they transitioned to middle school. Specifically, the study involved a comparative analysis of student achievement between those attending AVID Elementary schools and those who had never been enrolled in an AVID Elementary program. The purpose was to determine if students in AVID Elementary schools demonstrated a significant variance in state assessment results and to explore whether enrollment in an AVID Elementary program had a significant impact on school outcomes as students moved into middle school.

The motivation behind undertaking this study stemmed from the recognition that there has been a limited focus on examining the impact of the AVID program at the elementary school level. Furthermore, there is a scarcity of studies that concentrate on a single school district, comparing the academic achievements of students attending AVID

Elementary schools with those attending non-AVID Elementary schools within the same district. Most prior research efforts have primarily centered around middle and high school students who had only a year or 2 of exposure to the AVID program, typically within the context of the AVID Elective course, which is not part of AVID Elementary.

This study, in contrast, placed its focus on elementary school students who consistently attended the same AVID Elementary school from third through sixth grades and those who attended the same non-AVID Elementary school during this same time frame. AVID has gained a strong reputation for fostering student success, and this study aimed to explore its impact at the elementary level across an extended academic timeline.

There has been a noticeable shortage of research studies that compare the academic performance of elementary schools that participate in AVID with those that do not. The findings of this study revealed that there were minimal discernible distinctions in student achievement data related to SCREADY assessments, specifically in the domains of reading and math, for students enrolled in schools that implement AVID Elementary and schools that have never implemented AVID Elementary. Furthermore, these distinctions did not attain statistical significance. Additionally, the study indicated that there were no substantial variations in the academic performance of students transitioning to middle school, whether they had previously attended AVID Elementary or non-AVID Elementary schools.

The study was guided by the following research questions:

1. What effect has the implementation of AVID had on elementary school English language arts scores in an AVID-trained school as compared to a non-AVID-trained school?

2. What effect has the implementation of AVID had on elementary school math scores in an AVID-trained school as compared to a non-AVID-trained school?
3. How are AVID successes/failures sustained over time in the first year of transition to middle school?

In addressing the questions that guided this research study, I employed a quantitative methodology to gather data, which consisted of SCREADY assessment scores across multiple school years, including 2017-2018, 2018-2019, and 2021-2022. The third-grade students from the 2017-2018 academic year were tracked for each of the subsequent years. Assessment scores for English language arts and mathematics were analyzed for each of the school years to determine if there was a statistical significance in the performance based on the student scale scores.

Statement of the Problem

Minority students often face challenges when it comes to being adequately prepared for both higher education and the workforce. As they transition from high school, many of these students still find themselves lacking the essential college and career readiness skills necessary for success. This presents an ongoing issue that educational leaders should continue to address.

In particular, there is a pressing need for targeted support to be extended to economically disadvantaged students. AVID Elementary serves as a valuable solution in tackling the issue of unprepared students for college and the workforce. By giving students the chance to realize their full potential in core subject areas, AVID Elementary contributes to enhancing student achievement in these foundational areas. Ultimately, such achievements pave the way for success in higher education and adequately prepare

students for their future careers.

Overview of Results

To investigate the three research questions, an independent *t* test was conducted, involving the analysis of data from four schools within the same rural school district. Among these schools, one had adopted the AVID Elementary program, while the remaining three had not.

To address all three research questions, which aimed to compare achievement results in the subjects of English language arts and mathematics, the academic performance of elementary students attending the AVID Elementary school was compared to that of students attending the non-AVID Elementary school. This comparison was conducted within the context of the same groups.

Research Question 1: What Effect Has the Implementation of AVID Had on Elementary School English Language Arts Scores in an AVID-Trained School as Compared to a Non-AVID-Trained School?

The English language arts scale scores from SCREADY assessments revealed that students participating in the AVID Elementary school program displayed an average scale score similar to that of students in non-AVID Elementary schools when it came to standardized assessments. Based on these findings, it can be concluded that the comparisons of student averages for the English language arts state assessment did not indicate any noteworthy differences across multiple test administrations.

While there are indications of positive outcomes from the program, these outcomes do not reach the threshold of statistical significance. This suggests that the program may have the potential to yield more substantial results with a heightened

emphasis on stronger implementation and comprehensive training for all teachers throughout the school.

Research Question 2: What Effect Has the Implementation of AVID Had on Elementary School Math Scores in an AVID-Trained School as Compared to a Non-AVID-Trained School?

The mathematics scale scores from SCREADY assessments revealed that students engaged in the AVID Elementary school program exhibited comparable average scale scores to students in non-AVID Elementary schools when it came to standardized assessments; however, there was one noteworthy exception where the assessment results for math demonstrated a statistically significant divergence. In this particular case, students enrolled in the AVID Elementary school significantly outperformed students from a single non-AVID Elementary school.

This suggests that there is potential for the program to achieve more robust results through a more robust implementation of the AVID Elementary program, coupled with continuous professional development opportunities for teachers instructing students.

Research Question 3: How Are AVID Successes/Failures Sustained Over Time in the First Year of Transition to Middle School?

As the cohort of students made the transition to middle school, the data regarding their student achievement results in English language arts and mathematics, as measured by SCREADY assessments, indicated that there were no statistically significant differences between students who had previously been enrolled in an AVID Elementary school and those who had attended non-AVID Elementary schools. Student scale scores in reading and math were almost identical. Although there was only one AVID

Elementary school, it should be noted that the middle school is an AVID school site, and contains the AVID Elective course, where selected students participate in many of the AVID strategies that students in AVID Elementary schools learn to be successful and prepared for high school and beyond.

Implications

Although no statistically significant differences were observed in the achievement scores between the AVID Elementary school and elementary schools not implementing AVID, the analysis does show at times that the AVID Elementary school students achieved higher scale scores on these assessments in comparison to their non-AVID Elementary school peers. Despite having slightly higher scale scores at times and lower scale scores at others, there was not enough separation between the AVID Elementary and non-AVID Elementary students when comparing their academic achievement. Of each of the academic years observed, the AVID Elementary students only showed a statistical difference in 1 year when compared to a non-AVID Elementary school sites in mathematics.

As students transitioned to middle school, all students could have been exposed to many of the strategies that AVID Elementary school students learned, as the middle school serves as an AVID school site. Additionally, it should be noted that there is only one middle school in the school district. The middle school offers an AVID Elective course, which integrates many of the strategies learned by AVID Elementary school students. The course is taught by an AVID-trained teacher who is equipped with the tools to implement AVID with fidelity. Although the middle school serves as an AVID school site, not all teachers at the middle school are AVID-trained. As a result, many students

may be exposed to AVID-trained teachers, while others may not. Data wise, there were no statistical differences between the achievement levels of students who attended AVID Elementary schools and students who never attended an AVID Elementary school.

This study was unique because I focused solely on the implementation of AVID Elementary. When most researchers study AVID implementation, the focus tends to be on high school implementation. The majority of studies tend to center around the hypothesis that students in AVID schools outperform their counterparts in non-AVID schools. These studies, often concentrated on high schools, typically examine factors like graduation rates, suspension rates, and SAT performance. The findings of this research study hold the potential to influence other educators and policymakers in their evaluation of the academic accomplishments of AVID Elementary schools when contrasted with non-AVID Elementary schools. In districts that have AVID programs at each level (elementary, middle, and high), this study could assist district administrators with studying implementation district-wide.

The insights gleaned from this research study can be effectively disseminated to a broad audience, including AVID district directors, superintendents, principals, and AVID coordinators. This information can be delivered through various channels, such as seminars, AVID Path trainings, and other professional development sessions. These platforms can serve to furnish key stakeholders with valuable insights regarding academic achievement comparisons between AVID Elementary schools and non-AVID Elementary schools.

For instance, the study's findings indicated that there is no substantial difference in the academic achievement of students enrolled in AVID Elementary schools when

compared to their peers in non-AVID Elementary schools. These data can assist these stakeholders in comprehending that the implementation of AVID can indeed have an impact on student academic achievements. Moreover, when a school garners AVID honors and recognition, such as AVID site of distinction and demo school status, it underscores the program's effectiveness in enhancing student achievement, thereby encouraging support and enthusiasm from educators and administrators. For schools already implementing AVID programs, this study may cause reflection as it pertains to the implementation of the program with fidelity.

Limitations of the Study

The data analysis relied on information gathered from the testing coordinator within the school district's curriculum and instruction department. The district provided data for five elementary schools. Only one of the elementary schools implemented the AVID Elementary program. One of the elementary schools was a magnet school program, which focuses on mathematics and science; because students apply for acceptance into the school, it was excluded from this study as high state assessment scores are one criterion for acceptance. The study's results are indicative of a restricted sample size, primarily stemming from the limited enrollment in the AVID Elementary school. As a result of the small enrollment, students at the AVID Elementary school are taught by one certified classroom teacher, whereas students at the other elementary schools in the study are taught by at least two certified classroom teachers.

I currently serve as a school administrator in the chosen school district for this research. I have previously worked at the AVID Elementary school, and I am a trained staff developer for the AVID program. Given my connection to the school district under

examination, my training as an AVID staff developer, and my prior employment at the AVID Elementary school in question, there is a potential for my research to be perceived as biased. The elementary schools involved in the study did not exhibit any distinctive identifying characteristics. The collected data have been verified as both valid and reliable. I was given approval to conduct the research by the school district's superintendent. The schools selected for the study are comparable, as they have similar student demographics. One significant distinction is the varying school enrollment sizes, which could potentially impact the outcomes of state assessments. It is important to note that this study did not seek to control for these variables.

Delimitations of the Study

I decided to use only one school district in this study. As a result of this decision, I focused on only one AVID Elementary school to compare student achievement data. My concentration was on a compact rural school district, aiming to address the research questions related to academic achievement in both AVID and non-AVID schools. While it was possible to incorporate more schools into the study, this would have extended the study beyond the confines of this specific school district's implementation of the AVID program. Additionally, random sampling was applied to the restricted pool of students with available data for state assessments. This additional random sampling was carried out to ensure an equitable comparison between the number of students. In light of the findings from this study, there may be prospective opportunities to explore the implications of AVID program implementation in elementary schools. Specifically, further research could delve into the academic performance of AVID and non-AVID schools in both rural and urban school districts.

Connections to the Literature

Metacognition plays a vital role in the implementation of AVID Elementary. Teachers explicitly teach metacognitive strategies to support students with reading development. AVID teachers are trained to incorporate a variety of reading strategies to support reading comprehension. Teachers at AVID Elementary schools teach students to self-check as they read. Students are able to correct errors without intervention from teachers. Teachers implement repeated readings to support comprehension. Students utilize AVID strategies such as writing in the margins and marking the text as they read and reread. Additionally, AVID Elementary teachers emphasize goal setting. In many instances, the students in the AVID Elementary school scored higher on the state reading assessment.

The growth mindset theory is at the heart of AVID implementation. Teachers in AVID schools promote a growth mindset. Students and teachers continuously set goals and reevaluate the goals as needed. Teachers inspire students to keep persevering until they meet their goals. This growth mindset also impacts school culture where students believe they can do the impossible. Students in the AVID school are able to progress monitor their goals throughout the year as they work their way to the state test. The research from the literature discussed in earlier chapters alluded to the impact that having a growth mindset has on student achievement levels. In many instances, the students from the AVID cohort held higher scale scores in both reading and math. This could be seen as a direct link to teachers instilling a growth mindset due to AVID implementation at the elementary level.

AVID's goal of preparing all students for college and career readiness is rooted in

this study. AVID exists to close the opportunity gap. Students in South Carolina complete their college and career readiness assessments beginning in third grade. The leadership and systems throughout AVID schools must be intentional with their college and career focus. The intentionality to achieve college and career preparedness supports student achievement at all levels.

Recommendations for Future Research

The findings of this study, concerning the impact of AVID implementation, are circumscribed by the small sample size comprising only four schools, of which one incorporated the AVID Elementary program, all within a compact rural school district. A comprehensive examination of existing literature and the results obtained in this research prompted suggestions for future investigations. This is in part because there is a dearth of research exploring the academic outcomes of students enrolled in schools that have introduced the AVID Elementary program. Furthermore, the need for further research arises from the scarcity of studies examining the educational achievements of students within school districts that implement AVID across elementary, middle, and high school levels.

The initial recommendation is to broaden the scope of the study by incorporating students from all grade levels within the tested elementary schools. This expansion would result in a larger student sample, providing a more comprehensive basis for examining the impact of AVID implementation at the elementary level. Another avenue for future research involves the inclusion of additional variables in the study. Subsequent investigations could encompass factors such as attendance, student surveys, teacher surveys, and suspension records, all of which have the potential to influence student

achievement. Expanding the data collection to encompass other information gathered throughout the academic year would facilitate meaningful comparisons with state data, offering deeper insights into the study's outcomes. Analyzing the data for implications may lead to further inquiries, specifically regarding the potential correlation between student academic achievement and AVID Elementary program implementation compared to non-AVID Elementary schools. Additionally, future research efforts could further segment participants by subgroups based on race and gender to assess the impact of AVID within these specific areas, thereby addressing concerns related to the achievement gap.

Furthermore, a recommended research study could delve into primary-level data from AVID Elementary and non-AVID Elementary schools. This study could involve the examination of kindergarten readiness data, evaluations of teacher perceptions regarding student growth mindsets, and an assessment of whether students attending AVID schools exhibit lower suspension rates and fewer days absent from school in comparison to students at non-AVID Elementary schools. Researchers could then analyze these data as students transition to middle and high school to determine if the behaviors learned in elementary schools persist over time.

Conclusion

The endeavor to prepare students for their future is an ongoing challenge; however, programs like AVID can significantly contribute to enhancing student trajectories and guiding our efforts toward better preparing all students for college and career readiness. In the context of this research study, which examined academic achievement results on SCREADY assessments, students attending AVID Elementary

schools were compared to those in non-AVID Elementary schools. The outcomes revealed that there was no substantial difference in the academic achievement of students.

Notably, the student scale scores from AVID Elementary schools, in most instances, were equivalent to or slightly higher than those from non-AVID Elementary schools. These data underscore the potential for making a case that AVID is playing a role in closing the achievement gap, particularly when considering historical student achievement trends. As a recommendation for the future, I suggest conducting additional studies that encompass student surveys, teacher surveys, suspension records, and the comparison of test results on both state and national levels to gain a more comprehensive understanding of the program's impact.

The findings from this study may hold significance for school districts seeking effective programs to implement with the aim of achieving grade-level proficiency, enhancing student attitudes, and addressing the issue of the achievement gap. This would ultimately impact the school report card ratings, as districts should observe student growth data with program implementation with fidelity. Because AVID can be implemented at the elementary, middle, and high school levels, school districts could track students as they matriculate through their respective districts. For researchers interested in delving further into AVID implementation, it is recommended to explore online resources, review existing dissertations, and visit the program's official website at www.avid.org.

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