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THE AVID EFFECT IN HIGH SCHOOL: A QUANTITATIVE STUDY OF THE AVID
EFFECT IN A LARGE URBAN SCHOOL DISTRICT IN THE SOUTH

By
Darrell J. Potts

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2020

Approval Page

This dissertation was submitted by Darrell J. Potts under the direction of the persons listed below. It was submitted to the Gardner-Webb University School 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

THE AVID EFFECT IN HIGH SCHOOL: A QUANTITATIVE STUDY OF THE AVID EFFECT IN A LARGE URBAN SCHOOL DISTRICT IN THE SOUTH. Potts, Darrell J., 2020: Dissertation, Gardner-Webb University.

According to the Advancement Via Individual Determination (AVID) website, there are multiple studies comparing the academic achievement of AVID students to non-AVID students. This research study was uniquely designed to determine the effectiveness of the AVID program in large urban school districts in the south based on students' junior year academic performance on state assessments such as the ACT, English III, Math III, and chemistry exams. This study also examined comparisons between graduation rates, suspensions, and attendance. A one-way ANOVA was conducted to compare means of three groups during this study including AVID elective students, non-AVID elective students attending non-AVID schools, and non-AVID elective students attending AVID schools. An analysis of the results of the study indicated that junior year academic achievement means do not show a significant difference with ACT composite scores or state assessment performance in Math III, English III, and chemistry. However, the means for AVID elective students were slightly higher. Non-AVID students had slightly higher ACT composite score means. The results of the study indicated that the graduation rates, suspension, and attendance data do not reflect a significant difference between AVID elective students attending AVID schools, non-AVID students attending non-AVID schools, nor non-AVID elective students attending AVID schools. However, AVID elective students had slightly lower ISS, OSS, and days absent from school. Recommendations for future study were provided.

Keywords: AVID, end of course exam, North Carolina final exam, AVID elective

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Chapter 1: Introduction

Building 21st century skills remains a priority in America's schools. There are a number of students graduating from high school with a lack of college and career readiness (CCR). Even a decade ago, approximately one in five American College Testing (ACT) high school graduates was not prepared for entry-level college courses in English composition, college algebra, social science, and biology (ACT, 2009). Moreover, approximately one in four high school graduates was unprepared for college-level coursework in any of the four subject areas. The majority of the fastest growing jobs require knowledge and skills comparable to those expected of first-year college students (ACT, 2009). This lack of college readiness means a lack of career readiness in society. More recently, the national average ACT composite score for the 2018 graduating class was down from 2017 to 2018. Average scores in English, mathematics, reading, and science all dropped between 2017 and 2018 (ACT, 2018). Students can benefit from building CCR skills. Such skills allow students to apply foundational practices from math, English, and science to their collegiate coursework. High school graduates who are college ready are also in a better position to matriculate through community colleges and universities and to ultimately graduate and earn a degree. High school graduates who enter the labor force with strong 21st century skills are more prepared for a more diverse workforce taking place both in person and virtually. Despite these benefits, there is still a decline with college readiness levels in America. According to ACT (2018), "readiness levels in math and English have steadily declined since 2014. Readiness levels in reading and science have varied over the past five years, with no clear upward or downward trends" (Performance of 2018 Graduates section).

Producing less skilled citizens in society creates a problem for educators, employers, and job seekers most importantly. “Earning a wage sufficient to support a family in America is a growing challenge” (Ausman, 2008, p. 20). Students are entering the next phase of life unprepared and unable to sustain the success needed to live a reasonable quality of life. Some high school graduates are trying to become more productive through working minimum wage or part-time jobs, unaware that this is not enough to effectively become independent and support a family or have a higher quality of life. According to the Pew Research Center, the millennial college graduates who are working full time earn approximately \$17,500 more annually compared to millennial high school graduates (Kurtzleben, 2014). More students need to develop their CCR skills to help create more opportunities for a better quality of life after secondary and postsecondary schooling. Cultivating these skills increases our students’ chances to complete college or excel in a career with a livable wage. To combat the lack of CCR for our youth, one could potentially consider arming our school districts, building principals, teachers, and students with the foundational practices of a supplemental program such as the Advancement Via Individual Determination (AVID) college readiness system. The mission of AVID is to “close the achievement gap by preparing all students for college and career readiness in a global society” (AVID, 2018, Mission Statement section).

AVID was founded in 1980 as an educational nonprofit. On the national scale, the AVID program has had some impact on student performance for millions of students. Overall, the program has been implemented in approximately 7,000 schools in 47 states across the United States. In addition, AVID has been implemented in the Department of Defense Education Activity, Canada, and Australia (AVID, 2019d). Today, the AVID

program trains over 80,000 educators on an annual basis. Training consists of researched best practice strategies designed to increase engagement, CCR, and 21st century skills in students. Specifically, teachers are taught how to facilitate AVID curriculum for students during the AVID elective class and school wide. These educators have a direct impact on approximately two million students each year by providing academic and social support to aid student success in high school, college, and careers. AVID is also implemented in over 64 institutions of higher learning across the country (AVID, 2019d). According to AVID (2019d), 42% of first generation, low-income AVID college students graduate with a 4-year degree in 6 years. This is four times greater than their non-AVID peers within the same time frame (AVID, 2019d). Continuing this type of success will create more opportunities for students to secure good paying jobs to support their families.

Local school districts benefit from AVID's success as well. In North Carolina alone, 153 AVID sites serve 20,498 elementary and secondary students. Specifically, there are 132 secondary sites. In 2018, 100% of seniors in AVID graduated from high school. Over 96% met entrance requirements for a 4-year college or university, of which 82% applied to and were admitted to the 4-year college or university of their choice, yielding an acceptance rate of 77% (AVID, 2019b). Outcomes of the AVID program in a large urban district in the south are yet to be known.

Statement of the Problem

Students identified as minorities are underprepared in contemporary schools of higher learning. If students are graduating from high school underprepared, they are at a disadvantage in life. According to Melzer and Grant (2016), "Although underprepared students exhibit a great deal of resiliency and perseverance to reach the college level,

they still underperform academically and socially compared to more prepared students” (Melzer & Grant, 2016, p. 98). High schools are responsible for producing college and career ready citizens, but still there are too many minority students underperforming in postsecondary institutions. The question is why? Students from all walks of life depend on the public education system to prepare them for life after high school. If students are not college and career ready, we have failed them as educators and have set students up for failure at the next level. Melzer and Grant went on to state,

Underprepared students are more likely to drop out of college and have lower GPAs compared to their more prepared peers. First-generation college students, students from lower socioeconomic statuses, and minority students are more likely to be characterized as underprepared compared to other groups. (p. 97)

As a result, high schools must continue to prioritize the readiness levels of minority students to prevent a lack of 21st century skills by the time of graduation. The cycle of sending underprepared high school graduates into society must be broken. There is evidence of this pattern from over a decade ago and even prior to that. Perkins-Gough (2008) stated, “Even those students who take responsibility for their learning too often find themselves woefully unprepared for college” (para. 3).

Over time, a majority of school districts have focused their efforts and funds catered to the most struggling students or students with disabilities. This dates back to the No Child Left Behind Act (NCLB). According to the American Association of School Administrators, NCLB had no incentives and no mandates built into it for school districts to do anything with a population at or above proficiency (Kenney, 2007). In addition, NCLB, with its unprecedented high stakes focus on students performing below grade

level, left little incentive for the child already at or above grade level (Kenney, 2007).

Advocates from the National Association for Gifted Children expressed that gifted programs remain a high priority in some places despite pressures to divert resources and attention to NCLB's demands (Kenney, 2007).

When the Every Student Succeeds Act (ESSA) was passed in 2015, it replaced the controversial NCLB. The two laws are different, but they have some things in common (Jones, 2019). Under ESSA, states and school districts must have a plan for helping schools that have high drop-out rates, are consistently struggling, or have a specific group of students who are struggling (Jones, 2019). "Decisions about what assistance they give are made by the state, or by local school districts and schools. However, ESSA requires states to use evidence-based methods to help these struggling schools and students" (Jones, 2019, Struggling Students and Schools section).

As a result of ESSA, high schools can find resources to support the academics of minority students. School districts can leverage opportunities from ESSA to help assuage a lack of 21st century skills in students needed to succeed in the future. The AVID program can help to potentially mitigate this issue by creating more opportunities for underrepresented students to meet their full potential in English, math, and science. Student achievement in these content areas can lead to success in college and the career field. According to Ausman (2008) about workforce readiness,

Results from a study done by ACT in 2006 provide empirical evidence that whether planning to enter college or workforce training programs after graduating, high school students need to be educated to a comparable level of readiness in reading and mathematics. The study identified the level of skill in

these subjects that a student would need to master for entry-level jobs that require less than a bachelor's degree and pay a wage sufficient to support a family.

Student performance was compared on ACT tests measuring workforce readiness and ACT tests measuring college readiness. The results showed that students

following either pathway need a rigorous core preparatory course program. (p. 21)

As a result, it would be beneficial for school districts to have a proven program such as AVID to support students in both reading and math to develop the necessary 21st century skills for survival in contemporary times.

Another key ingredient to the recipe of AVID success for minority students includes a focus on the social and emotional support for this group of scholars. According to AVID (2019e), social and emotional learning is at the core of AVID best practice. The AVID program works to build relational capacity between teachers and students to foster safe learning environments in which students can thrive. According to AVID (2020), "In a culturally relevant learning environment, students must develop collaboration skills to build relational capacity and respect the diverse experiences of others. Culturally relevant learning environments empower student voice and engender self-advocacy and leadership" (AVID, 2020, Student Agency section). AVID demonstrates this focus through their alignment with the five core competencies of the collaborative for academic, social, and emotional learning (CASEL), which is a trusted source for knowledge about high-quality, evidence-based social and emotional learning (SEL). These five competencies include self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (CASEL, 2019). These core competencies are all skills that are routinely addressed throughout the AVID program.

AVID elective teachers facilitate curriculum consisting of engagement strategies to provide students with an opportunity to practice and develop their SEL skills.

Specifically, AVID strategies are researched based and are proven to help students build confidence with self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

As a result, the AVID program is associated with the idea that schools should not focus on academics alone, because students need more than test scores to be successful in life. Students have to be able to work with others effectively. According to the Aspen Institute National Commission on Social, Emotional, and Academic Development (2019), “overwhelming evidence demands that we complement the focus on academics with the development of the social and emotional skills and competencies that are equally essential for students to thrive in school, career, and life” (para. 1). The AVID program is a reflection of this belief and has great impact on student social emotional development as a result.

Purpose of the Study

The purpose of this study was to evaluate the effectiveness of the AVID program in a large urban school district in the southeastern region by comparing student achievement levels on high stakes tests in English, math, science, and ACT assessments of five high schools including three AVID schools and two non-AVID schools with similar demographics. In addition to high stakes assessment scores, the study compared graduation rates of each school to determine if implementation of the AVID program has any impact in this area. Last, the study investigated the impact of AVID on student SEL by comparing discipline data collected from both AVID and non-AVID schools.

Research Questions

This program evaluation was a quantitative method approach study seeking to address how the AVID program influenced student achievement with English, math, graduation rates, and suspension rates in one of two high schools sampled within a large school district in the southeastern region of the United States. This study addressed the following overarching questions:

1. How does student achievement differ on assessments such as the Math III end of course (EOC) exam, English III North Carolina final exam (NCFE), and chemistry NCFE when comparing results from AVID schools and non-AVID schools?
2. How do ACT composite scores and graduation rates differ between AVID schools and non-AVID schools in a large urban school district in the south?
3. How do suspension and attendance rates differ for AVID schools compared to non-AVID schools?

Theoretical Framework

There are three learning theories guiding the research for this study. They include constructivism theory, metacognitive theory, and Marzano's (2009) theory. Each learning theory consists of components associating with the AVID program, which has an impact on student learning occurring at AVID schools selected for the study. By examining each learning theory, one will have a better understanding of how each theory has significance in the study.

The comprehensive high schools used in this study all share the same state accountability measures. Each school is responsible for administering state assessments

based on comprehensive state standards. Essentially, students are assessed on what they know and have learned over the course of a semester on a yearlong schedule. Curriculum aligned to state standards is taught to students comprehensively during each school year. As a result, one can argue that this approach to learning is associated with the theory of constructivism.

According to Bada (2015), “Constructivism is an approach to teaching and learning based on the premise that cognition (learning) is the result of mental construction. In other words, students learn by fitting new information together with what they already know” (p. 66). This is a common theory of learning observed in the state and school district housing the four schools used in this study. Moreover, “constructivists believe that learning is affected by the context in which an idea is taught as well as by students' beliefs and attitudes” (Bada, 2015, p. 66). Incorporating student perspectives into a lesson and providing relevant context to students are components associated with the AVID program's instructional philosophy; specifically, the practice of culturally responsive teaching (CRT).

Bada (2015) went on to support this association by stating,

In any case, we are active creators of our own knowledge. To do this, we must ask questions, explore, and assess what we know. In the classroom, the constructivist view of learning can point towards a number of different teaching practices. In the most general sense, it usually means encouraging students to use active techniques (experiments, real-world problem solving) to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. The teacher makes sure he/she understands the

students' preexisting conceptions and guides the activity to address them and then build on them. (p. 67)

The Theory of Constructivism plays a role in this study around the core high school curriculum, the AVID elective curriculum, and the student experience in high school. Constructivism's central idea is that human learning is constructed, that learners build new knowledge upon the foundation of previous learning. This view of learning contrasts with passive learning methods and the mere transmission of information from one individual to another (Bada, 2015). The AVID program is associated with rigorous best teaching practices that are grounded in student reconstructing complex concepts into forms that can be transferred to long-term memory. This may be difficult for students who have grown accustomed to passive learning.

Metacognitive Theory plays a significant role in this study as well. The term metacognition is defined as one thinking about their thinking. Metacognitive Theory emerged in the late 1970s. This theory has been around for decades yet has relevance in contemporary education as it challenges learners to confront personal misconceptions that arise during the learning process. Metacognition is observed regularly in a number of AVID best practice strategies that have a direct impact on student learning.

Livingston (2003) cited Flavell, stating,

The term metacognition is most often associated with John Flavell. According to Flavell, metacognition consists of both metacognitive knowledge and metacognitive experiences or regulation. Metacognitive knowledge refers to acquired knowledge about cognitive processes, knowledge that can be used to control cognitive processes. Flavell further divides metacognitive knowledge into

three categories: knowledge of person variables, task variables and strategy variables. (p. 2)

This is significant to the study because performance data were compared based on acquired knowledge of student participants. Both AVID and non-AVID students had to demonstrate their ability to apply both task and strategy variables to high stakes tests.

Livingston (2003) went on to state,

Metacognitive experiences involve the use of metacognitive strategies or metacognitive regulation. Metacognitive strategies are sequential processes that one uses to control cognitive activities, and to ensure that a cognitive goal (e.g., understanding a text) has been met. These processes help to regulate and oversee learning, and consist of planning and monitoring cognitive activities, as well as checking the outcomes of those activities. (p. 3)

This is significant to the study because I examined the outcome of student results on state assessments. As students travel with their metacognition, the overall results can be seen through their summarized test scores such as the ACT, Math III, English III, and chemistry end-of-year exams. The study of metacognition has provided educational insight about the cognitive processes involved in learning what differentiates successful students from their less successful peers (Livingston, 2003). During this study, I compared the state assessment results of students attending three AVID schools and two non-AVID schools.

Marzano has completed several works about his nine high yielding strategies.

They are

- identifying similarities and differences

- summarizing and note-taking
- reinforcing effort and providing recognition
- homework and practice
- nonlinguistic representations
- cooperative learning
- setting objectives and providing feedback
- generate and testing hypothesis
- questions, cues, and advance organizers.

Each of the Marzano high yielding strategies are associated with AVID writing, inquiry, collaboration, organization, and reading (WICOR) strategies and best practices. Schools identified with having a certain level of AVID certification have implemented the practice of WICOR school wide. As a result, AVID is expected to have a positive impact on school-wide achievement based on the application of instructional strategies in the classroom with fidelity. The coaching and implementation of these strategies falls on the accountability of each school to provide teachers feedback on their practice.

According to Marzano (2009),

In terms of providing teachers with feedback, the focus must always be on student learning and the perspective must always be that instructional strategies are a means to an end. Checklist approaches to providing feedback to teachers probably do not enhance pedagogical expertise, particularly when they focus on a narrow list of instructional, management, or assessment strategies. In fact, such practice is antithetical to true reflective practice. (p. 31)

The AVID program has a curriculum to support a number of different instructional best

practice strategies for teachers. The use of these strategies impacts AVID school-wide achievement. However, the instructional strategies Marzano identified might have a positive effect on student achievement in some situations or a negligible or even negative effect on student achievement in other situations.

Assumptions

The following theoretical and empirical assumptions grounded this study.

Theoretical

1. The academic programs selected by a school or school district can influence student achievement.
2. The teaching strategies adopted by a school can influence student achievement.
3. Growth on state standard-based assessments is a good indicator of student achievement for a school or district and future success in college or the work force.

Empirical

1. The target population is sufficient (approximately 200 students from each sample school) to generalize to a larger population of 12th-grade students in both AVID schools and non-AVID schools.
2. The sample groups are sufficiently representative of a larger general population of 12th-grade students.
3. Participating in the AVID program for 3 or more years is a reliable method to determine that a student has internalized AVID expectations adequately, actively participates in AVID instructional strategies, and understands AVID

methodologies in the classroom.

4. Data collected from the selected school district were reliable and valid.
5. AVID students have met the criteria for selection into the program.
6. AVID teachers were effectively trained and consistently exposed students to the AVID strategies and methodology with fidelity.

Limitations

The study consisted of the following limitations:

1. The number of AVID schools within the district possessing an AVID site certification was very low at two total schools.
2. AVID enrollment and identification information received for the participating schools was subject to inaccuracies.
3. Student testing data obtained from the unidentified school district potentially could be impacted by reporting errors.
4. Additional variables outside of my control may have influenced student achievement, performance, and behavior.

Delimitations

This study had the following delimitations:

1. The purposive sampling method utilized to select the AVID schools and non-AVID schools created boundaries for this study.
2. The study samples included schools from one large school district in the southeast; therefore, the results may not be generalizable.
3. Data explored for both AVID and non-AVID students in 11th grade created limits for this study.

4. Only ACT, Math III EOC, English III NCFE, and chemistry NCFE data from 2017-2018 were used.

Definitions

Average Students

Average students are those who represent the majority school population. They are neither labeled as gifted and talented nor learning disabled by the school district guidelines; and their grades typically fall in the middle of achievement, usually earning Bs and Cs.

AVID

AVID comes from the Latin root *avidus* meaning “eager for knowledge.” It is a college preparatory program for underperforming, underserved students. AVID focuses on transforming school-wide domains and having a school-wide impact. Teachers from core content classes along with school administrators and counselors receive training during the summer and throughout the school year to reinforce AVID methodologies related to their subject areas.

AVID Domains

AVID domains are classified into four areas focused on school-wide transformation using AVID methodologies. These domains consist of school-wide leadership, systems, culture, and instruction.

AVID Elective Class

AVID elective classes consist of students who are in the AVID program and, in addition, receive targeted best practice strategies, questioning skills, and tutorial sessions to support high-level thinking and problem-solving on a daily basis in a classroom

setting.

AVID Schools

AVID schools have the required components of the AVID Coaching and Certification Instrument rated Meets Certification Standards (Level 1) or higher. For this study specifically, both AVID schools are classified as sites of distinction.

AVID Site Team

AVID site teams consist of a multi-person core academic (language arts, mathematics, science, and social studies) teaching team in which the teachers have been trained in AVID instructional strategies and methodologies. School counselors, administrators, academic facilitators, and multi-classroom leaders may join the team as well.

AVID Tutorials

AVID tutorials consist of students completing prework in a specific content area to determine their point of confusion with the work. College level tutors or student peer leaders come into the AVID classroom and tutor small groups of students at one time using the Socratic method. This process allows students to learn from one another and from the tutor.

Collaborative Study Groups

Collaborative study groups are abbreviated versions of AVID tutorials. This version excludes the tutor and prework piece. Collaborative study groups are conducted outside of the AVID elective to have school-wide impact.

College and Career Readiness (CCR)

CCR refers to a level at which students have the knowledge, skills, and behaviors

to complete a college course of study successfully without remediation.

End of Course Exams (EOC)

EOC state standardized assessments evaluate the grade level proficiency of students and provide information about the depth and breadth of what students have learned aligned to state standards.

Grade Level Proficiency

Grade level proficiency is achieved by earning an EOC or NCFE score at Level 3, Level 4, or Level 5.

North Carolina Final Exams (NCFE)

NCFEs are state standardized assessments to evaluate the grade level proficiency of students and provide information about the depth and breadth of what students have learned aligned to state standards.

Secondary Coaching and Certification Instrument

The Secondary Coaching and Certification Instrument is a tool to help schools successfully implement the AVID elective as the foundation of a successful AVID system, while also monitoring AVID school-wide implementation in order to benefit more students on a campus.

State Assessment Data

Assessments in mathematics, English, and science that districts administer on standardized multiple choice test scores and academic grades. Some districts also assess students on constructed response questions, such as writing a detailed solution to a problem. Achievement in core subject areas can also be measured over time.

Writing, Inquiry, Collaboration, Organization, and Reading (WICOR)

WICOR represents AVID instructional strategies and methodologies including writing, inquiry, collaboration, organization, and reading, which are the key components found in all classrooms with AVID-trained teachers and are practiced school wide. These strategies provide the foundation for AVID students to build CCR skills.

Significance of the Study

This study will add value to the existing literature on AVID program effectiveness by comparing the achievement of AVID schools and non-AVID schools. It is of great importance that the most effective programs are funded in our Title I schools.

Additionally, there has been limited research on AVID's influence on school discipline, Math III, English III, and chemistry state exam scores collectively. This study will expand the knowledge of the AVID program's effectiveness and influence on student outcomes in a large urban school district in the south. This study will also add to the research on effective program selection for school districts as they look for ways to increase college and job readiness of their students. The Math III, English III, and chemistry state assessments are gateways to college level courses, therefore successful demonstration of grade level proficiency in these courses usually predicts successful completion of future core academic courses.

Organization of the Study

Chapter 1 introduced the study. It provided a brief explanation of the need for an effective academic program such as AVID to close achievement gaps and prepare students for CCR. Chapter 1 also suggested a larger significance of the study in helping to answer the broad question of whether the AVID program has an influence on student

achievement and behavior. It provided background for the problem with a more detailed overview of the AVID program's success as it relates to the research questions.

Chapter 2 provides additional context and a literature review. It includes a comprehensive review of the AVID program's approach to closing achievement gaps and preparing students for college readiness. It also outlines efforts made by a large school district in the south to address the issue of poor student performance in minority-populated schools. Chapter 3 details the research design, methodology, and the variable used in the study. Chapter 4 details the findings of the study. Chapter 5 discusses the implications of the study.

Chapter 2: Literature Review

Introduction

Chapter 2 reviews relevant topics related to this study. Such topics include a review of literature related to how students learn socially and emotionally, the background of secondary schools in America, reform efforts to address the achievement gap, developing CCR skills, and a review of literature on the implementation of the AVID elective and AVID school wide. This chapter discusses secondary school reform and the achievement gap in a broader context and then narrows the focus to literature regarding building CCR skills for all students.

The literature review is organized into five sections. Listed below is a summary of each section.

- The first section includes a review of literature on how students learn. This section focuses on SEL to emphasize the importance of this component to promote student achievement in secondary schools.
- The section on secondary education continues from a historical perspective of education in the United States beginning with reasons for its inception and finishes with research on the emergence of secondary schools in America.
- The next section includes a review of literature on the background of educational reform efforts to address the achievement gap.
- The third section includes a review of literature on building CCR in high school students.
- The final sections of this chapter speak directly to how the AVID program is implemented in a secondary school setting. This is important in order to

understand the basic philosophies of this program and how fidelity of implementation is maintained within the AVID program.

The elements of this chapter are important to this study because they review literature on topics that build upon our understanding of the connections between these topics and the research questions pertaining to this study. In addition, this study explicitly evaluates the effectiveness of the AVID program and its ability to close the achievement gap. In addition, this study offers a further evaluation of its ability to positively influence school-wide growth measures. The order of these sections was arranged to provide a logical flow of the topics to assist in making connections between the topics involved in this study with specific problems in education and potential solutions for a large urban school district in the south.

How Students Learn

Students learn in many different ways and educators are charged with the mission of facilitating instruction to fit the needs of each student. In order to accomplish this lofty and professional goal of providing an equitable education, teachers need to have an understanding of how the adolescent brain works, know culturally responsive pedagogical principles and have the ability to operationalize those principles into culturally responsive practices in the classroom (Hammond, 2015). In other words, students learn from CRT if executed with fidelity. Ladson-Billings (1994, as cited in AVID, 2020) described the term CRT as “a pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes” (Cultural Relevance section, para. 1). Hammond (2015) defined CRT as

An educator's ability to recognize student' cultural displays of learning and meaning making and respond positively and constructively with teaching moves that uses cultural knowledge as a scaffold to connect with the student knows to new concepts and content in order to promote effective information processing. All the while, the educator understands the importance of being in a relationship and having a social-emotional connection to the student in order to create a safe space for learning. (p. 15)

AVID (2020) further defined CRT by stating, "CRT uses the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning more relevant and effective" (Cultural Relevance section, para. 1). It is not good enough for teachers to know about what students know regarding individual facts and concepts. Teachers need to understand how students learn so they can convey new knowledge through students' own learning systems (Gay, 2018, p. 205). By analyzing the major components of CRT, one can gain a better understanding of how students learn to better support them.

One can consider a goal of education to help students learn how to learn versus pumping them full of information and facts. Teaching students how to learn involves transitioning them from being a dependent learner to an independent learner. According to Hammond (2015), "Here is the problem. On his own, a dependent learner is not able to do complex, school-oriented learning tasks such as synthesizing and analyzing informational text without continuous support. Let's not misunderstand the point, dependent does not mean deficit" (p. 13). A number of minority students are taught based on low and mundane expectations. Students are expected to perform below grade level

because of their race, culture, and background. Teachers must teach advanced cognitive skills to students with labels like disadvantaged. “They struggle because we do not offer them sufficient opportunities in the classroom to develop the cognitive skills and habits of that would prepare them to take on more advance academic tasks” (Hammond, 2015, p. 14). This directly associates AVID and CRT. The AVID program has a history of incorporating researched best practice strategies to build student skills in the areas of writing, inquiry, and reading. The program is designed to push the cognitive resilience of students and grow them into independent learners.

Shifting a student from being a dependent learner to an independent learner is no easy task. A great deal of time and effort is required for all parties involved. According to Hammond (2015), CRT is more than just a bag of tricks: “CRT is a pedagogical approach firmly rooted in learning theory and cognitive science. When used effectively, culturally responsive pedagogy has the ability to help students build intellectual capacity or fluid intelligence” (p. 16). This will take more than willpower or mindset. Both are important but not sufficient by themselves. Educators have to help dependent learners develop new cognitive skills and habits of mind to increase their brain power through neuroplasticity and growth of dendrites (Hammond, 2015).

Building capacity in the brain is vital to student learning. This contributes to the student becoming an independent learner. Teachers must develop an understanding around this. According to Hammond (2015),

Intellectual capacity is the increased power the brain creates to process complex information more effectively. Neuroscience tells us that culture plays a critical role in this process. This is why it is important for culturally responsive teachers

to be well-versed in brain science and cultural understanding. (p. 16)

Last, teachers must be able to operationalize culturally responsive pedagogical principles. In doing so, teachers have to learn the instructional moves associated with CRT. Hammond (2015) organized key areas to build teacher capacity for helping students move from dependent learners to independent learners: awareness, learning partnerships, information processing, and community of learners and learning environment.

Another way to apply CRT is through story telling. Gay (2018) went into depth about the power of storytelling, stating,

Stories serve many different functions. They can entertain, educate, inform, invoke memories, showcase ethnic and cultural characteristics, and illuminate abstractions. Stories are means for individuals to project and present themselves, declare what is important and valuable, give structure to perceptions, make general facts more meaningful to specific personal lives, connect to self with others, proclaim this self as a cultural being, develop a healthy sense of self, forge new meanings and relationships, or build community. (p. 3)

To better promote learning, teachers also have to find alternatives to deficit thinking or focusing on student weaknesses. According to Gay,

Virtually every student can do something well. Even if students capabilities are not directly translatable to classroom learning, they can still be used by teachers as points of reference and motivational devices to invoke student interest and involvement in academic affairs. (p. 1)

This type of thinking in education contributes to developing a more receptive mindset in

our students. Gay went on to state, “Teachers must learn how to recognize, honor, and incorporate the personal abilities of students into their teaching strategies. If this is done, then school achievement will improve” (p. 1) . This will also foster more engagement from students during instruction daily. Teachers must consider their approach to instruction when thinking about building more engagement.

If teachers make explicit links between the material and performance strategies with popular culture data sets and conventional canons, and if they center the learning process more proactively on students’ experiences, then students can eventually become more adaptively flexible in the application of their talent, skills, and effort. (Boykin & Noguera, 2011, p. 110)

The Development of Secondary Education

Generations of people, environments, science, politics, business, and social interactions evolve over time. So does the AVID program. AVID has recently shifted to a more virtual model during the 2020 school year for both teaching students and providing staff professional development. As a result, education will always be a key element evolving in society. School development traces back to Horace Mann in the 19th and early 20th centuries evolving from the one-room schoolhouse model to many different school structures within a nationally supported public school system during contemporary times. Due to constant changes in society, researchers continue to study ways to make schools better, and so will I. “Prior to the first and second Industrial Revolutions, education opportunities in the 13 colonies during the seventeenth and eighteenth centuries varied considerably depending on one’s location, race, gender, and social class” (Lumen Learning, 2019, History of Education in the United States section, para. 1). One can

begin to see the infancy stages of educational inequities contributing to the modern achievement gap. During this time, basic education in literacy and numeracy was widely available, especially to White males residing in the northern and middle colonies, and the literacy rate was relatively high among this population. Educational opportunities were much sparser in the rural South (Lumen Learning, 2019).

Horace Mann championed education reform that helped to expand state-sponsored public education in the 1800s. This became known as the Common School Movement. Mann's commitment to common schools stemmed from his belief that political stability and social harmony depended on universal education (Encyclopedia.com, 2019). According to Lumen Learning (2019),

A common school was a public, often one-roomed school in the United States or Canada in the 1800s. The term was coined by Horace Mann and refers to the school's aim to serve individuals of all social classes and religions. Students often went to the common school from ages six to fourteen (correlating to grades 1–8). The duration of the school year was often dictated by the agricultural needs of particular communities, with children on vacation from school when they needed to work on the family farm. (Common Schools Section, para. 1)

One-room schoolhouses began with several students of diverse age groups all learning at different levels from one instructor. Church (2015) quoted Michael Day, an extensive researcher of one-room schoolhouses:

The evolution of education reform in the mid-1800s forced improvements that eventually led to different classrooms for each grade and the consolidation of several schoolhouses into one larger building. Schoolhouses were originally

established by the local church, he explained. “They divided the town into school districts, built the schools and hired the teachers,” Day said. “The whole point of education was to teach reading so students could read the Bible.” Around 1800, that changed. Since there was no longer one official religion, as there had been under English rule, a new system was needed to run the schools. Groups of parents called School Societies took over until the 1830s, when the government dissolved those. School districts were established and parents paid tuition. This continued until 1909, when the state had the towns take over schools and establish Boards of Education. “For most of our nation's history, most people in the United States got their education in a one-room schoolhouse,” Day said. “The last one closed in 1967.” (p. 1)

Now as Americans, we have thousands of separate public schools for American children ranging from pre-elementary schools to high schools with millions of teachers serving them. Today's children are educated in spacious, comfortable schools, with amenities ranging from libraries, cafeterias, and gymnasiums to computers, tablets, and Smartboards. The AVID program has taken full advantage of these contemporary opportunities. The program works with teachers and students to increase capacity around the use of technology and more advanced classrooms.

Specifically, high schools emerged mostly during the early 1900s with Boston Latin School being the oldest high school in America founded in 1635 and Hartford Public High School opening in 1638 as the next oldest secondary school. Moreover, the United States led all nations in developing universal publicly funded secondary schools, and much of the growth occurred from 1910 to 1940. Small towns experienced the

highest levels and greatest expansion of high schools from 1910 to 1920 (Goldin & Katz, 1999). This was a very important time in the realm of education for the United States.

According to Goldin and Katz (1999),

The period from 1910 to 1940 is often referred to as that of the “high school movement” in the United States, and the emergence of the high school as the “second great transformation” of American education. The period has been singled out as a special one in the history of education for good reason. The rise of the public high school was rapid across the entire United States. In 1910, just 9 percent of American youths earned a high school diploma, but by 1935, 40 percent did.

The importance of the rapid move from the grammar (or common) school to that at the secondary level cannot be overemphasized. About 70 percent of the increase in years of education of the adult population from 1900 to 1970 was due solely to the increase in secondary school attendance and graduation. Without the rapid rise of the high school, America could not have put the G.I. Bill of Rights into action after 1944 because American youth would not yet have graduated high school. Nor would the 1950s to 1970s have witnessed the enormous expansion of college education. (p. 686)

The emergence of high schools in America would eventually lead to more opportunities for youth and young adults. According to Goldin and Katz,

What is most important about the history of the American high school in this context is that the modern version—one that we would easily recognize today—emerged c. 1910. Prior to 1900, secondary schools in much of America often

trained youths to gain entry to particular colleges and universities in their vicinity. During the period of the high school movement, however, secondary education was transformed into training “for life,” rather than “for college.” In 1910, 49 percent of high school graduates continued on to some form of higher education; by 1933, only 25 percent did. Secondary schools were granting more terminal degrees, not because college entry had declined but because high school entry had so greatly increased. (p. 689)

The evolution of secondary schools is ongoing and hopeful in yielding gains in student achievement for all students across our nation no matter their socioeconomic background. Being a high school student is difficult enough; however, being a high school student from a low socioeconomic background only makes things more difficult for the student. The AVID program is designed to support students from such backgrounds and works with schools to increase the academic performance associated with this population. Consequently, Title I high school reform efforts need to pay attention to research on programs successful in assisting these types of students with increasing their achievement levels in order to assist high schools in becoming more effective. The next few sections discuss specific reform efforts focused on closing the achievement gap, developing CCR in high school students, and the background on the importance of SEL. This is followed by a review of literature on AVID and a description of this program.

American Reform Efforts to Address the Achievement Gap

Another area in which this research was of considerable value was if the results of the AVID high school program reveal it to be an effective program in closing the

achievement gap between high school students of color and White high school students and if it contributes to school-wide achievement. An academic gap in learning exists between minority students and White students in the United States. One can blame stakeholders, circumstances, efficacy, or whatever cause you choose for this current gap; but the reality is that the gap exists, and attention to this issue needs to be addressed by employing research-based programs with proven results to address it. Moreover, minority populations in the United States are growing fast and Whites will one day be the minority race.

Wilson (2016) wrote,

People of color will become a majority of the American working class in 2032.

This estimate, based on long-term labor force projections from the Bureau of Labor Statistics and trends in college completion by race and ethnicity, is 11 years sooner than the Census Bureau projection for the overall U.S. population, which becomes “majority-minority” in 2043. (p. 1)

Since the U.S. has significant data projections to predict this “majority-minority” population shift, the nation must act in a proactive manner to prepare this demographic for leading the economy moving forward. The AVID program helps to prepare this group by building CCR skills specifically in the areas of education, occupations, technology, and politics to sustain economic growth.

Wilson (2016) went on to include the following:

The transition to a majority-minority population in 2043 means that although the non-Hispanic white population will remain the largest single group in America, the combined populations of all nonwhite racial and ethnic groups will make up

more than half of the U.S. population...As the current population ages, the older population will remain predominantly non-Hispanic white while the younger population will increasingly be people of color. In 2043, 60.7 percent of people under age 18 will be people of color, while 64.9 percent of those over age 65 will be non-Hispanic white...this demographic shift has implications for the future of the American economy, as shaped by the workforce, education, and politics...While the full realization of a nonwhite majority in the U.S. population is nearly three decades away, there are clear indications that this future reality is quickly taking shape. As these shifting population demographics converge with patterns of educational attainment, the next majority-minority transition is likely to take place within America's working class, or among workers with less than a bachelor's degree. (p. 2)

In recent history, the U.S. has attempted to close the achievement gap and mitigate the presence of a less skilled and educated society. Over time, a number of reform efforts and reports initiated these efforts such as the following:

1. Elementary and Secondary Education Act in 1965 (ESEA).
2. Project Head Start in 1965.
3. Immigration Act of 1965.
4. Equality of Education (Coleman) Study of 1966.
5. Title IX of the Educational Amendments of 1972.
6. Rehabilitation Act of 1973.
7. Equal Educational Opportunities Act of 1974 (EEOA).
8. A Nation at Risk report of 1983.

9. Americans with Disabilities Act of 1990 (ADA).
10. Improving America's Schools Act of 1994 (IASA).
11. NCLB.
12. ESSA.

One would be remiss to neglect mentioning as many reforms as possible, but the most pertinent efforts pertaining to this study include ESEA, EEOA, the Nation at Risk report, IASA, NCLB, and ESSA. Each effort was initiated close to a decade after the previous one. Closing the achievement gap is closely associated with providing equitable opportunities for all students, primarily for students of low socioeconomic status. When students take advantage of these opportunities, they increase their chances of graduating from high school, attending college, and landing a career to increase their quality of life. The AVID program is viewed as a means to increase student performance, graduation rates, and college admissions for minority students.

ESEA was implemented during times of the civil rights movement in 1965 and shows a longstanding commitment to equal opportunity for all students. ESEA authorizes state-run programs for eligible schools and districts to raise academic achievement of struggling learners and address complex challenges that arise for students who live with disabilities, mobility problems, learning difficulties, or poverty, or who need to learn English language proficiency.

According to Paul (2019),

This law brought education into the forefront of the national assault on poverty and represented a landmark commitment to equal access to quality education (Jeffrey, 1978). ESEA is an extensive statute that funds primary and secondary

education, emphasizing high standards and accountability. As mandated in the act, funds are authorized for professional development, instructional materials, resources to support educational programs, and the promotion of parental involvement. The act was signed into law on April 9, 1965 and its appropriations were to be carried out for five fiscal years. The government has reauthorized the act every five years since its enactment. In the course of these reauthorizations, a variety of revisions and amendments have been introduced. (p. 1)

Nine years later, EEOA was passed in 1974 and changed public education for the better. The act guaranteed education free of bias and discrimination, or unequal treatment, for all people. This act was another step towards equity. EEOA is one of a set of federal laws that works to prohibit discrimination in schools. Specifically, EEOA bans discrimination based on race, nationality, color, or sex against faculty, staff, and students.

The History.com Editors (2019) further explained this act:

The EEOA mandated that schools accommodate students regardless of nationality and that they provide adequate resources for students who did not speak English. In effect, this meant that schools must now offer both English classes for non-native speakers and classes in other subjects taught in students' native languages. Subsequent Supreme Court cases clarified the full extent of the law. In 1974, the Court ruled that the EEOA mandated that schools offer classes in students' first languages while they learned English as a second language. In 1982, it ruled that, based on the EEOA, undocumented students not only had the right to attend public schools but were obligated to do so, the same as all American children. (para. 3)

Nine years later, in April 1983, the National Commission on Excellence in Education released the report *A Nation at Risk*. The widely publicized report declared that the educational foundations of our society were being eroded by a state of mediocrity that threatens our very future. The report called for elected officials, educators, parents, and students to reform a public school system described as being in need of improvement. That need for improvement was based on numerous statistics listed in the report that presented the insufficient quality of American education. The findings and data presented in the report were organized around four major topics: content, expectations, time, and teaching. The report made four major recommendations based on the topics (Park, 2004).

Regarding content, Park (2004) recommended that all students seeking a high school diploma have a foundation in the basics. This included four courses in English, three in mathematics, three in science, three in social studies, and one-half credit in computer science. In addition, students should earn two credits in a foreign language to support their planning to attend college (Park, 2004). Moreover, the report recommended that all K-12 schools adopt more rigorous and measurable standards to foster higher expectations for student performance and conduct. The report also suggested that colleges and universities raise admissions standards to push students to improve their performance during elementary and secondary years of schooling (Park, 2004). Another recommendation asked schools to devote more time to teaching the new basics with a more efficient use of the existing school day. The report listed seven recommendations for improving teacher quality, such as

- higher standards for teacher-preparation programs
- teacher salaries that were professionally competitive and based on

performance

- 11-month contracts for teachers allowing more time for curriculum and professional development
- career ladders opportunities that differentiated teachers based on experience and skill
- more resources devoted in teacher-shortage areas
- incentives for drawing highly qualified applicants into the profession
- mentoring programs for novice teachers designed by experienced teachers. (Park, 2004, p. 1)

Park went on to express,

Even though the report had its weaknesses, it still had a strong impact on American education. Most notably, the commission's report led to comprehensive school reform efforts, was the impetus for the academic-standards movement, drew attention to the importance of education policy, and led to a focus on school accountability. (p. 1)

Nine years later, President Clinton signed IASA on October 20, 1994. This act reauthorized ESEA for 5 subsequent years during that time. The law authorized \$11 billion in fiscal 1995 for most federal K-12 education programs and enacted program changes that are considered the most significant since ESEA was first passed in 1965. IASA was a major part of the Clinton administration's efforts to reform education to close the achievement gap. It included reforms for the following:

- the Title I program, providing extra help to disadvantaged students and holding schools accountable for their results at the same level as other

students;

- charter schools;
- safe and drug-free schools;
- the Eisenhower professional development program for teachers, principals, and other school staff;
- major increases in bilingual and immigrant education funding; and
- education technology and other programs.

Such reforms impacted the development of the AVID program through funding from Title I grants stemming from ESSA.

Eight years later, President George W. Bush signed NCLB on January 8, 2002. According to Klein (2015),

NCLB was the product of a collaboration between civil rights and business groups, as well as both Democrats and Republicans on Capitol Hill and the Bush administration, which sought to advance American competitiveness and close the achievement gap between poor and minority students and their more advantaged peers. (p. 1)

NCLB is another enhancement of ESEA from 1965. NCLB was developed out of concern that American schools were no longer internationally competitive. As a result, NCLB significantly increased the federal government's role in holding schools responsible for the academic progress of all students. In addition, it put a special focus on ensuring that states and schools boost the performance of certain groups of students, such as English language learners, students in special education, and poor and minority children whose achievement has trended downward compared to their peers (Klein,

2015).

States were not forced to comply with NCLB requirements; but if they did not comply, they risked losing federal Title I money. Under NCLB, states must test students in reading and math in Grades 3-8 and once in high school. Assessment results must be reported for the student population as a whole, coupled with particular subgroups of students including English learners, students in special education, racial minorities, and children from low-income families (Klein, 2015). In addition, states were required to bring all students to grade level proficiency on state tests by the 2013-2014 school year. In efforts to do so, many school districts implemented programs such as AVID since these programs are scientifically based and provide foundational strategies for improving student proficiency. In early 2015, the deadline passed and zero states succeeded in reaching this goal of getting 100% of its students over the proficiency bar. Under the law, schools are kept on track toward their goals through a system known as adequate yearly progress or AYP. If a school misses its state's annual achievement targets for 2 years or more, either for all students or for a particular subgroup, it is identified as not "making AYP" and is subject to a number of increasingly serious sanctions (Klein, 2015). Some of the sanctions required schools to do the following:

- allow students to transfer to a better performing public school in the same district;
- offer free tutoring;
- schools that continue to miss achievement targets could face state intervention. States can choose to shut these schools down, turn them into charter schools, take them over, or use another, significant turnaround

strategy;

- set aside a portion of school federal Title I dollars for tutoring and school choice; and
- schools at the point of having to offer school choice must hold back 10% of their Title I money.

The law requires states to ensure their teachers are highly qualified. This means that teachers must have a bachelor's degree in the subject they are teaching as well as state certification. Beginning with the 2002-2003 school year, all new teachers hired with federal Title I money had to be highly qualified in an effort to provide equity for all students. By the end of the 2005-2006 school year, all school paraprofessionals hired with Title I money must complete at least 2 years of college, obtain an associate's degree or higher, or pass an evaluation to demonstrate knowledge and teaching ability. Last, states also had to ensure that highly qualified teachers are evenly distributed among schools with high concentrations of poverty and wealthier schools (Klein, 2015). The AVID program works to provide training for teachers through an AVID summer institute to provide the necessary skills required to be a highly qualified teacher.

Thirteen years later, President Obama signed ESSA on December 10, 2015. This was welcomed news for our nation's schools. This bipartisan measure serves as the most modern reformation of ESEA. This new law builds on significant areas of progress in recent years, made possible by the efforts of educators, communities, parents, and students across the country (U.S. Department of Education, 2019). NCLB represented a significant step forward for our nation's children in many respects; specifically to where students were making progress and where they needed additional support, regardless of

race, income, zip code, disability, home language, or background. NCLB's prescriptive requirements became increasingly unworkable for schools and educators. Recognizing this issue, in 2010, the Obama administration responded to educators and families to create a better law that focused on the clear goal of fully preparing all students for success in college and careers to close the achievement gap (U.S. Department of Education, 2019).

According to the U.S. Department of Education (2019), ESSA includes provisions that will help to ensure success for students and schools, such as

- Advances equity by upholding critical protections for America's disadvantaged and high-need students.
- Requires all students in America be taught to high academic standards that will prepare them to succeed in college and careers.
- Ensures that vital information is provided to educators, families, students, and communities through annual statewide assessments that measure students' progress toward those high standards.
- Increasing access to high-quality preschools.
- Maintains accountability and action to foster positive change in our lowest-performing schools, where groups of students are not making progress, and where graduation rates are low over extended periods of time. (p. 1)

The achievement gap has existed in America since 1635 due to factors such as slavery, segregation, and discrimination of minorities. Very little has been done about this issue until approximately 330 years later when President Johnson passed ESEA in 1965. Over the past 50 years, America has been trying to combat this issue of minorities

underachieving academically by initiating several reform efforts. The most recent being signed by our first minority president in 2015. The gap has closed slightly, but there is still a long road ahead to fix the once persisting problem of inequality lasting for over 330 years in 50 years' time. There are a number of equity issues in contemporary society as it pertains to education, but the AVID program can be a potential solution for preparing all students for CCR in a global society.

Building CCR

There are a number of factors to consider when building CCR in high school students. Initially, students must develop the right mindset to cultivate their CCR skills. The AVID program works to build growth mindset and equip students with the necessary skills to demonstrate CCR at the next level. The two terms college and career are not mutually exclusive, and there is much overlap when analyzing the skills needed to sustain success in college or in a career. Some educational leaders may refer to these abilities as possessing and using their 21st century skills effectively. As it pertains to career readiness, there is an association with 21st century skills. According to Stauffer (2019), a renowned career curriculum developer,

21st Century skills are 12 abilities that today's students need to succeed in their careers during the Information Age. 21st Century skills are:

- Critical thinking
- Creativity
- Collaboration
- Communication
- Information literacy

- Media literacy
- Technology literacy
- Flexibility
- Leadership
- Initiative
- Productivity
- Social skills

These skills are intended to help students keep up with the lightning-pace of today's modern markets. Each skill is unique in how it helps students, but they all have one quality in common. (The Twelve 21st Century Skills section, para. 1)

Developing 21st century skills is key to sustaining career readiness for students across the country. Placing an intentional focus in this area would only benefit secondary education. The AVID program works to cultivate 21st century skills in all student participants. Specifically, the program challenges students to leave their comfort zone and apply such skills in rigorous high school courses like honors and AP classes. Students are then pushed to find ways of applying 21st century skills to an array of career fields through several strategies included within the AVID curriculum. Targeting career readiness can also positively influence the workforce with more educated employees.

College readiness can be considered equally as important as career readiness. Although several of the skills associated with both CCR translate, a different focus can be observed. According to Conley (2008), "a comprehensive college preparation program must address four distinct dimensions of college readiness: cognitive strategies, content knowledge, self-management skills, and knowledge about postsecondary education" (p.

1).

High schools should also focus on preparing students for college as early as possible to increase the chances of students attending institutions of higher learning. The AVID program focuses on this aspect as a staple for the program. According to ACT (2009),

Reasonable growth in achievement is seen throughout high school for students who are on target for college and career readiness. Students who are significantly off target for college and career readiness in eighth grade are far less likely to become ready for college-level work during high school. For these students, academic interventions will be necessary in order to help them attain the foundational academic skills that are necessary for college and career readiness.

(p. 1)

The importance of developing CCR skills in high school students can be described as immense. Students must have an early start to cultivating their CCR skills to gain the most impact. Secondary schools would be remiss to neglect a focus on CCR. The AVID program can help to fill this gap if implemented with fidelity.

The AVID Program

School reform efforts have been a noticeable shift towards building CCR in recent years. Attention has been given to more systemic reform programs such as AVID. The AVID program is designed to empower middle and high school students with mediocre abilities and from groups traditionally underrepresented in postsecondary education to succeed in school. When students fully buy into the AVID program, there is an opportunity for eligibility to attend and succeed in 4-year colleges and universities. The

history of AVID demonstrates that success of AVID students is a collaborative effort consisting of a number of factors working together. In 2018 alone, approximately 92% of AVID students nationwide reported plans to attend a postsecondary institution, and over 78% reported taking at least one rigorous course. Over 94% of AVID students in 2018 completed 4-year college entrance requirements (AVID, 2019d). By examining the history of the AVID program, implementation of the AVID elective, and implementation of AVID school wide, one can gain a better understanding of how this program works to support over two million students annually in over 7,000 schools (AVID, 2019d).

History of AVID

The AVID program began in a classroom of 32 students in Clairemount High School in San Diego, CA. The year was 1980; and during that time, an English department chair, Mary Catherine Swanson, recognized the inequity of expectations for students bussed to her school from disadvantaged areas around the city (AVID, 2019a). Mary believed that if students had a will to be successful, there was a way to teach them to be college ready. By 1986, the AVID system caught fire and demonstrated so much success at Clairemount High School that funds were provided by the California Department of Education to implement the AVID program in most of San Diego County schools. In 1989, the AVID Summer Institute was created to foster professional learning for teachers to apply best teaching practices back at their home school sites. “The first summer institute was held at the University of San Diego, with 258 attendees” (AVID, 2019a, The 1989 section, para. 1).

During 1991, Swanson won the Dana Award for Pioneering Achievement in Education. She was the only public school teacher to win this honor. The award was

worth \$50,000 and exposed the AVID program to national attention. As a result, the AVID Center was established as a nonprofit to support schools across the country and eventually around the world (AVID, 2019a). By 1996, AVID had expanded to all regions of California, a number of other states, and in the Department of Defense Schools to support military training. By 2001, Swanson was featured as America's Best Teacher by *TIME Magazine*. The article noted that AVID had become known as one of the most effective educational reforms ever created by a teacher (AVID, 2019a).

Since 2003, AVID has established a national conference to foster discussion, collaboration, and sharing of best practices among educational leaders from across the country. In 2007, AVID Elementary was launched to help build CCR skills in students as early as possible. In 2010, AVID for Higher Education was established to allow the program to reach educators and students at all levels. AVID calls this K-16. Today, AVID is used in over 7,000 schools in 47 states across the U.S. This includes schools in the Department of Defense Education Activity, Canada, and Australia. AVID now influences over two million students in Grades K-12 and 62 postsecondary institutions (AVID, 2019a).

AVID Elective Implementation

The AVID elective class was designed to support average students who are taking advanced placement and honors courses. Implementing the AVID elective in a high school setting starts with establishing an AVID site team consisting of AVID elective teachers, at least one counselor, an administrator, and representation from each content area. The school then commits to sending this group of educators to AVID summer institute for extensive training on effectively implementing the program. The summer

institute consists of a 3-day conference in selected cities across the country. Each conference provides a variety of strands or courses for educators to select and immerse themselves into the concept/practice. If funding is a challenge to attend the summer institute, the school can schedule and arrange for a path training closer to the school site. Path trainings are abbreviated versions of summer institutes that only last 2 days. While at AVID summer institute, site team members are taught how to access the AVID curriculum, utilize WICOR best practice strategies, select program participants based on the AVID student profile, and create a sustainable college going culture at their school site. Upon completion of training, the site team convenes to create site-based goals for implementation during the school year using a continuous improvement cycle of plan, do, study, and act. This continuous improvement cycle is then used to monitor the progress of the AVID elective for the duration of the school year.

AVID School-Wide Implementation

AVID is considered school wide when a strong AVID system transforms the four domains of a school, ensuring college readiness for all AVID elective students and improved academic performance for all students based on increased opportunities in the school (AVID, 2019c). The four domains include instruction, systems, leadership, and culture. AVID becomes school wide through the education and training of as many staff members as possible coupled with a commitment of building leadership to implementing AVID strategies and methodologies across the campus. AVID school-wide instruction is evident when the entire instructional staff utilizes AVID strategies, other best instructional practices, and 21st century tools to ensure college readiness for all students (AVID, 2019c). AVID school-wide systems are evident when systems are in place that

support governance, curriculum and instruction, data collection and analysis, professional development, and student and parent outreach to ensure college readiness (AVID, 2019c). AVID school-wide leadership is vital because this sets the vision and the tone that promotes college readiness and high expectations for all students in the school. The principal plays a vital role in the leadership domain working with both the administrative team and AVID site team to ensure implementation is occurring with fidelity (AVID, 2019c). AVID school-wide culture is a continuous process where the AVID philosophy progressively shifts the system of beliefs and behaviors, thus increasing all students meeting college readiness requirements. Culture can be defined as what we allow in schools. By garnering buy-in from all stakeholders, the shift to AVID school-wide implementation can preset a number of challenges stemming from a culture of failure. AVID school-wide implementation is measured based on the AVID Coaching and Certification Instrument. A secondary school-wide Site of Distinction is the highest level of certification a school can attain on AVID's Secondary Coaching and Certification Instrument Continuum. Lower levels of school-wide implementation include a noncertified site, certified site, and emerging school-wide site (AVID, 2019c).

Chapter 3: Methodology

Introduction

In this chapter, I will identify the methodology that was used to examine and evaluate the effectiveness of the AVID high school program. This chapter describes the method of procedure used in this study. The archival database from the selected school district was utilized to obtain AVID student enrollment, academic performance, graduation, suspension, and attendance data for this study. The data will be used to explore differences in student academic achievement on the ACT, EOC, and NCFE state examinations. In addition, the data will be used to compare graduation, attendance, and suspension rates between three AVID and two non-AVID school sites. The research questions utilized to guide this study were as follows:

1. How does student achievement differ on assessments such as the Math III EOC, English III NCFE, and chemistry NCFE when comparing results from AVID schools and non-AVID schools?
2. How do ACT composite scores and graduation rates differ between AVID schools and non-AVID schools in a large urban school district in the south?
3. How do suspension and attendance rates differ for AVID schools compared to non-AVID schools?

This chapter includes sections on the purpose of study, research hypotheses, research design, sample population, data sources, data analysis, significance of the study, and a chapter summary.

Purpose of the Study

The purpose of this study was to analyze the differences in student academic

achievement on the Math III state final exam, English III state final exam, and chemistry state final exam and the ACT performance of AVID students attending AVID schools and students attending non-AVID schools. Specifically, this quantitative study evaluated AVID's school-wide impact on assessment scores and college readiness by comparing student results between three AVID schools and two non-AVID schools in a large urban school district in the south. In addition, this quantitative study examined AVID's school-wide impact on achievement by examining each school's graduation rate. Specifically, the study examined how many students graduated from the AVID school compared to those at the non-AVID schools. Last, this quantitative study evaluated AVID's school-wide impact on school culture by comparing the in-school-suspensions (ISS), out-of-school suspensions (OSS), and attendance rates between students at one AVID school and one non-AVID school in a large urban school district in the south. The desired result is that students enrolled in the AVID school could potentially outperform the non-AVID school in every category of measurement, thus showing the AVID high school program to be a potentially effective program worth implementing in more high schools to assist in closing the achievement gap and increasing overall student achievement at additional school sites.

Research Hypotheses

While the three research questions are listed in the first chapter, the corresponding null hypotheses are as follows.

Null Hypothesis 1. There is no statistically significant difference in student achievement on state assessments such as the Math III final exam, English III final exam, and chemistry final exam for students enrolled in AVID high

schools when compared to non-AVID schools.

Null Hypothesis 2. There is no statistically significant difference between ACT composite scores and graduation rates of students enrolled in the AVID high schools when compared to students enrolled in the non-AVID high schools.

Null Hypothesis 3. There is no statistically significant difference in suspension and attendance rates of students enrolled in AVID high schools when compared to those enrolled in non-AVID high schools.

These null hypothesis statements are being made in order to provide more knowledge to the understanding of the AVID high school program and whether or not it should be considered as a viable educational program worthy of implementation in schools to assist student achievement. Furthermore, school systems in need of effective education programs to assist with closing the achievement gap may find this study's results worth examining as part of their decision-making process in choosing supplemental educational programs to accomplish this goal.

Research Design

This is a comparison group study design resulting in a summative program evaluation of AVID's effect on student achievement, graduation rates, suspension rates, and attendance rates. This study used a quantitative method approach in which high school seniors enrolled in three AVID high schools for 4 consecutive years were compared with 12th-grade students enrolled in two non-AVID high school during 4 consecutive years. I analyzed student results for math, reading, and science using the NCFE and EOC scores of the sampled students. In addition, I analyzed school level data on student graduation, attendance, and suspension rates. These data points were

compared to determine whether there was a difference between AVID high schools and non-AVID high schools.

Sample Population

The total population of students randomly chosen in this study was 900 of 2,607 total students. This includes 11th-grade students from five high schools in a large urban district in the south, including three AVID schools and two non-AVID schools.

Approximately 150 students were selected from three AVID high schools, 300 students were selected from two non-AVID high schools, and 450 students who attend AVID schools but do not participate in the elective were selected. Each sample group of students was further sampled randomly to create equal and comparable groups of 150 students. To further sample these participants, I chose to select and include every other student randomly until reaching 150 partakers for each study group. This allowed me to create more randomized study groups for comparing means. The reasons for choosing these high schools was that they are comparable as it pertains to state school report card grades, district poverty classifications, and enrollment sizes. The number of students selected from each school varied based on data available and number of AVID elective student participants available for sampling. AVID schools have employed the AVID program for the last 3 years. Non-AVID schools have not implemented the program during the past 3 years. Table 1 provides information on the population of the comparable groups of this study.

Table 1*Population of Comparable Groups*

Research question	Total number of students chosen for comparison	Comparable groups and number of students compared
1	900	150 AVID elective students, 300 non-AVID school students, and 450 non-AVID elective students in AVID schools.
2	450	150 AVID elective students, 150 non-AVID school students, and 150 non-AVID elective students. Graduation rates will be obtained using school level data.
3	450	Suspension and attendance samples include 150 AVID students, 150 non-AVID school students, and 150 non-elective students

As seen in Table 1, for the first research question, 900 students were chosen for comparison. The number of students enrolled in the AVID schools totaled approximately 600, including 150 AVID electives and 450 non-AVID elective students from three schools. Each elective student participated in the AVID program for at least 3 consecutive years and was enrolled in AVID III during the 2017-2018 school year. The 150 AVID elective students were used to create a treatment group (TG) from all three AVID schools combined. Subsequently, achievement data were examined from the 2017-2018 school year to evaluate student performance Means. The same sample size of 150 students was taken from each non-AVID school and used for comparisons of state assessment results. This group consisted of 300 students who attended the non-AVID sites for 4 consecutive years. For the second research question, 450 students were chosen for ACT composite score data, and I used school level data for comparisons of graduation rates. I compared the graduation rates of three AVID schools and two non-AVID schools

from 2016-2019. For Research Question 3, 450 students were chosen for the comparison of suspension and attendance data. I compared the suspension and attendance rates of both AVID and non-AVID schools from 2017-2018.

The large school district in the south has a total of 32 high schools. Of the 32 high schools, 11 high schools have maintained a site certification of implementation for the AVID program ranging from 2-23 years. Of the 11 AVID schools, only three were used for this study. The three AVID schools were selected because the AVID program has been implemented for more than 3 years at each site. In addition, these treatment schools were comparable to criteria for choosing non-AVID schools. Consequently, non-AVID schools were selected based on similar demographics shared by AVID schools. Public data observed from the school district's performance dashboard were used to select from a group of 18 non-AVID schools. Performance dashboard data identifying similar enrollment sizes, school report card grades, and moderate poverty levels were used in the selection process. The five specific schools used in this study are identified as School A, B, C, D, or E. In order to preserve anonymity among the results of each school, student names and school names are not included in the dissertation results. I collected data without student names and school names included. The demographic data include data in the following categories for each school used in this study: number of students enrolled, graduation rates, NCFE results, ACT results, suspension rates, and attendance rates. The study only included students from both the treatment and control groups who attended their respective schools 4 consecutive years.

The TG of elective students is sampled from Schools A, B, and C. Control Group A (CGA) consists of Schools D and E from which the 300 non-AVID school students are

sampled. Control Group B (CGB) consists of the non-AVID elective students attending Schools A, B, and C. This makes up the participant groups for this study..

Data Sources

This research study is purely quantitative and makes student performance measure comparisons using the data collected from the 2016-2017, 2017-2018, and 2018-2019 school years from a large urban school district's department of research and accountability. The data for all student performance measures were collected in excel files and formatted by the large urban school district's department of accountability after the 2018-2019 school year. The students in this study were compared using the following student performance measures: 2017-2018 EOC exam for Math III and NCFE in English III and chemistry. ACT results were compared from the same year as well. In addition, I compared school level data for graduation rates, attendance, and suspension rates between 2016-2019 using the district performance dashboard. These are published data located on the district's website. As it pertains to state testing, the EOC and NCFE are administered to all ninth- through 12th-grade students in the state at the same time in the subject areas of math, English, and science. Both the NCFE and EOC include multiple choice questions and questions requiring written responses. Both assessments are taken at the conclusion of a course and measure basic as well as higher level skills throughout the specified course. Students take the NCFE exam for approximately 120 minutes and Math III EOC exams for 180 minutes. There are 5 testing days, 4 days for core content areas and 1 makeup day. The test is scored by the education value-added assessment system, a testing vendor who reports the scores for individual students to local school systems. The school systems then report the scores to their schools, and the schools report the scores to

students and parents. The NCFE and EOC scores show how well students learned the English, math, and science skills in the state curriculum.

The NCFE and EOC exams used as part of the student performance measures in this study have achievement levels ranging from 1 to 4. The lowest possible score is a Level 1 on all three exams including the Math III EOC, English III NCFE, and chemistry NCFE. All 12th-grade students in both high schools who took the EOC and NCFE exams were included in the random sampling for comparison. It should be noted that student attendance rates are presented as the number of days absent and student suspension rates are listed as the number of days suspended.

External and Internal Validity

The external validity of this study shows how the results of this study can be generalized to describe the influence of AVID on student performance on the ACT, EOC, and NCFE assessments. This study encompasses a high-risk school district, which has 32 high schools divided into six learning communities. The results of this study may be generalized to represent learning communities across the district or school districts across the state that are similar in size and demographics. Additionally, students in all the schools selected for this study completed the same assessments based on the same standards.

Internal validity is the extent to which a study establishes a trustworthy cause-and-effect relationship between a treatment and an outcome. It also reflects that a given study makes it possible to eliminate alternative explanations for a finding (Cuncic, 2020). Strengths regarding internal validity in this study are evident in the randomized selection of students from each school who have attended 4 consecutive years. Experimenter bias

is avoided due to the blinding of my awareness to the treatment received by the non-AVID students. Anonymity was enforced while acquiring data from the district and sampling of all students to create experimental groups. Last, study protocol is upheld by AVID schools maintaining site certification during the researched time frame.

Threats to internal validity are historical events, maturation, and attrition.

Historical events and maturation may influence the outcome of studies that occur over a period of time (Cuncic, 2020). All students sampled in this study, both AVID and non-AVID, attended their school for 4 consecutive years. Students in the TG were a part of the AVID elective for 3 consecutive years concurrently with attending 4 total years in the same school. In addition, the AVID program was implemented at AVID sites during the 4 years examined in this study. Each site has maintained a certification for implementation. Student maturation during high school and transitions of school staff could both serve as potential threats to this study. Attrition refers to participants dropping out or leaving a study, which means the results are based on a biased sample of only the people who did not choose to leave (Cuncic, 2020). Over the course of a student's high school experience, some students may transfer, drop out, or become reassigned to alternative schools. Forms of attrition such as this could pose a threat to this study. As a result, I only used students who attended their respective school 4 consecutive years.

Data Analysis

Data collected were statistically analyzed using Microsoft excel, and the results are provided in both descriptive tables and analysis of variance (ANOVA) figures to reveal if there was a statistically significant difference in the comparisons mentioned in Research Question 1. The dependent variables for this study were the student

performance measures: EOC, NCFE, and ACT scores in Math III, English III, and chemistry. In addition, school level data on student attendance and suspension rates were compared. The independent variables for this study were the 12th-grade students enrolled in the AVID school and the non-AVID students.

A one-way ANOVA was used to compare the results of the TG, CGA, and CGB. This method was chosen because the study compares the performance of three participant groups. The treatment applies to elective and non-elective students at the AVID schools. Students sampled from AVID schools received 3 consecutive years of exposure to school-wide practices deriving from implementation of the AVID program. Student samples from non-AVID schools were not exposed to the AVID program.

A one-way ANOVA is a type of statistical test that compares the variance in the group means within a sample while considering only one independent variable or factor. This is a hypothesis-based test, meaning it aims to evaluate multiple mutually exclusive theories about the data for this study. With a one-way ANOVA, there is one independent variable. The independent variables in this study were 11th-grade students who have attended either an AVID or non-AVID school in the same school district. The dependent variable was academic achievement on state exams, graduation rates, suspension rates, and attendance rates. Last, by using an ANOVA, I stated with some degree of confidence that the obtained difference between the mean of the sample groups was too great to be a happenstance and that some difference exists in the populations from which the sample was drawn (AVID elective students, non-AVID students, and non-elective students from AVID schools in this case). In other words, the difference I found between student results at the AVID schools and non-AVID schools in this sample might have occurred by

chance, or it might exist in the population. If my ANOVA produced a p value that resulted in a probability of .05, I could have said that my results were statistically significant. I could have said that it was unlikely that my results occurred by chance and the difference found in the sample probably existed in the populations from which it was drawn. Moreover, I reported my results by stating a one-way ANOVA was conducted to compare the academic achievement, graduation rate, suspension, and attendance rates in AVID and non-AVID conditions using Excel output.

Significance of the Study

The significance of the study is that it provides information to a high school site team and district learning community on the extent to which the investment in the AVID program is producing its intended effects. The findings imply that certain aspects of AVID's implementation are contributing to positive measured effects. However, the findings also demonstrate negative effects and multiple outcomes without any measurable effect. The high school site team and learning community will be able to use the results of this study to assess AVID's impact as well as to determine areas of future study regarding AVID's implementation and effects in a large urban district in the south.

Summary

This research study draws conclusions from the comparison of student performance measures to show if a statistically significant difference is present in the measures of students enrolled in an AVID high school as compared to those students not enrolled in an AVID high school. This study aims to expand current research on the AVID program, specifically at the high school level. However, this research does not stop at comparing how high school students enrolled in an AVID school perform when

compared to high school students not enrolled in an AVID school. The study also compares students attending AVID schools and not participating in the elective course. As a result, this study examines the program's ability to be an effective tool worth implementing school wide to assist in closing the achievement gap. The key findings of this study are identified in the next chapter.

Chapter 4: Results

Introduction

This chapter provides the findings of the data analysis in Chapter 3 that examined the association of the AVID program with high school student performance in the subject district. The purpose of this study was to determine the effectiveness of AVID on academic achievement, attendance, and discipline. The research examined overall effectiveness of this program and its ability to close the achievement gap by analyzing data that compared AVID students enrolled in AVID schools but not in the elective course, students in the AVID elective at an AVID school, and non-AVID students in non-AVID schools. This chapter contains the research questions, description of the data, and data analysis. The participants were 900 seniors from five high schools in an urban school district in the south. The three AVID high schools implemented the program for at least 3 years. Within the three AVID schools, approximately 150 students who took the AVID elective were identified. This calculates to an average high school AVID class size of 25 students in each school (24.6 rounded up to 25).

This study was guided by the three main research questions for which the findings are reported throughout this chapter; and at the end of each analysis, a decision is made to accept or reject the null hypotheses. Those research questions were

1. How does student achievement differ on assessments such as the Math III EOC, English III NCFE, and chemistry NCFE when comparing results from AVID schools and non-AVID schools?
2. How do ACT composite scores and graduation rates differ between AVID

schools and non-AVID schools in a large urban school district in the south?

3. How do suspension and attendance rates differ for AVID schools as compared to non-AVID schools?

Findings

The data collected in this research study showed there were no compelling differences in the academic achievement between students in the AVID elective, non-AVID students, and non-elective students attending an AVID school. The ultimate goal of this quantitative study was to determine if student academic achievement on junior level state assessments in AVID schools showed any differences for students attending a non-AVID school as well as if there are significant differences in graduation rates, suspension rates, and attendance rates.

This chapter represents an overview of the findings during the data collection process using a quantitative research method. I obtained data from the school district's Office of Accountability. Specifically, data from Math III, English III, and chemistry state assessments were analyzed. In addition, data were collected from ACT composite scores. Data reflect the scores of students in the 11th grade who attended one of the three AVID high schools in a large urban school district included in this study. Assessment data for the 2017-2018 school year from the NCFE, EOC, and ACT standardized test were used in this study. This research study determined if the academic performance on the state assessments of students in Grade 11 attending an AVID school in a large urban southern district is higher than, equal to, or lower than students in Grade 11 attending a non-AVID school in the same urban school district. The study also compares the graduation rates, suspension rates, and attendance rates of each school.

Description of the Sample

The secondary schools chosen for this study were from a large urban district located in the south. The achievement data for math, reading, science, and the ACT represent performance of the students for the 2017-2018 academic school year. The graduation rates, suspensions, and attendance derive from 2018-2019 and were retrieved from the school district's Department of Accountability. The assessments reflected the scores of participants who were in the 11th grade during the 2017-2018 school year.

There were 900 total students sampled for this study. Each sample group of students was further sampled randomly to create equal and comparable groups of 150 students. To further sample these participants, I chose to select and include every other student randomly until reaching 150 partakers for each study group. Of this total, 150 students represent the TG that participated in the AVID elective at three different schools with comparable demographics. CGA consisted of 300 non-AVID students who attended two non-AVID schools. One hundred fifty students were randomly sampled from each non-AVID school to create CGA. CGB consisted of 450 non-elective students who attended the three AVID schools. One hundred fifth non-elective students were randomly sampled from each AVID school to create CGB.

Table 2

Breakdown of Each Sample Group Overall

Sample groups	Total students sampled	Students further sampled randomly
TG (AVID elective students)	150 (150 elective students from three AVID schools)	150
CGA (non-AVID students in non-AVID schools)	300 (150 students each from two non-AVID schools)	150

CGB	450	150
(non-elective students in AVID schools)	(all non-elective students attend the three AVID schools)	

Assessment scores provided by the district varied for the TG in Math III, English III, and chemistry. Of the 150 students sampled for the TG, only 61 students had available Math III scores, 102 students had English III scores, and only 84 students had a chemistry score. Of the 300 students in CGA, 153 had Math III scores, 225 had English III scores, and 99 had chemistry scores. Of the 450 students in CGB, 243 students had Math III scores, 360 students had English III scores, and 236 students had chemistry scores. However, all students in each group had a recorded ACT composite score. As a result of the assessment scores available, further random sampling was conducted on non-AVID students in CGA and non-elective students in CGB to match the number of tested students with those of the 150 AVID students in the TG. This was done to create a balance in the comparable groups to avoid the limitation of imbalance in the comparable groups. This hypothesis was created to determine if there is an overall effectiveness of the AVID high school program on student performance measures. As a result, an equal number of participants from each group were selected for the assessment study. Sixty students were sampled for Math III, 100 students were sampled for English III, and 60 students were sampled for chemistry. Of the 60 students sampled for Math III in CGA, 30 were randomly sampled from each of the two non-AVID schools. From CGB, 20 non-elective students were randomly sampled from each of the three AVID schools. Of the 100 students sampled for English III in CGA, 50 were randomly sampled from each of the two non-AVID schools. From CGB, approximately 35 non-elective students were randomly sampled from AVID Schools A and B. Thirty students were sampled from

AVID School C. To paint a clear picture of each study group, a detailed breakdown of each sample group is in Tables 3-5.

Table 3*Breakdown of AVID Elective Students in AVID Schools*

Treatment groups	Total # of treatment students	# of Math III scores	# of English III scores	# of chemistry scores
School A	109	33	80	58
School B	16	15	16	11
School C	25	13	6	15
Totals	150	61	102	84

Table 4*Breakdown of Students Sampled from Non-AVID Schools to Create CGA*

Treatment groups	Total # of non-AVID students	# of Math III scores	# of English III scores	# of chemistry scores
School A	150	54	100	66
School B	150	15	16	11
Totals	300	99	125	33

Table 5*Breakdown of Non-Elective Students in AVID Schools Used to Create CGB*

Treatment groups	Total # of non-elective students	# of Math III scores	# of English III scores	# of chemistry scores
School A	150	54	129	88
School B	150	84	100	67
School C	150	105	131	81
Totals	450	243	360	236

As it pertains to ACT composite scores, more results were available in data provided by the school district. However, some scores were still reflected as null in the data set. As a result, 130 students were sampled from the TG, CGA, and CGB. More specifically, 130 students were sampled from a total of 150 TG participants. Of these

participants, 89 were sampled from AVID School A, 16 were sampled from AVID School B, and 25 were sampled from AVID School C. Next, of the 276 total students from CGA, 65 participants were randomly sampled from each of the two non-AVID schools to equal 130 tested subjects. Last, of the 450 non-elective students, 130 were randomly sampled. A total of 45 students were sampled from School A, 45 students were sampled from School B, and 40 students were sampled from School C. To paint a transparent picture of each study group, a detailed breakdown of each sample group is in Tables 6-8 below.

Table 6

Breakdown of Elective Students Sampled to Compare ACT Composite Scores

Treatment groups	Total # of ACT students	Total # of ACT scores used
School A	109	89
School B	16	16
School C	25	25
Totals	150	130

Table 7

Breakdown of Non-AVID Students Used to Create CGA and Compare ACT Scores

Treatment groups	Total # of ACT students	Total # of ACT scores used
School A	144	65
School B	132	65
Totals	276	130

Table 8*Breakdown of Non-Elective Students Used to Create CGB and Compare ACT Scores*

Treatment groups	Total # of ACT students	Total # of ACT scores used
School A	150	45
School B	150	45
School C	150	40
Totals	450	130

Research Question 1: State Assessments

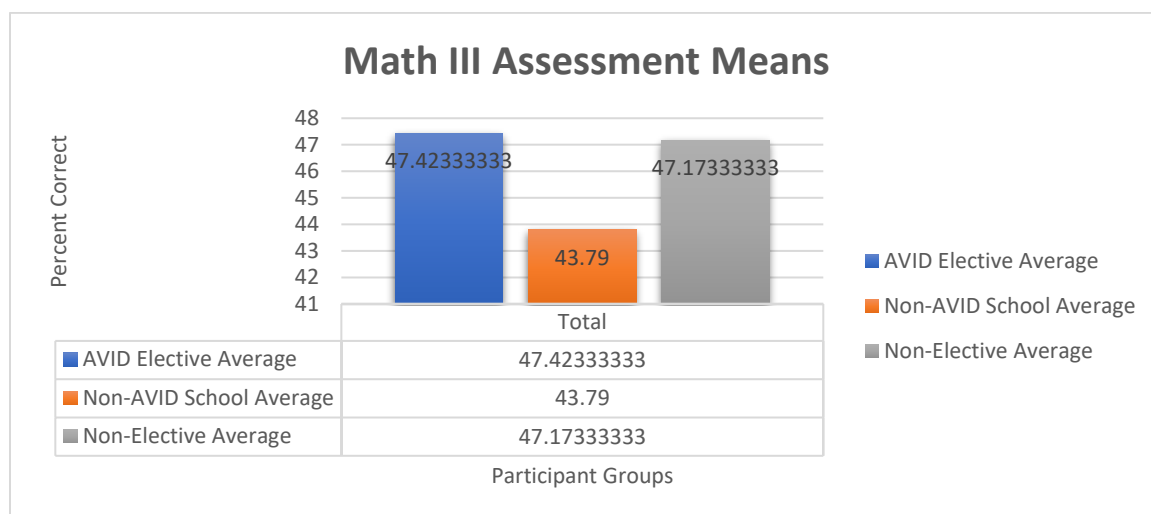
To address Research Question 1, comparing the academic achievement results on the NCFE state exam of students in 11th grade attending an AVID school to the achievement results of students in the same grades attending non-AVID schools, a one-way ANOVA was conducted. The results of the one-way ANOVA tests that were run specifically to determine if there were statistical differences between AVID elective students, non-AVID students, and non-AVID elective students attending an AVID school are now presented. The statistical results and analysis of the data are shown in the figures below each analysis.

Math III EOC

The ANOVA (see Figure 1) showed no statistically significant difference between the three groups in Math scores. Since the p value, 0.33, is greater than $\alpha = 0.05$, we fail to reject H_0 and conclude that there is not enough evidence to support the claim that H_a is true that there are at least two groups where the difference between the mean is statistically significant. Based on the descriptive analysis provided in Figure 2, it shows that those 11th graders in the AVID elective had a slightly higher mean on the Math III assessment than those 11th graders who were not a part of the AVID school program (TG = 47.42, CGA = 43.79, and CGB = 47.17); but again, it was not significant.

Figure 1*Math III ANOVA*

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
AVID Elective	60	2845.4	47.4233333	198.174		
Non - AVID School	60	2627.4	43.79	264.6568		
Non - AVID Elective	60	2830.4	47.1733333	214.7915		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	494.2111111	2	247.105556	1.093997	0.337129	3.047012
Within Groups	39979.71867	177	225.874117			
Total	40473.92978	179				

Figure 2*Math III Assessment Means**English III NCFE*

The ANOVA (see Figure 3) showed no statistically significant difference between the three groups in English scores. Since the p value, .06, is greater than $\alpha = 0.05$, we fail to reject H_0 and conclude that there is not enough evidence to support the claim that H_a is

true that there are at least two groups where the difference between the mean is statistically significant. Based on the descriptive analysis provided in Figure 4, it shows that those 11th graders in the AVID elective had a slightly higher mean on the English III assessment than those 11th graders who were not enrolled in and AVID school or part of the AVID elective within an AVID school (TG = 65.05, CGA = 60.60, and CGB = 59.90); but again, it was not significant.

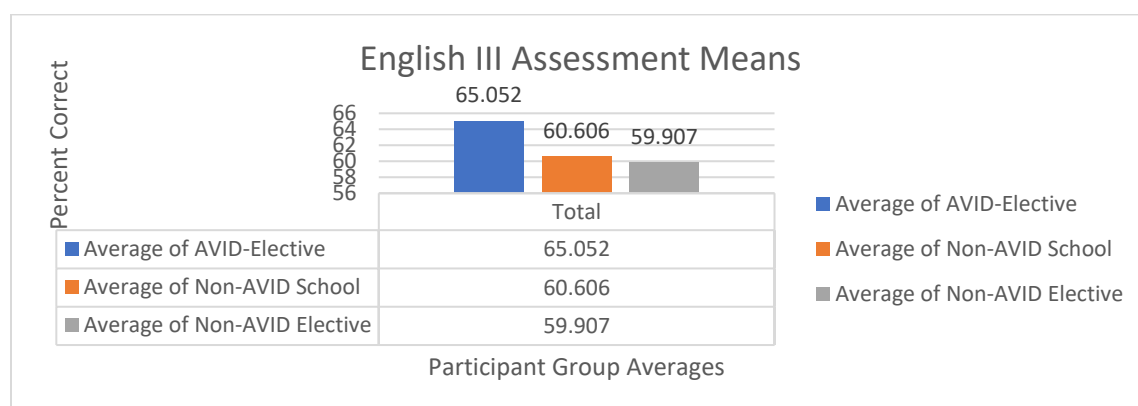
Figure 3

English III ANOVA

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
AVID-Elective	100	6505.2	65.052	178.1288		
Non-AVID School	100	6060.6	60.606	373.1373		
Non-AVID Elective	100	5990.7	59.907	300.4526		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1557.5514	2	778.7757	2.743074	0.066004	3.026153
Within Groups	84320.1511	297	283.9062327			
Total	85877.7025	299				

Figure 4

English III Assessment Means



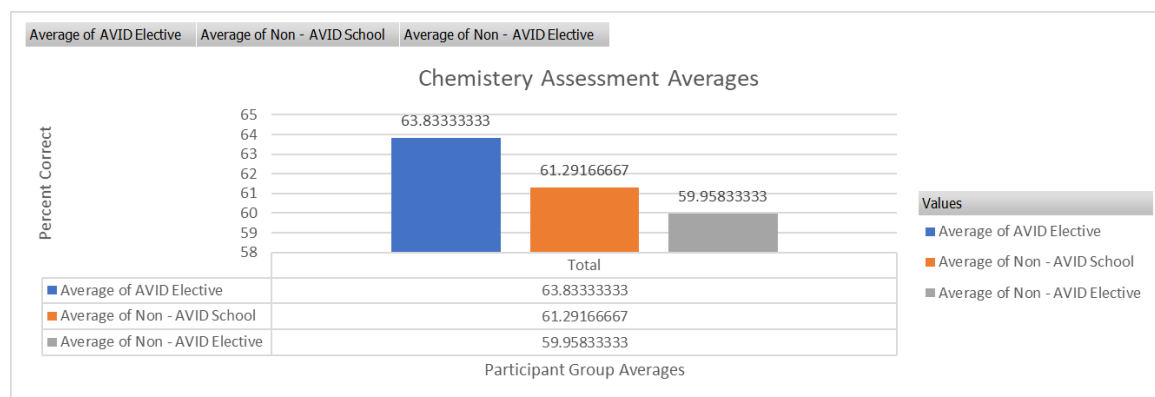
Chemistry NCFE

The ANOVA (see Figure 5) showed no statistically significant difference between the three groups in chemistry scores. Since the p value, 0.53, is greater than $\alpha = 0.05$, we fail to reject H_0 , and conclude that there is not enough evidence to support the claim that H_a is true that there are at least two groups where the difference between the means is statistically significant. Based on the descriptive analysis provided in Figure 6, it shows that those 11th graders in the AVID elective had a slightly higher mean on the chemistry assessment than those 11th graders who were not enrolled in an AVID school or part of the AVID elective (TG = 63.83, CGA = 61.29, and CGB = 59.95); but again, it was not significant.

Figure 5

Chemistry III ANOVA

Anova: Single Factor						
SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
AVID Elective	60	3830	63.83333	320.0141		
Non AVID School	60	3677.5	61.29167	431.0364		
Non AVID Elective	60	3597.5	59.95833	360.0618		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	465.0694444	2	232.5347	0.627843	0.534926	3.047012
Within Groups	65555.625	177	370.3708			
Total	66020.69444	179				

Figure 6*Chemistry Assessment Means*

State assessment comparisons were close. The EOC and NCFE percent correct Means for both AVID and non-AVID schools indicated that the AVID elective school students had slightly higher means than non-AVID students and non-elective students attending AVID schools on each standardized test. Specifically, both the AVID elective students and non-elective students attending an AVID school reflected a 4% higher mean in Math III than non-AVID students attending a non-AVID school. As it pertains to English III, the AVID elective students had a 5% higher mean than non-AVID students at 65%. However, the non-elective students attending AVID schools had the lowest mean in English III at 59% compared to the other participant groups. Regarding the chemistry assessment, AVID elective students had a 2% higher means than non-AVID students at 63% compared to 61%. Non-elective students attending AVID schools had the lowest mean for chemistry at 59%.

Research Question 2: ACT Composite Scores and Graduation Rates

To address Research Question 2, I compared the graduation rates of AVID schools and non-AVID schools. In addition, this research question is addressed by comparing ACT composite scores of students in 11th grade attending an AVID school to

the composite scores of students in the same grades attending non-AVID schools. A one-way ANOVA was conducted. The results of the one-way ANOVA tests that were run specifically to determine if there were statistical differences between AVID elective students, non-AVID students, and non-AVID elective students attending an AVID school are presented below. The statistical results and analysis of the data are shown in the figures below each analysis.

Graduation Rates

The graduation rates of each sample school between the years of 2016-2019 were compared and averaged to determine any trends. It was discovered that four of the five schools averaged a graduation rate above 90%. The 4-year average of both AVID and non-AVID schools was 92%. Of the five schools sampled, non-AVID School B had the lowest graduation rate average at 89%. Demographics of students at non-AVID School B are similar to all participating schools in this study. As a result of these averages, there was no difference determined between the graduation rates of AVID schools and non-AVID schools with similar demographics.

Table 9

Graduation Rates Over a 4-Year Span

Sample school	2016 GR	2017 GR	2018 GR	2019 GR	4-year average
AVID School A	95	95	95	95	95%
AVID School B	93	93	93	91	92%
AVID School C	95	89	91	91	91%
Non-AVID School A	95	95	95	95	95%
Non-AVID School B	94	95	85	85	89%

ACT Composite Scores

The ANOVA (see Figure 7) showed no statistically significant difference between

the three groups in English scores. Since the p value, 0.10, is greater than $\alpha = 0.05$, we fail to reject H_0 and conclude that there is not enough evidence to support the claim that H_a is true that there are at least two groups where the difference between the mean is statistically significant. Based on the descriptive analysis provided in Figure 8, it shows that those 11th graders in the AVID elective coupled with the non-elective had a slightly lower mean for the ACT composite scores (TG = 19.12, CGA = 19.56, and CGB = 18.57); but again, it was not significant.

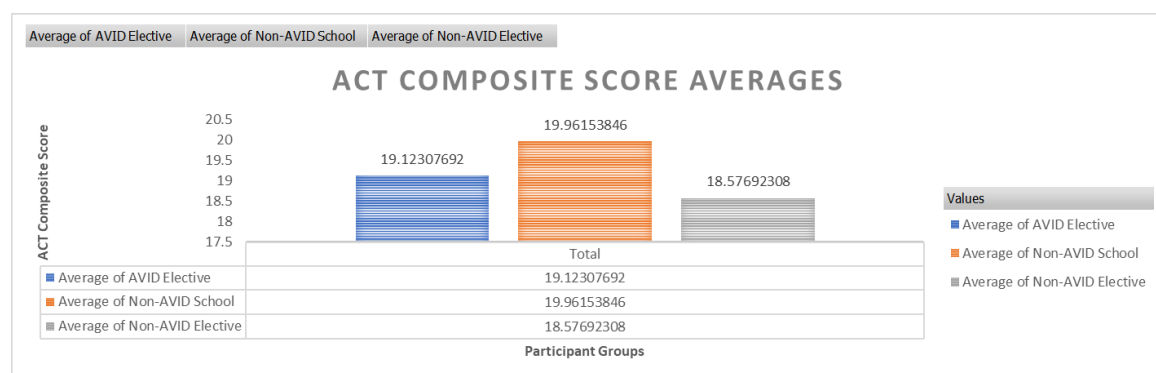
Figure 7

ACT Composite Score ANOVA

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
AVID Elective	130	2486	19.12307692	14.79094		
Non-AVID School	130	2595	19.96153846	39.7427		
Non-AVID Elective	130	2415	18.57692308	27.78086		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	126.4666667	2	63.23333333	2.304576	0.101169	3.019042
Within Groups	10618.56923	387	27.43816339			
Total	10745.0359	389				

Figure 8

ACT Composite Score Means for Each Sample Group



The graduation rates of both AVID and non-AVID schools were 92% when

averaged over 4 years. The average graduation rate of non-AVID School B was slightly lower than all other participating schools at 89%. The ACT composite score averages of AVID and non-AVID schools indicated that the non-AVID students had a 0.9% higher ACT composite score average at 19.9% compared to 19.1% reflected by AVID students. Non-elective students attending AVID schools had the lowest average at 18.5%. Even though non-elective averages were lower, this population of students were not far behind the AVID and non-AVID groups.

Research Question 3: Suspensions and Attendance

To address Research Question 3, a comparison of suspension rates of AVID schools and non-AVID schools was conducted. In addition, this research question is addressed by comparing the mean of days absent of students in 11th grade attending an AVID school to the mean of days absent of students in the same grade attending non-AVID schools; a one-way ANOVA was conducted. The results of the one-way ANOVA tests that were run specifically to determine if there were statistical differences between AVID elective students, non-AVID students, and non-AVID elective students attending an AVID school are presented below. The statistical results and analysis of the data are shown in the figures below each analysis.

Suspension Data

Data for this research question would be considered a limitation of the study. This derives from the amount of ISS and OSS data available for the treatment and both control groups. Of 900 total students sampled for this study, 788 students had null data for ISS and OSS days served. This accounts for approximately 87% of the sample population having null data. However, a one-way ANOVA was still conducted based on the limited

data provided by the school district. As it pertains to the TG, there were 150 total AVID students sampled to compare days of ISS and OSS. From this group, 138 treatment students' data were reflected as null. As a result, only 12 AVID students possessed data for comparing days of ISS and OSS.

For CGA, there were 300 total non-AVID students sampled to compare days of ISS and OSS. From this total, 254 students' data were reflected as null. As a result, only 46 non-AVID students possessed data for comparing days of ISS and OSS. Last, for CGB, there were 450 non-elective students sampled to compare days of ISS and OSS. From this group, 396 students' data reflected as null. As a result, only 54 non-elective students possessed data for comparing days of ISS and OSS. Consequently, the study was only able to create equal samples of 12 students from each participant group to compare the mean of days of ISS and OSS.

For the TG, all 12 students were used. From CGA, six students were randomly sampled from each non-AVID school to create a comparison group of 12. Last, from CGB, four non-elective students were randomly sampled from each of the three AVID schools to create an equal comparison group of 12. Table 10 provides a breakdown of how the data were compared.

Table 10*Number of Students Sampled to Compare ISS and OSS Days*

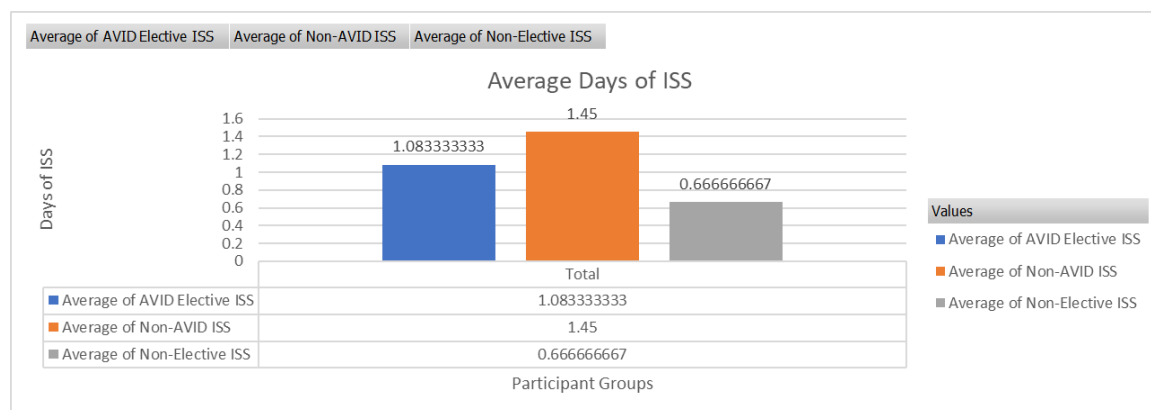
Sample groups	Total # of students	# of students with null data	# of students with suspension data present	Equal comparison group created
Treatment group (AVID students)	150	138	12	12
CGA (non-AVID)	300	254	46	12
CGB (non-elective)	450	396	54	12
Totals	900	788	112	36

Days of ISS

The ANOVA (see Figure 9) showed no statistically significant difference between the three groups in ISS days served. Since the p value, 0.41, is greater than $\alpha = 0.05$, we fail to reject H_0 and conclude that there is not enough evidence to support the claim that H_a is true that there are at least two groups where the difference between the mean is statistically significant. Based on the descriptive analysis provided in Figure 10, it shows that those 11th graders in the AVID elective coupled with the non-elective had a slightly lower means for ISS days served (TG = 1.08, CGA = 1.45, and CGB = 0.66); but again, it was not significant.

Figure 9*Days of ISS ANOVA*

Anova: Single Factor						
SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
AVID Elective ISS	12	13	1.083333	3.719697		
Non-AVID ISS	12	17.4	1.45	1.368182		
Non-Elective ISS	12	8	0.666667	0.969697		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	3.686666667	2	1.843333	0.912906	0.411253	3.284918
Within Groups	66.63333333	33	2.019192			
Total	70.32	35				

Figure 10*Days of ISS Means for Each Sample Group**Days of OSS*

The ANOVA (see Figure 11) showed no statistically significant difference between the three groups in ISS days served. Since the p value, 0.59, is greater than $\alpha = 0.05$, we fail to reject H_0 and conclude that there is not enough evidence to support the claim that H_a is true that there are at least two groups where the difference between the mean is statistically significant. Based on the descriptive analysis provided in Figure 12, it shows that those 11th graders in the AVID elective coupled with the non-elective had a

slightly lower mean for ISS days served (TG = 0.5, CGA = 1.5, and CGB = 0.91); but again, it was not significant.

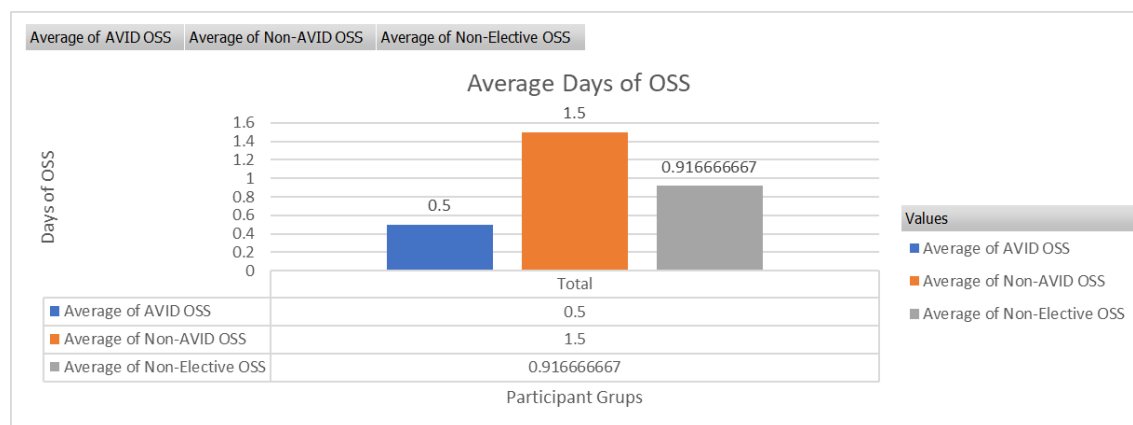
Figure 11

Days of OSS ANOVA

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
AVID OSS	12	6	0.5	2.090909		
Non-AVID OSS	12	18	1.5	11.18182		
Non-Elective OSS	12	11	0.916667	3.901515		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	6.055555556	2	3.027778	0.528893	0.594168	3.284918
Within Groups	188.9166667	33	5.724747			
Total	194.9722222	35				

Figure 12

Days of OSS Means for Each Sample Group



Attendance

The ANOVA (see Figure 13) showed no statistically significant difference between the three groups in ISS days served. Since the p value, 1.66, is greater than $\alpha = 0.05$, we fail to reject H_0 and conclude that there is not enough evidence to support the

claim that H_a is true that there are at least two groups where the difference between the mean is statistically significant. Based on the descriptive analysis provided in Figure 14, it shows that those 11th graders in the AVID elective coupled with the non-elective had a slightly lower mean for ISS days served (TG = 5.88, CGA = 9.62, and CGB = 6.82); but again, it was not significant.

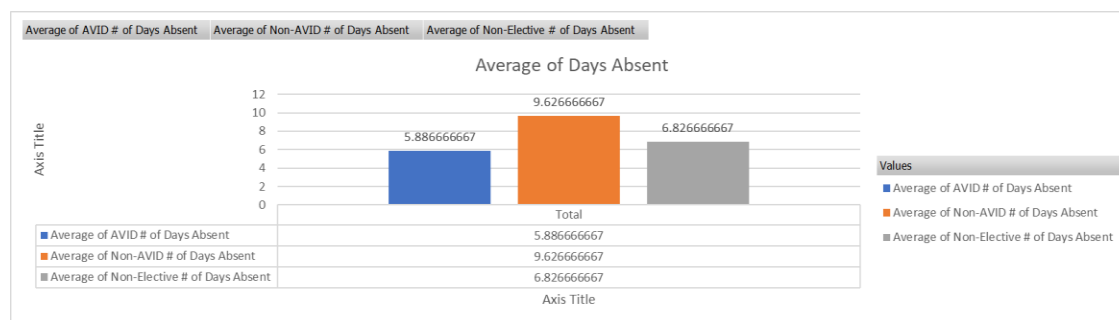
Figure 13

Means of Days Absent 2017-2018 ANOVA

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
AVID # of Days Absent	150	883	5.886667	33.94009		
Non-AVID # of Days Absent	150	1444	9.626667	83.81942		
Non-Elective # of Days Absent	150	1024	6.826667	33.21808		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1135.56	2	567.78	11.28207	1.66E-05	3.015899
Within Groups	22495.66	447	50.32586			
Total	23631.22	449				

Figure 14

Means of Days Absent



Suspension and attendance means for both AVID and non-AVID schools indicated that the AVID elective school students had slightly lower ISS, OSS, and days absent means than non-AVID students and non-elective students attending AVID

schools. As it pertains to days of ISS means, non-AVID elective students attending AVID schools reflected the lowest days of ISS at 0.6, compared to 1.08 for AVID elective students and 1.45 for non-AVID students. This represents a 0.85 difference from the highest mean. Regarding OSS, AVID elective students had the lowest mean at 0.5, compared to 0.91 for non-elective students at AVID schools and 1.5 for non-AVID students attending non-AVID schools. This is a 1-day difference compared to the highest mean. Last, non-AVID students reflected the most days absent from school at 9.6 during 2017-2018. This is a 3.74-day difference compared to AVID elective students missing an average of 5.88 days and non-elective students attending AVID schools missing 6.82 days on average during the 2017-2018 school year.

Summary: Research Question 1

Research Question 1 compared the student achievement on the NCFE and EOC for 11th-grade students during the 2017-2018 school year. Specifically, the study compared student results from Math III, English III, and chemistry state exams. A one-way ANOVA was conducted to compare the results for each assessment. While results for each assessment were not statistically significant, there was a slightly higher mean on each assessment for AVID students when compared to non-AVID students and non-elective students. For both the English III and chemistry state assessments, non-AVID students had a slightly higher mean than non-elective students attending AVID schools. Again, these findings are not statistically significant.

Summary: Research Question 2

Research Question 2 compared graduation rates of both AVID and non-AVID schools between the years of 2016-2019. The average graduation rate between both

AVID and non-AVID schools during this time frame was the same at 92%. As a result, there was no difference. Moreover, Research Question 2 compared ACT composite scores for 11th-grade students during the 2017-2018 school year. A one-way ANOVA was conducted to compare the means for ACT composite scores. While results for ACT composite scores were not statistically significant, there was a slightly higher mean for non-AVID students when compared to AVID students and non-elective students attending AVID schools. Again, these findings are not statistically significant.

Summary: Research Question 3

Research Question 3 compared the suspension and attendance data for 11th-grade students during the 2017-2018 school year. Specifically, the study compared the number of ISS and OSS days served by each study group. In addition, the number of days absent for each study group was compared. A one-way ANOVA was conducted to compare the results for suspensions and attendance. While results for suspensions and attendance were not statistically significant, there was a slightly higher mean with ISS, OSS, and days absent for non-AVID students when compared to AVID students and non-elective students who attended AVID schools. Again, these findings are not statistically significant.

Chapter 5: Discussion

Introduction

This quantitative study analyzed the effectiveness of the AVID high school program to measure its effect on student achievement and student performance. The research analyzed data from 11th-grade students from five high schools in the same district of which three utilized the AVID program and two did not. Specifically, data analyzed included the scores from the 2017-2018 North Carolina EOC for Math III, NCFE for English III and chemistry, and the ACT. This study also analyzed student performance measures collected from district data such as school graduation rates, attendance, and suspensions.

The significance of this study was to examine the effectiveness of the AVID high school program on its ability to positively affect the achievement of high school students. Further, a student achievement comparison was made between students in the AVID high school elective for 3 years, students enrolled in non-AVID schools, and non-elective students enrolled in AVID schools to see if 3 years in this program had a significant difference on state assessment outcomes and also to see if enrollment in an AVID school had a significant difference on school outcomes such as graduation rates, attendance, and suspensions.

The interest in conducting this study came from the knowledge that few achievement studies have focused explicitly on junior year data at AVID and non-AVID high schools as it relates to the comparison of the academic achievement of AVID elective students, non-AVID students, and non-elective students attending AVID schools. Studies between 2007 and 2013 were conducted with middle or high school students

having 1 or 2 years of participation in the AVID program. Specifically, this study focused on high school students who attended the same high school for 4 consecutive years and AVID elective students participating in the program for 3 years at the same school. Over time, the AVID program has built a strong reputation for students demonstrating success. According to an AVID evaluation study from 2007, “The overall results from the outcome evaluation indicated that AVID was effective in meeting the academic needs of underachieving students in Clark County School District” (Marchand, 2006-2007, p. 5). This evaluation also stated that AVID students are attending college at high rates and are outperforming their peers on some standardized tests, grade point averages, attendance rates, and enrollment in honors/AP courses (Marchand, 2006-2007). A study from 2015 stated that middle school students participating in the AVID elective were more successful than non-AVID students on academic indicators and attendance rates (Montoya, 2015). Furthermore, the AVID website displays numerous examples of success as well. However, this study aimed to provide more recent results around the effect AVID has in high schools based on students participating in the program for 3 consecutive years.

There has been little to no research studies comparing the academic achievement of 11th-grade students in AVID and non-AVID schools. This study showed results indicating that indeed there were differences as well as similarities in English III, Math III, chemistry, and ACT academic achievement of students attending both AVID and non-AVID schools. The study also showed the results of suspensions and days absent were higher in non-AVID schools and lower in AVID schools during the 2017-2018 school year in the subject district. However, these results were not statistically significant. Last,

the study showed no major difference in the average graduation rates of both AVID and non-AVID high schools.

The study was designed to guide the following research questions:

1. How does student achievement differ on assessments such as the Math III EOC, English III NCFE, and chemistry NCFE when comparing results from AVID schools and non-AVID schools?
2. How do ACT composite scores and graduation rates differ between AVID Schools and non-AVID schools in a large urban school district in the south?
3. How do suspension and attendance rates differ for AVID Schools compared to non-AVID Schools?

To answer the research questions, I used a quantitative methodology to collect data from the EOC, NCFE, and ACT student assessment scores from the 2017-2018 school year. In addition, quantitative school level data were collected on student suspensions, attendance, and graduation rates. The eight forms of data collection used were

1. EOC assessment data for Math III that reflects the percent correct of students in the 11th grade during the 2017-2018 school year;
2. NCFE assessment data for English III that reflects the percent correct of students in the 11th grade during the 2017-2018 school year;
3. NCFE assessment data for chemistry that reflects the percent correct of students in the 11th grade during the 2017-2018 school year;
4. ACT composite scores of students in the 11th grade during the 2017-2018 school year;
5. Graduation rates for the academic school years of 2016-2017, 2017-2018, and

2018-2019;

6. Number of OSS days served by students in the 11th grade during the 2017-2018 school year;
7. Number of ISS days served by students in the 11th grade during the 2017-2018 school year; and
8. Number of days absent for students in the 11th grade during the 2017-2018 school year.

Statement of the Problem

Minority high school students and recent 2018-2019 graduates are still underprepared in the contemporary United States of America. As a result, minority students possess a lack of CCR by the time of their graduation. This is a major problem that should continue to be addressed by educational leaders and reform efforts. According to ACT's (2019) annual report,

A slight decline in college readiness is continuing in general, particularly longer-term downward trends in Math and English which were identified last year. In fact, the percentages of graduates meeting the ACT College Readiness

Benchmarks in Math and English are the lowest they've been in 15 years. (p. 1)

As a result, the academic success of minority student populations must remain a priority in America and should not be overlooked in school districts. Failure to do this can lead to a lack of the 21st century skills needed to succeed in the future for millions of American students.

Targeted support must be provided for minority students who are considered economically challenged. Roorda, ACT CEO, stated, "Our findings once again

indicate that taking core courses in high school dramatically increases a student's likelihood for success after graduation" (ACT, 2019, p. 1). Roorda went on to say, "That's why we need to ensure that all students of all backgrounds have access to rigorous courses and that we are supporting them not only academically, but socially and emotionally as well" (ACT, 2019, p. 1). The AVID program can potentially help mitigate the issues mentioned above by creating more opportunities for underrepresented students to meet their full potential in English, math, and science. Student achievement in core content areas leads to success in college and the career field. An ACT study dating back to 2006 expressed, "Whether planning to enter college or workforce training programs after graduating, high school students need to be educated to a comparable level of readiness in reading and mathematics" (Ausman, 2008, p. 1). More than a decade later, school districts are still fighting the same battle against achievement gaps and underprepared students. As a result, it could be beneficial for school districts adopting a proven program such as AVID to support students in both reading and math to develop the necessary 21st century skills for survival in the modern world.

Overview of Results

The test performed to address all three research questions was a one-way ANOVA using three samples assuming equal variances. To address Research Questions 1 and 2 comparing the academic achievement results on state exams such as Math III, English III, chemistry, and the ACT composite scores of 11th-grade students attending AVID schools to the achievement results of students in the same grade attending non-AVID schools, a one-way ANOVA using three sample groups assuming equal variances was conducted. To address Research Question 3 comparing the number of ISS, OSS, and

days absent of 11th-grade students attending AVID schools to the number of days for students in the same grade attending non-AVID schools, a one-way ANOVA using three sample groups assuming equal variances was conducted.

Research Question 1: How Does Student Achievement Differ on Assessments Such as the Math III EOC, English III NCFE, and Chemistry NCFE when Comparing Results from AVID Schools and Non-AVID Schools?

The EOC and NCFE percent correct means for both AVID and non-AVID schools indicated that the AVID elective school students had slightly higher means than non-AVID students and non-elective students attending AVID schools on each standardized test. I concluded that student mean comparisons for Math III, English III, and chemistry indicated the significant levels were greater than 0.05 on each summative state assessment. Consequently, these results showed that there was not a significant difference in the EOC and NCFE state assessment results. Despite the fact of there not being a significant difference, I recognize the slight achievement of AVID elective students. There is evidence of some positive outcomes from the program, but not enough. Perhaps the program can yield better results with stronger implementation and execution of AVID best practices both in the elective and school wide. In addition, if the implementation piece is refined in the elective, this may also have a positive effect on non-AVID elective students attending AVID schools. If the AVID program focuses on school-wide transformation, I would like to see better results from non-AVID elective students attending AVID schools.

Research Question 2: How Do ACT Composite Scores and Graduation Rates Differ Between AVID Schools and Non-AVID Schools in a Large Urban School District in the south?

The graduation rates of both AVID and non-AVID schools were averaged over 4 years and produced the same result of 92%. The graduation rate of one non-AVID school was slightly lower than all other participating schools. The ACT composite score means of AVID and non-AVID schools indicated that the non-AVID students had slightly higher ACT composite scores than both AVID students and non-elective students attending AVID schools. I concluded that student mean comparisons indicated the significant levels were greater than 0.05 for ACT composite scores. Consequently, these results showed that there was not a significant difference in the ACT assessment results. Despite there not being a significant difference with these results, I observed the ACT composite scores for each group below a general mean of 20. Moreover, the AVID elective students still underperformed non-AVID students, and non-elective students attending AVID schools were the farthest behind. Why is this the case? Perhaps the AVID program in this school district can place more emphasis on college readiness and focus more resources on preparing all students for success on the ACT. Graduation rates are high for both AVID and non-AVID schools, but ACT scores are subpar. What does this say about the level of rigor in core content areas for both AVID and non-AVID students? Perhaps this school district can revisit how rigorous their core content curriculums are in preparing students for success on the ACT and developing CCR skills.

Research Question 3: How Do Suspension and Attendance Rates Differ for AVID Schools Compared to Non-AVID Schools?

Suspension and attendance means for both AVID and non-AVID schools indicated that the AVID elective school students had slightly lower ISS, OSS, and days absent means than non-AVID students and non-elective students attending AVID schools. I concluded that student mean comparisons for ISS, OSS, and days absent indicated the significant levels were greater than 0.05 in each category. Consequently, these results showed that there was not a significant difference in the suspension and attendance results. The slightly higher suspension means do not have a great impact on the state assessment performance of each study group. This is due to there being only a 1 day or less difference for both ISS and OSS. Moreover, I observed a negative impact around non-AVID students missing 3 to 4 more days of school than both AVID elective and non-elective students attending AVID schools. Why are non-AVID students at non-AVID schools missing more days of school? What can non-AVID schools do about this?

Implications

While there was no significant difference in state assessments, graduation rates, suspensions, and attendance comparisons between AVID and non-AVID school students, the data show that students in the AVID elective scored higher than both non-AVID school students and non-elective students attending AVID schools on Math III, English III, and chemistry state assessments. Despite having slightly higher means, AVID elective students did not establish enough separation with their academic achievement. More specifically, there was not an assessment mean higher than 5% for AVID elective students when compared to non-AVID students. English III had the most separation, with

AVID elective students scoring 5% higher followed by Math III with AVID elective students scoring 4% higher. As a result, each participant group's performance was close to the other. Non-AVID students had higher ACT composite scores than both groups attending AVID schools. However, non-AVID student ACT composite scores were only 1% higher than both groups of students at AVID schools. AVID school's ACT performance is very close to that of non-AVID schools. Except for Math III assessment data, the non-elective students demonstrated a slightly lower mean than the other groups. However, demonstrating a higher mean in Math III by non-elective students can be attributed to the school-wide impact of the AVID program on student math performance if implemented with fidelity. Non-AVID school students scored higher than non-elective students on the ACT, English III, and chemistry state assessments. In addition, the means were only slightly below those of AVID elective students. This suggests that the AVID program has a slight impact as currently implemented at each school.

The graduation rate data collected revealed no significant difference between the AVID schools and non-AVID schools used for this study. There was one non-AVID school with a slightly lower graduation rate than all other participating schools. This particular school also had the most OSS. The data from suspension and attendance comparisons show that non-AVID and non-elective students had less ISS, OSS, and days absent from school. Students in the AVID elective had the lowest means in each category. However, these results are not statistically significant. Perhaps the lower suspension means could be attributed to AVID's impact on the school-wide environment, but the difference was only by a maximum of 1 day or less for both ISS and OSS. A stronger argument pertaining to school-wide impact could be made for days absent.

Specifically, there is a greater difference of about 3-4 more days absent for non-AVID students attending non-AVID schools. This could be due to a better focus on AVID elective teachers knowing their students and developing stronger relationships through the elective. Such teacher-to-student relationships expand beyond the AVID elective classroom and become pervasive school wide.

This study was unique because I used selective variables that may have impacted the results such as junior year achievement data of specific populations including AVID elective, non-AVID, and non-AVID elective students attending AVID schools. I was unable to find any other studies that exclusively focused on junior level test results for students attending AVID schools compared to students attending non-AVID schools as well as the non-elective students attending AVID schools. Most research compares the academic achievement of middle school AVID students to non-AVID middle school students. A number of other research studies only use high school students with 1-2 years of participation in the program. This study used students with 3 years participation. The results indicated that the academic achievement in both AVID and non-AVID schools did not show a significant difference.

The findings from this research study provide a more in-depth look at the comparison of the academic achievement of AVID school students. The implications that AVID school students perform higher than non-AVID school students have been the focus of most research. The results of this research study may influence other educators and state and federal officials in their assessment of the academic achievement of AVID schools compared to non-AVID schools in every state. This research study may assist teachers, parents, and other educators with carefully analyzing the academic results of

AVID schools to determine best programs in education that may lead to increased CCR.

The information in this research study can be shared with AVID coordinators, AVID district directors, superintendents, and principals in the form of professional development, virtual seminars, or local and state training sessions to provide information about the comparison of academic achievement results on a state assessment of AVID schools to non-AVID schools. For instance, the results revealed that there was not a significant difference in the academic achievement of students, and this information serves as an aid for internal and external stakeholders to be able to better assist with helping each stakeholder group better understand that each AVID school's level of implementation impacts the academic achievement of the students. Achieving site of distinction or demo school status maximizes the AVID program's effectiveness on student achievement. For AVID schools specifically, this study may cause them to reflect on the level of fidelity to which the program is being implemented at their school. Still, many other factors can be researched to determine the reason for the outcome. Also, the ACT results of non-AVID schools could be of interest to examine why non-AVID students possessed higher ACT composite scores. Last, the lower means of ISS, OSS, and days absent for AVID elective students coupled with non-elective students attending AVID schools is of interest. Specifically, this would garner interest around the AVID program's school-wide impact on social emotional learning, school climate, and the learning environment.

Limitations of the Study

I based my data analysis on information collected from the district department of accountability for each school in the study. The district provided data for three AVID

schools and two non-AVID schools. The results of the study represent a limited sample size of only 150 AVID elective students from the school district. Moreover, the results of the study represented a limited sample size for each state assessment, suspension, and attendance comparison analysis.

I work as an assistant principal in the school district selected for this study. In addition, I work for the AVID program as a staff developer providing professional development. I also work at an AVID school that was excluded from the study. Since I am related to the school district with five schools included in the study and am employed by AVID, my research could be viewed as biased. There was no identifying characteristic of the AVID schools included in the study, and the data collected were proven to be valid and reliable. I had to complete a rigorous application and approval process conducted by the participating school district. Schools selected in the study for comparison have similar demographic makeup of the AVID schools, which could affect the results of the state assessment. This study did not attempt to control these variables.

Delimitations of the Study

I decided to use only three AVID schools in this study, with the focus being on AVID and non-AVID schools. I could have included more schools in the study but attaining non-AVID school data would go beyond the scope of the study. My focus was on a limited number of AVID schools to determine how the research questions pertaining to academic achievement in AVID and non-AVID schools would be answered. Last, there was further random sampling of the limited number of students with data available for state assessments, suspensions, and attendance comparisons. This further random sampling was conducted to ensure an equal number of students was compared for each

category. Based on this study, there may be future considerations to study the AVID effect in high school, specifically the academic achievement of AVID and non-AVID schools in large urban districts.

Recommendations for Future Research

This study's results on the AVID effect in high school are limited to the sample size of only three AVID schools from a large southern urban school district. A review of literature and the study conducted by me led to several recommendations for further studies. This is due to the lack of research evaluating the educational outcomes of 11th-grade AVID high schools on a national level that may benefit school districts and other AVID schools that are interested in knowing how their AVID school is preparing students for success through their state achievement results compared to non-AVID schools in the state and nation. This research study focused on the academic achievement on the ACT, Math III, English III, and chemistry state assessments for students in the 11th grade attending both AVID and non-AVID schools located in an urban school district in North Carolina. The first recommendation would be to expand the study sample size to more AVID high schools in the district and state to better examine the impact of different levels of AVID implementation. Future research could compare the achievement of AVID emerging sites, sites of distinction, and demonstration sites compared to non-AVID sites. Another area of future study would be to include other variables such as SAT scores, student surveys, or other factors that may impact student achievement. Future research could expand the data collection to other data collected throughout the year to be used in comparison to the state data to examine the results. Analyzing the data for implications could lead to further inquiry on whether there is a correlation of student academic

achievement success in an AVID school versus a non-AVID school. When selecting participants from non-AVID schools, you could review eighth-grade math achievement data to create a more comparable participant group projected to be on the same freshman track academically as the AVID student participants. In addition, future research could further sample participants based on subgroups of race and gender to determine AVID's impact in these areas. This would address achievement gap concerns. Last, a suggested research study could examine junior level data of AVID and non-AVID schools nationally as well as research why students attending AVID schools have lower suspensions and days absent from school than students at non-AVID schools.

Conclusion

Preparing students for the future is an endless war. However, educational programs such as AVID can help to move the efforts to improve in the right direction. Moreover, the academic achievement results on the ACT, Math III, English III, and chemistry state assessments of students who attend AVID schools compared to non-AVID schools in this research study revealed that there was not a significant difference in the academic achievement of students, yet the means for AVID elective students were slightly higher on each assessment excluding ACT composite scores. In addition, there was not a significant difference in the graduation rates, suspension, or attendance data comparisons. However, AVID elective students had lower suspensions and days absent from school. I recommend future studies be conducted that could include student SAT scores, student surveys, and comparison of test results on a state and national level.

The results of this study may be of particular importance to public school districts

that may be looking for a program to implement to assist them in making grade level proficiency in their state, since grade level proficiency is measured in part by results in math and reading scores and often includes attendance rates as a measured variable as well. The best practices of the AVID program that make it successful should be considered for incorporation into schools by all teachers. However, considering the level of implementation will determine the how well students may perform. For example, the AVID program's use of tutorials, collaborative study groups, an elective class for study skills, and tailored professional development for teachers are just a few components of the program to consider as an initiative in all schools to help increase student achievement. To review information on the AVID program, search online information, existing dissertations, research and visit the AVID program's website at www.avid.org.

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