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ABSTRACT

THE EFFECTS OF A TRANSITION PROGRAM ON THE ACADEMIC ACHIEVEMENT OF
NINTH GRADE STUDENTS IN A CALIFORNIA SUBURBAN HIGH SCHOOL

by

Igor Nicholas Milosavljević

Chair: Duane Covrig

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University
School of Education

Title: THE EFFECTS OF A TRANSITION PROGRAM ON THE ACADEMIC ACHIEVEMENT OF NINTH GRADE STUDENTS IN A CALIFORNIA SUBURBAN HIGH SCHOOL

Name of researcher: Igor Nicholas Milosavljević

Name and degree of faculty chair: Duane Covrig, PhD

Date completed: August 2019

Problem

High school graduation rates have improved over the last decade. However, approximately one-fourth of U.S. high school students still do not graduate within four years. The rates are higher especially among minority and low socioeconomic status students, including students with special needs and English Language Learners. More ninth graders fail than any other grade in high school. A disproportionate number of students held back in ninth grade subsequently drop out. Students who do not complete high school face significant social, financial, and health challenges. Programs have been developed to address this need. One of those is the Accelerated Academic Achievement

(AAA) Academy. This program selects students pre-identified to be highly likely to struggle in ninth grade and provides them help to become academically successful. This study examined the influence of AAA Academy on the achievement gap, particularly between minority and/or low socio-economic status (SES) ninth-grade students who attended the AAA Academy.

Conceptual Framework and Research Design

The theoretical framework of this study is anchored in Sergiovanni's "school as community" or "gemeinschaft" perspective. As opposed to viewing schools strictly as bureaucracies and rigid organizations characterized by hierarchy and tight mechanisms of control, he advised educators to look at schools as communities, where members are not guided by contractual obligations or profit calculations, but rather by shared meaning and purpose, teamwork, collaboration, and local decision making. This would foster a sense of mutuality focused on networks of meaningful relationships that convey a strong sense of belonging (Sergiovanni, 1994). This approach has promised to create relational links for children and youth to keep them in school as a place with a nurturing community. AAA was designed with some of these community building aspects.

A quantitative causal-comparative method was used. It compared differences in GPA in the presence of Mathematics California Standards Test (CST) scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates between a group of ninth-grade students who attended the AAA Academy and a group of ninth-grade students (control) who did not attend. It also sought to determine whether a significant difference existed in the GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline

as covariates of students according to their demographic characteristics of gender, ethnicity, and socioeconomic status. Comparison was made between independent variables (intervention, i.e., control group and experimental group; and demographic characteristics, i.e., gender, ethnicity, socioeconomic status) and dependent variable (GPA) while controlling the effects of covariates (Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline). Archival data from 208 ninth-graders, 104 involved in the AAA Academy intervention and 104 with matching characteristics in the control group were used in this study. The statistical tool of Analysis of Covariance (ANCOVA) was used.

Results

ANCOVA results showed that the GPA between students who participated in the transition program and those students who did not were significantly different when controlling the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Comparison of unadjusted means showed that the students who participated in the transition program had significantly greater GPA than those students who did not participate in the transition program or had been exposed to a general and normal high school program. However, comparison of the adjusted means showed that students who did not participate in the transition program had a greater GPA than those students in the experimental group or than those who had participated in the transition program, adjusting for the covariates of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Also, ANCOVA results showed that GPA was significantly different between the different ethnicity groups of the ninth-grade students when controlling the

effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Comparison of unadjusted means and adjusted means showed that students in the other race groups of Caucasian, African American, and Other had a significantly higher GPA than did Latino/Hispanic students. Also, there was a significant interaction effect of ethnicity and intervention on GPA wherein Latino/Hispanic students in the experimental grouping had significantly greater GPA than did Latino/Hispanic students in the control grouping.

Conclusions and Recommendations

This study's mixed results, especially between unadjusted and adjusted GPA, indicate a delicate web of influences at work on high school students. Descriptive data indicated that students in the experimental group earned more credits, had fewer behavior incidents and higher attendance than students in the control group suggesting some positive effects of the intervention. There was a positive effect on those in the transition group on Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline. Ethnicity also seemed to play a role in the GPA of both groups as Caucasian, African American, and Other had greater academic achievement in terms of GPA than Latino/Hispanic students in both programs. Nuancing these effects further will be crucial, not only for researchers, but also for practitioners and policy makers. Leadership that can strengthen the nurturing culture and community of schools may be central in the process of developing programs and supports that help teens through the difficult transitions in high school.

Andrews University

School of Education

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OF NINTH GRADE STUDENTS IN A CALIFORNIA SUBURBAN HIGH SCHOOL

A Dissertation

Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by

Igor Nicholas Milosavljević

August 2019

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APPROVAL BY THE COMMITTEE:

Chair: Duane Covrig

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Member: Jimmy Kijai

External: Bradley Sheppard

Date Approved

To my parents Dr. Radivoje “Rade” Milosavljevic and Zeljka “Ella Milosavljevic,
my amazing children, Arianne, Elianna, Lara, and Nathan, and
my breathtaking wife Flora S. Milosavljevic

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If I have forgotten to acknowledge anyone else, it was not intentional.

Igor Nicholas Milosavljevic

July 26, 2019

CHAPTER 1

INTRODUCTION

Approximately one-fourth of high school students do not graduate from high school within four years, and many of these eventually drop out (Balfanz & Legters, 2004; McFarland et al., 2017; Swanson, 2004). This often causes severe financial and social problems for the student, their families, and for the state and federal systems that often must support undereducated or under trained individuals.

Research strongly indicates that ninth grade is a "make it or break it" year for many of these students because ninth grade involves novel experiences that often create obstacles for students (Capstick, 2007; Gifford, Evans, Berlin, & Bai, 2011; Kinney, 1993; Neild, 2009; Neild, Stoner-Eby, & Furstenberg, 2001; Torres, 2004; West, 2009). Students fail ninth grade more than any other grade. Many of those held back in ninth grade subsequently drop out (Herlihy, 2007). Offering student support during this critical juncture could prove to be indispensable.

This study examines an innovative intervention program—Accelerated Academic Achievement (AAA) Academy—that targets ninth grade students pre-identified to be highly likely to struggle in ninth grade, consequently drop out, and not graduate. This chapter reviews the background of this study related to dropout rates and intervention strategies. It reviews the problem and purpose of the study and the basic research

questions. Research design and the theoretical framework are briefly reviewed, although covered more in-depth in chapters two and three. The chapter ends with an explanation of the significance of the study, a short review of assumptions and delimitations, and a review of the main definitions of terms used in this study that might not be widely understood by readers. A summary concludes this chapter.

Background of the Problem

Federal legislation such as the *No Child Left Behind Act* (NCLB), from 2002 is an example of initiatives aimed at ameliorating achievement gaps among high school students and an attempt to improve graduation rates. Despite these initiatives, large disparities in graduation rates between White, Asian, Hispanic, and African American students persist; 46% of African American students and 39% of Hispanic students attend high schools where a 50% graduation rate is the norm (Balfanz & Legters, 2004). Scholars have observed that minority students do not earn a high school diploma at the same rate as their White peers do (Cataldi & KewalRamani, 2009). Searching for potential solutions to the graduation crisis, scholars have examined data that points to Grade 9 as the “make it or break it” year. In particular, students who failed to successfully negotiate the challenges of the first year of high school experienced greatly reduced chances of graduating from high school and receiving a diploma (Allensworth & Easton, 2005; Neild et al., 2001). Therefore, many school districts have begun to consider developing and implementing creative transition programs aimed at supporting students who are identified as most likely to struggle during ninth grade.

Statement of the Problem

Despite recent increases in national graduation rates, approximately one-fourth of U.S. high school students do not graduate within four years, especially minority and low SES students. Those students who do not graduate and fail to earn a high school diploma face dire social, financial, health, and other challenges. The freshman year has been identified as the critical point for some of these students. Interventions have been created to determine whether they can help students at risk to navigate through this transition period toward better academic achievement. One such intervention is the Accelerated Academic Achievement Academy or AAA Academy.

Purpose of the Study

The purpose of this study is to understand the AAA Academy influence on academic performance. This promises to not only improve the program, but to examine its role in improving academic performance. A further purpose of this study is to utilize the quantitative causal comparative method to identify whether a significant difference exists in the criterion variable of GPA in the presence of Mathematics California Standards Test (CST) scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates between a group of ninth-grade students who attended the AAA Academy and a group of ninth-grade students who did not attend. Another objective of the study is to determine whether a significant difference exists in the criterion variable of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students

according to their demographic characteristics (e.g., gender, ethnicity, socioeconomic status).

Research Questions

The central question under examination is whether a statistically significant difference exists in the GPA between the students who participated in the AAA academy program and the control group and across differed in demographic characteristics after controlling for Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. The specific research questions are as follows: ¹

Research Question 1

Is there a significant difference between the GPA of those who participated in the transition program and those who did not in the presence of Mathematics CST scores, Language CST scores, GPA, credits earned, student attendance, and student discipline as covariates?

Research Question 2

Is there a significant difference between the GPA of those who participated in transition program and those who did not participate in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline

¹ The hypotheses for research questions can be found in Appendix A.

as covariates according to their demographic characteristics (gender, socioeconomic status, ethnicity)?

Research Design

This research employed a quantitative causal comparative method on existing data from a secondary school. The basic design of a causal comparative study is to identify potential differences between groups of students as a function of the identified criterion variable. In this case our focus was student GPA in the presence of Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline.

A quantitative analysis was used for this study to provide the researcher with the ability to compare two variables to determine whether a significant relationship exists between them (Moore, McCabe, & Craig, 2009). A comparison was made between independent variables (intervention, i.e., control group and experimental group; and demographic characteristics, i.e., gender, ethnicity, socioeconomic status) and a dependent variable (GPA) while controlling the effects of covariates (Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates. The researcher assigned numerical values to the variables so that a comparison could be determined (Punch, 2014), allowing for the quantification of the results using various statistical procedures. This was appropriate because the database used provided complete information on the academic measures of the students, along with key information pertaining to the variables required for this study. Archival

data was collected from the district-wide academic database used by the participating school for this study. Specifically, aggregate data of demographic characteristics, Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, student discipline, and academic performance in terms of GPA from selected students was examined.

Conceptual Framework

Schools are often viewed and may function as bureaucracies comprised of structures, rules, procedures, policies, regulations, hierarchy of authority, and technical competence (Weber, 1947). Because schools often function as bureaucracies they have been criticized as being too rigid, intransigent, and unresponsive to the feedback and needs of employees (Gouldner, 1954; Merton, 1957), preventing innovation and creativity (Hage & Aiken, 1970) while alienating and exploiting workers and deterring a clear flow of communication (Blau & Scott, 1962). Teachers and parents often voice their frustration over unresponsive districts and school structures with rigid rules and policies that impede progress and prevent them from delivering and implementing programs that would meet the needs of students. Furthermore, students can also be alienated by those bureaucracies. This can decrease their sense of belonging and lead to poor academic performance.

Sergiovanni's (1994) work on "school as community" compels us to view schools not merely as bureaucratic organizations that require complex administration, but as places where social community is crucial for development. Sergiovanni argues that

scholars have tended to borrow extensively from the economic theoretical framework when examining schools, leading them to emphasize issues of productivity, efficiency, quality, and management, aiming to increase profit and reduce loss. However, schools must also keep their social and even “family” “community” characteristics. A concern for profit analysis and labor segmentation must be counterbalanced with attention to creating a dense network of meaningful relationships where individuals are bonded to each other not solely because of business contracts, but because of mutual shared commitments, shared values and ideals, and caring relationships. Schools can organize their work to provide such “family” like experience (Sergiovanni, 1994).

To drive the argument and explain the difference between viewing schools as community versus organization, Sergiovanni borrows two terms, “gemeinschaft” (community) and “gesellschaft” (society), from the sociologist Ferdinand Tönnies. Sergiovanni understood that schools operate in society “gesellschaft,” characterized by technical rationality that requires management and policies and protocols and application of rules. However, schools also have a “gemeinschaft” role as communities where members create a shared sense of belonging based on common transcended values and where the role of an administrator is conceived of as a guardian of relationships, a builder of trust, and the chief nurturer of caring connections. Using the “school as community” metaphor Sergiovanni suggested that since members of such a community are bonded together not by contracts, but by relationships based on shared values and ideas resulting in obligations and work required to fulfill the obligations, implications arise in terms of curriculum and instruction that emphasize teachers and students working longer together

than simply a 50-minute period, and their work would occur within smaller groups of learners emphasizing close knit relationship (Sergiovanni, 1994).

Furthermore, Sergiovanni proposes that children today have a strong desire for belonging and connectedness, particularly children from disadvantaged families. Understanding and applying the school as community model has the potential to compensate for the experienced loss of belonging and to provide a critically important layer of support (Enomoto, 1997).

Finally, Sergiovanni argues that using the lens of school as community substantially redefines the role of a school administrator. We move away from the role of administrator as the building manager/supervisor toward the administrator as the community/team builder and collaborator.

This theoretical framework of viewing schools as “community,” proposed by Sergiovanni, inspired me to embrace the AAA Academy model for students receiving intervention. This theoretical framework was used to inform and explain the data collected.

AAA Structural Elements

The AAA model attempts to change the way schools are organized, as well as school policies and curriculum content. Specifically, the AAA model organizes students into a small learning community, using curriculum that is research-based and designed to support all students toward mastery in mathematics and English. It also offers additional sources of support for struggling students, staff professional development, collaboration

time for teachers, emphasis on college and career readiness, reduced class size, reduced outside time constraints such as the inability to sign up for afterschool sports, thereby increasing the amount of time a student must work on academics, teaching and implementing a social-emotional curriculum within specific classes, and built-in incentives for meeting both behavioral and academic targets.

Significance of the Study

This particular study promises to make crucial contributions to several groups and to the scholarship of high school students. First, students in the program may benefit as we understand better what impact this program has on various forms of achievement. Second, those running the program locally may benefit by receiving valuable insights into what influence this program is having on their students. Third, the school district that runs this program operates in a high population of low-income minority students who are struggling to graduate within four years. As the district looks to support its at-risk students by providing effective programming data from this AAA Academy, this programming could inform other programming. This is especially true as the district considers scaling up the transition programs to include other schools in the district. Fourth, as the state of California and the nation continue to face fiscal challenges, it is imperative that more programs be developed to effectively maximize resources to serve students well. Fifth, this research may inform educators in California working in similar demographic environments as to what may or may not work in this AAA Academy intervention.

In addition, this study of AAA Academy may provide insight on how better to help struggling ninth graders succeed. Consequently, we may better harness the talents and energies of youth to help them become effective members of society, ultimately producing a more educated, productive workforce. Finally, this research can provide insights to researchers who are passionate about reducing the achievement gap, particularly between minority and low socio-economic status (SES) students and their more affluent peers. In addition, this research informs the discussion about what we can do to prevent increased dropout rates and how we can help improve the graduation rates of all students, particularly minority students and those living in poverty.

Assumptions

In this study, we assume that the data collected by the school district was collected, stored, and reported with fidelity in its entirety.

Delimitations

The research sample was delimited to one high school and one high school sub population of ninth-grade students who were pre-identified to be at risk for dropping out based on their eighth grade CST Mathematics scores. It included those who attended the AAA program, and those ninth-grade high school students who were eligible to attend but chose not to.

Definition of Terms

- **AAA Academy**—a ninth-grade transition program designed to support pre-identified struggling ninth-grade students and help them become academically successful.
- **At Risk**—an at risk student is one who is more likely to fail at school either through poor attendance or poor grades with school failure happening as dropping out of school (Kaufman & Bradbury, 1992).
- **Dropout**—California department of education defines a dropout as having several characteristics. First, they were enrolled the previous year in Grades 7-12. Second, they would left school before completing that previous school year. Third, they had not come back to school the following year by “Information Day (typically around the first of October), nor began attending the next grade (7, 8, 9, 10, 11, or 12) in the school to which they were assigned, or in which they had pre-registered or were expected to attend by Information Day” (Joint Venture, Silicon Valley Network, 2009, p. 57).
- **ELL** – A student who is considered an English Language Learner and whose primary language is a language other than English (Carlo et al., 2004).
- **GED**—the General Education Development test, which comprises five subject tests that when passed, signify the individual has acquired high-school level skills (Murnane, Willett, & Boudett, 1999).

- **Majority-minority**—a high school where a minority group of students (Hispanic, African American, Asian, and Other) comprises the majority of the student population (Balfanz & Legters, 2004).
- **NCLB**—No Child Left Behind; an Act of Congress that is a reauthorization of the Elementary and Secondary Education Act, which includes the Title I program designed to aid disadvantaged students (J. Lee, 2006).
- **SES**—socio-economic status (Winkleby, Jatulis, Frank, & Fortmann, 1992). Typically used measure of SES in educational research that is the percent of students receiving free or reduced lunch at school.
- **Transition program**— a program designed to support incoming ninth graders by changing the environment, curriculum, bell schedule, and offering other support for students (Erickson, Peterson, & Lembeck, 2013).

Summary

Chapter 1 provides a broad overview of the background of the problem, purpose of the study, research questions, research design, conceptual framework, assumptions, delimitations, and definition of terms. Chapter 2 will inform our study further by examining the relevant scholarly literature. It will introduce trends and issues of the high school dropout problem, complexities involved in calculating both dropout and graduation rates, the ninth-grade transition problem, general economic and social problems associated with dropping out, predictors of dropping out, and transition programs and intervention strategies, including AAA Academy. Chapter 3 will describe

the methodology. In this chapter, the research design, research questions, and respective hypothesis will be stated. A background on the selected population and geographic location will be presented, as well as a discussion on instrumentation, validity, and reliability. Finally, data collection and data analysis procedures will be presented.

Chapter 4 will review the participants and provide the results of the descriptive data, data analysis using descriptive statistics, and analysis of covariance (ANCOVA) and data findings structured by the study question. Chapter 5 will provide the summary of major findings, discussion of the major findings, conclusions, and recommendations for both practitioners and policy makers, and offer suggestions for future research.

CHAPTER 2

REVIEW OF LITERATURE

Basic Research Plan

This chapter reviews scholarship related to high school dropout issues and retention programs, which was used to inform a causal comparative quantitative study of a high school freshman transition program in a California suburban high school. To inform that study, the first section will review general dropout trends and studies, as well as the economic and human capital crises that dropping out creates for students, families, and society. Second, a review of the literature on the causes or predictors of dropping out will be provided. Third, a review of dropout transition research will explore areas of intervention that have been shown to help ameliorate dropout rates. In conclusion, this general scholarship will be summarized and connected to the preliminary plans for the study of a high school transition program.

High School Dropout Trends and Issues

Are Graduation Rates Moving Up or Down?

The barometer of American society's health and preparedness of its future work force is the high school graduation rate (Heckman & LaFontaine, 2010). The importance of the American high school in its economic and social impact can hardly be overstated.

The American high school affords equal opportunity for all, as outlined in *Brown v. Board of Education* (1954). The impact created by the American high school on the social and economic fabric of America has steadily become recognized as shown by the increasing public and private funding of various initiatives to strengthen or reform the schools (Carnevale & Desrochers, 2003; Orfield, Losen, Johanna, & Swanson, 2004).

The first decades of the 1900s saw a positive trend in American high school graduation. Generally, each new cohort during each new decade were more likely to have higher graduation rates than the cohort and generation before. This seems to have improved the overall economic productivity of America (Heckman & LaFontaine, 2010). Golden (1998) attributes about a third of the variability in this period of economic growth to increases in the years and quality of formal education, specifically changes at the secondary school level. Higher attendance and graduation rates seemed to boost the American economy.

Getting students to attend and graduate from high school is considered one of the greatest achievements of the American educational system in the last 100 years. It has had profound, far reaching, and long-lasting benefits for individuals and the nation at large. High school completion in the United States has increased considerably. Only 10 to 12 percent of today's High School Seniors are not graduating (Mare, 1995; Stoops, 2003). This positive trend has been observed up to the present. According to the National Center for Education Statistics the national cohort graduation rate was approximately 84% in 2016 (McFarland et al., 2018, p. 25). Hence, what is concerning are research documents that suggest that almost one third of High School seniors are still struggling to

graduate today (Balfanz & Legters, 2004; Swanson, 2004). This means that approximately one-fourth or more of public high school students fail to graduate. In addition, the reports have painted a dire picture for African-American and Hispanic youths, who in approximately 20% (900–1000 high schools) of high schools have no better than a 50–50 chance of graduating (Balfanz & Legters, 2004). Therefore, the general good news about the average nationwide upward trend of high school graduation rates are masking the reality that some populations in specific states, districts, and high schools are facing higher drop-out rates. These populations of students tend to be predominantly minority (African-American, Hispanic), English language learners, students with special needs, and students who belong to the low socioeconomic level (Leventhal-Weiner & Wallace, 2011).

Even more alarming is the fact that 46% of African-American students and 39% of Hispanic students attend high schools with an approximate 50% graduation rate (Balfanz & Legters, 2004, p. 6). These statistics highlight the growing trend that minority students do not earn a high school diploma at the same rate as do their white counterparts (Cataldi & KewalRamani, 2009, p. 4). Nearly one-half of Latino (44%) and African-American (46%) students do not finish high school, whereas less than one-fourth of White (24%) students fail to graduate (Emmett & McGee, 2012, p. 74).

“Nearly half of our nation’s African-American students, nearly 40% of Latino students, and only 11% of white students attend high schools in which graduation is not the norm” (Balfanz & Legters, 2004, p. v). Data shows that between 1993 and 2002, the number of high schools with the lowest level of success in promoting freshmen to senior

status on time increased by 75%. During the same period, the total number of high schools increased by just 8%. In addition, a high school that has a majority of minority students “is five times more likely to have weak promoting power (promoting 50% or fewer freshmen to senior status on time) than is a majority white school” (Balfanz & Legters, 2004, p. v). This trend has continued into the current decade (Freeman & Simonsen, 2015; Rumberger, 2011).

Consequently, these findings have renewed passionate discourse over the high school dropout crisis and have spurred debate over how best to restructure American high schools. Scholars, politicians, educators, and the public at large have begun to wonder what has gone wrong and what the figures suggest about the future of our children, communities, and nation at large.

Calculating Graduation Rates

Commenting and drawing conclusions about graduation rates must be based on generally agreed, statistically reliable, and accurate figures. However, considerable controversy has existed over the actual graduation rates reported in public, as well as the methods used to calculate graduation rates.

Indicators based on census and survey data have demonstrated an increase in the graduation rate from approximately 50% in the 1950’s to nearly 90% among recent graduates (Stoops, 2003). However, new studies utilizing the administrative records of enrolled students exhibit dismal evidence showing that the “on-time high school

graduation rate” is approximately 15%–20% lower than the survey-based estimate (Pharris-Ciurej, Hirschman, & Willhoft, 2012).

An examination of extensive recent literature has revealed several reasons for the discrepancy between the survey and the administrative estimates of high school graduation rates. The most relevant reason cited is confusion over the high school diploma and high school equivalency certification, such as the General Education Development (GED) test. Treating and counting the GED diploma as equivalent to a high school diploma distorts the real graduation picture. In other words, metrics that rely on the number of dropouts to measure graduation rates indirectly tend to inflate the graduation-rate figures, and it is generally agreed that they are unreliable (Heckman & LaFontaine, 2006). Although approximately 50% of high school dropouts will in time obtain some type of high school completion certificate, scholars point out that the actual high school diploma is worth considerably more in the “open market” (Heckman & LaFontaine, 2006).

Adding to the problem is the fact that graduation rates are often inaccurate or misleading due to very minimal federal oversight. Some schools account for missing students by assuming the student is either in another school or already graduated, not considering the possibility that the student could have dropped out (Orfield et al., 2004). Certain states have reported a small 5% dropout rate for African-American students, when the actual figures reveal that only half of African American ninth graders actually graduate within four years with a diploma.

Furthermore, extremely low dropout rates of African-American high school students have been reported in Florida (3.9%), Texas (2.6%), and Missouri (5.4%), but the Swanson (2004) report has clearly revealed that only half of African-American students in those states actually graduate within four years (Orfield et al., 2004). An analysis of graduation rates based on reported enrollment indicates that large numbers of missing students are entirely unaccounted for in both the official dropout and graduation rate reports (Orfield et al., 2004). Particularly telling is the commentary provided by Phillip Kaufman of MPR Associates who stated that the federal government spends over \$40 million on National Assessment of Education Progress (NAEP) test scores, while spending less than \$1 million on dropout statistics (Kaufman, 2001). The inconsistent graduation rate policies have resulted in imprecise and unreliable state reports that obscure appalling conditions. The inaccurate state reports are also gravely misleading. For example, state dropout reports have been limited to enrolled twelfth graders and have excluded large numbers of students who dropped out prior to reaching the twelfth grade (Kaufman, 2001).

Historically, calculation, evaluation, and reporting of graduation rates have not been a major focus of educational statistics. Test scores have taken the front stage of educational statistics reporting. However, since implementation of the federal legislation known as the No Child Left Behind Act (NCLB) in 2002, the topic of high school graduation rates has gained prominence in scholarly and policy circles (Swanson, 2004). The NCLB legislation required for the first time that schools and educational systems not

only mind test scores as the only measures of accountability and educational achievement, but also focus on and report their graduation rates.

Additional questions have arisen following this requirement. Scholars and educators have become concerned, not only about national graduation rates, but with graduation metrics of crucial subgroups such as the economically disadvantaged, ethnic minorities, special education and English language-learner (ELL) populations, as well as gender groups (Swanson, 2004).

Questions have also begun to emerge as educators within the classroom and school and district administrators began comparing graduation rates with their own experience in the classroom, which often differed substantially. For example, a west coast metropolitan school district reported that based on enrollment data, the number of ninth graders was approximately 3,000. However, only about 1500 students were enrolled in the senior class (Heckman & LaFontaine, 2006). As other schools and districts across the nation began to observe and report the same phenomenon and NCLB required that states pay closer attention to graduation rates, scholars, educators, and legislators began investigating the “ninth grade bulge” and dropout rates more closely.

The primary research agency of the U.S. Department of Education is the National Center for Educational Statistics. The agency collects, organizes and reports on most of districts and state educational organizations in the United States (Pharris-Ciurej et al., 2012). Data collected is referred to as the Common Core of Data (CCD) and was the basis of the reignited graduation rates debate (Swanson, 2004). Using CCD data, Swanson posited that the most accurate high school graduation rates can be calculated by

employing a metric termed the Cumulative Promotion Index (CPI). Swanson argued that the CPI metric developed by the Urban Institute is superior to other commonly used metrics of graduation rates for several reasons (Orfield et al., 2004). It uses the NCLB specified definition of the high school graduation rate, making it useful for purposes of federal accountability. The CPI method avoids relying on unreliable dropout data and instead calculates the graduation rate based on enrollment and diploma counts. The CPI metric can be ascertained for nearly every public-school district in the country, relying on data available to the general public. Whereas other models require four years of data collection, the CPI only requires two years of data collection. The CPI is an extremely valuable statistic because it places great focus on current educational conditions and is therefore able to quickly detect system changes due to implemented reforms (Swanson, 2004).

Based on the Swanson calculations, around the early 2000's, 1) nearly one-third of high school students fail to graduate, 2) the national graduation rate was 68%, 3) substantial ethnic/racial differences exist for graduation rates, 4) students who belong to disadvantaged minority groups (Black, Hispanic, American Indian) have approximately a 50% chance of graduating from high school with a diploma, 5) the national comparison graduation rates for Asians and Whites are 77% and 75%, 6) female students graduate at an 8% higher rate than males do, 7) students attending urban schools plagued with high poverty and racial segregation have graduation rates that are 15%–18% lower than their peers, 8) a considerable amount of graduation rate variation, including differences

between student groups, is found across areas of the country and the states (Swanson, 2004).

While there is much to celebrate about recent increased graduation rates, Swanson and others demonstrate that our nation is continuing to experience a broad based high school completion crisis affecting minority, ELL, and low SES students in disproportionate ways that has largely gone unnoticed due to lack of available statistics and reliable data, as well as decreased national attention and lack of federal oversight (Freeman & Simonsen, 2015; Rumberger, 2011; Swanson, 2004).

Demographic Trends

Current economic conditions and unstable markets have called into focus the importance of education as a critical, if not essential, commodity necessary for the survival of our democracy. Furthermore, optimal education allows individuals to remain competitive and marketable in fluctuating and unstable economic periods. Dropping out of high school is detrimental to both the individual and the nation at large. Communities that contain a high proportion of dropouts are likely to have unstable family and social structures, resulting in low quality of life and poor economic progress (Orfield et al., 2004).

Nationally about 15% of high school students do not graduate (McFarland et al., 2017), which suggests a graduation rate of about 85%. Sadly, the graduation rates of minority groups and males are lower. About 50% of African-American students, 51% of Native-American students, and 53% of all Hispanic students graduated from high school.

But for male students it is even worse. African American, Native American, and Hispanic male student graduation rates were 43%, 47%, and 48%, respectively. The average graduation rate for White students was approximately 75%, with the female student graduation rate being 77%, and males graduating at a significantly lower rate of approximately 70% (Orfield et al., 2004).

While overall graduation rate nationwide has increased, the trends from the early to mid-2000s continues into this decade as data from 2016-2017 indicate. Hispanic, African American, English Language Learners and low SES students continue to have graduation rates that are more than 20% lower than Caucasian and Asian students (McFarland et al., 2017).

Amplifying the crisis is the common practice of states to not desegregate the graduation rates for racial and ethnic minorities according to race or socioeconomic (SES) status, students with disabilities, low-income students, and students with limited English proficiency subgroups. Consequently, little attention is given to these groups and the questions that arise about them. Lack of available actionable statistics reduces exposing the problem to the general public, which in turn limits the amount of assistance and aide that can be generated to initiate meaningful policy initiatives that could begin to address the grave concerns the data illuminates (Orfield et al., 2004).

Regional trends also exist. For example, investigation reveals that while nationally, the performance of Asian and White students is similar in the West and South, the graduation rates of Asian students reach 79% and 82%, respectively outperforming their White peers by 4% and 14% respectively (Swanson, 2004).

When comparing the graduation rates of Asian and White students in the Midwest and Northeast, we found that White students have higher graduation rates than do their Asian peers, who lag behind by 3% in the Midwest and 13% in the Northeast. The large regional graduation rate differences between White and Asian students become obscured or negated when combined at the national level (Swanson, 2004).

School District Disparities

Orfield et al. (2004) investigated district dynamics in graduation rates and reported sobering patterns in the nation's 100 largest school districts. They measured the graduation rates of school districts in New York City and Houston, which are primarily comprised of Hispanic students, to be 38% and 40% respectively. The predominantly African-American districts of Oakland, Atlanta, Cleveland, and Columbus had graduation rates of 30.4%, 39.6%, 30%, and 34.4%, respectively (Orfield et al., 2004).

Swanson (2004) examined the CCD data to compare the graduation rates for districts that vary in the number of English language learners, low socioeconomic levels (measured in free or reduced lunch programs), students served in special education programs, percentage of students who are members of racial-ethnic minorities, and district location. Strong patterns of disparity existed between educational institutions that serve our nations' predominantly disadvantaged students and higher performing educational institutions (Swanson, 2004). According to the CCD data, a pattern that highlights the apparent differences is that nationally, approximately 38% of students are eligible to participate in the Free or Reduced Lunch program (FRL). Districts with a high

FRL student population seem to be those with more than 38% of eligible students.

Districts that are comprised of a majority of White students have graduation rates of approximately 74%, whereas districts that are majority-minority have graduation rates of approximately 56%. Districts serving a high FRL population have a graduation rate of approximately 57%, whereas districts serving a low FRL population have graduation rates of approximately 76%. Districts serving a low percentage of limited English persons have graduation rates of approximately 70% as compared to districts with a high percentage of limited English persons whose graduation rate is approximately 60% (Swanson, 2004).

Differences also exist when comparing districts serving a low percentage of special education students, having graduation rates of approximately 70%, whereas districts serving a high percentage of special education students have graduation rates of approximately 65%. Finally, districts located in the central city have graduation rates of approximately 57%, whereas districts located in the suburbs have graduation rates of approximately 73% according to the CCD data (Swanson, 2004).

Hence, while the overall national graduation rate improved over the past several years, disaggregating the data reveals continued overall and regional disparities in graduation rates between minority, ELL, low SES, White and Asian students. Therefore, looking at new programs that could positively affect these disparities, especially in Southern California where students are predominantly minority and English Language Learners is of particular importance to students, schools, school districts, and policy makers.

Gender Disparities

Further analysis of the data reveal that considerable and consistent disparities exist in the graduation rates of male and female students. A regular national pattern shows that the graduation rates of males is 64%, which is 8% lower than females, whose graduation rate is 72%. Disaggregating the data further according to regions, we observe that the difference of females outperforming males holds true and steady. The size of the disparity and the gender-specific graduation rates in the Northeast and West are similar to the national mean. The south consistently displays lower graduation rates for both male and female students, with a larger disparity between genders of approximately 10%. The graduation rates for the Midwest region are surprisingly higher than the national average, and the gender disparity is somewhat less pronounced (Swanson, 2004).

An examination of gender disparity at the national level reveals the greatest differences among Hispanic and African American students. In these two groups, females graduate at rates of 11% and 13% higher, respectively, compared with their male peers. The gender gap by ethnicity is evident across regions. Even in the Northeast region where the Asian subgroup has good graduation rates, Asian female students exceed the graduation rates of Asian males by a substantial margin of 13% (Swanson, 2004).

The graduation rate for the state of California as of 2004 is 68.9%. Native American, Asian, Hispanic, African-American, and White students have graduation rates of 49.7%, 82%, 57%, 55.3%, and 75.7%, respectively. California is 32nd in graduation rates (Swanson, 2004).

Regarding gender differences in California, for the 2008 cohort, 13% more females than males graduated from high school. This gap becomes even more pronounced when examining A-G eligibility rates. Forty percent more females than males graduated A-G eligible (Innovate Public Schools, 2015). The University of California (UC) and California State University (CSU) expect incoming freshmen to have already completed specific courses in high school. These courses are named the “A – G” courses because each subject area is assigned or indicated by a letter. For example, letter “A” stands for History/Social Science, letter “B” stands for English, and so on.

The situation in California is also disturbing when considering traditionally underrepresented students such as African American, Latino, and Native American students for the class of 2008. Data show that 20% more underrepresented females than males graduated from high school, whereas 70% more underrepresented females than males graduated A-G eligible (Innovate Public Schools, 2015). We also note that 83% more underrepresented females than males enrolled in California State University or University of California (Rogers & Freelon, 2012).

The Ninth Grade Transition Problem

A literature review of national graduation rates shows that one-third of our students do not graduate from high school within four years (Swanson, 2004). Scholars and educators have begun to search for potential causes of this problem and seem to have uncovered one of the major and neglected factors—transitioning from eighth to ninth grade. As alarming as the national graduation rate figure may be, it pales in comparison

to the data regarding ninth graders. Akos and Galassi (2004) described the transition from eighth to ninth grade as particularly challenging for students. Scholars and educators concur that first year high school experiences frequently define and govern the trajectory throughout high school and potentially beyond. Data demonstrate that more students fail in ninth grade than in any other grade of high school (National High School Center, n.d.). Many students who are promoted to 10th grade of high school have already fallen off track to graduate in four years because during the ninth grade, they failed to accumulate sufficient credits or had attendance problems.

Students who are held back in ninth grade help to create what some scholars have termed “the ninth grade bulge,” and will often drop out of high school by the time they reach the 10th grade to become part of the “tenth grade dip” (Balfanz & Legters, 2004). Wheelock and Miao indicated that, compared to other grades, the promotion rates between ninth and 10th grade are considerably lower (Wheelock & Miao, 2005).

Because students fail to be promoted out of ninth grade, the highest percentage of overall high school population is typically comprised of students in ninth grade. For example, the enrollment figures show that during the 2003–2004 school year, 4.19 million students were enrolled in ninth grade. The data for the following 2004–2005 school year show a significant drop in enrollment of 10.5%, or 3.75 million for 10th grade (Gray, Sable, & Sietsema, 2006). The “10th grade dip” phenomenon consists of those not promoted from ninth grade, as well as numerous students who simply dropped out after ninth grade prior to entering 10th grade (Balfanz & Legters, 2004).

Furthermore, Haney et al. (2005) noted that the 9th grade bulge had increased from 4% to 13%. Balfanz and Legters (2004), in their seminal work at Johns Hopkins University, noted that in cities with very high dropout rates, almost 40% of ninth graders repeated ninth grade. Of those who did, only a small fraction successfully graduated from high school. According to the Editorial Projects in Education (EPE) Research Center, the ninth-grade dropout problem is most pronounced in urban, high-poverty schools. In these schools, approximately 40% of dropouts left after ninth grade. This is compared to 27% in districts with less poverty (Balfanz & Legters, 2004).

In addition, the ninth-grade bulge and the 10th grade dip show significant racial differences between African American, Latino, and White students. The ninth grade enrollment of African American students is approximately 23% to 27% higher than for 10th grade, whereas the attrition rate is approximately 20%, compared to their White peers whose ninth grade enrollment is only between 6% to 8% higher than 10th grade, whereas the attrition rate between ninth grade and 10th grade stabilizes at around 7% (Wheelock & Miao, 2005).

Wheelock and Miao (2005) also reported that 29 of 51 states reported that their most pronounced “leakage” in the “education pipeline” occurred during the ninth grade, with some states reporting nearly a 20% drop in enrollment between ninth and 10th grades. Legters and Kerr (2001) noted that the majority of high school dropouts fail at least one quarter of their ninth-grade courses, compared to only 8% of high school graduates who experienced the same challenges.

The critical importance of the first year of high school cannot be overstated. However, transitioning to the ninth year of high school from Grade 8 is fraught with numerous social, personal, and organizational challenges that students often find overwhelming, and in which their grades and attendance suffer as a result (Barone, Aguirre-Deandreis, & Trickett, 1991).

The transition process can be devastating to students entering the high school environment, particularly in urban areas where it is not uncommon for less than half of freshmen to graduate (Neild et al., 2001). In these schools, dropping out would not be considered a form of “social deviance.” On the contrary, it is a well-traveled path (Wehlage & Rutter, 1986). Students who ultimately drop out of high school without graduating within four years typically encounter considerable challenges in the ninth year. Most notably, but not exclusively, these challenges are academic.

Neild noted that during the 1996–1997 school year in Philadelphia, among ninth graders, 57% of those not promoted to 10th grade had dropped out before the end of four years (Neild, 2009). Numerous scholars have extensively documented the academic challenges faced during the transition to high school, particularly in large cities. Cities such as Baltimore (Legters, Balfanz, Jordan, & McPartland, 2002), Chicago (Roderick & Camburn, 1999), and Philadelphia (Neild & Balfanz, 2006) have yielded troubling data. In Chicago, more than 40% of students fail a core subject during the first semester, whereas in Philadelphia, one-third of ninth graders are unsuccessful in earning a sufficient number of credits to be promoted to the next grade (Neild et al., 2001). Researchers have estimated that in the 35 largest cities in the United States,

approximately 40% to 50% percent of high schools successfully graduate only half of their freshman class within four years (Horwitz & Snipes, 2008). More recent work has shown that transition challenges remain a serious obstacle for students (Hazel, Pfaff, Albanes, & Gallagher, 2014). These graduation rates for ninth graders are considerably worse for students of color, English language learners, special education students, and other minority students. Consequently, the education gap will continue to widen, resulting in further erosion of the social fabric and deepening social and economic inequalities if left unchallenged (Horwitz & Snipes, 2008).

The data strongly point to the transitory period between middle school and high school as the critical juncture for students. Haney's work shows that most high school students end up failing the ninth grade more than any other grade. This observation is even more pronounced in high poverty, high minority, high English language learner districts where approximately 40% of student attrition occurs in the freshman year, compared to low poverty districts where the attrition rate is also disturbing, yet 13% lower (Haney et al., 2005).

Most of the students who don't graduate are ones who have a difficulty transitioning from middle school to high school (Horwitz & Snipes, 2008). However, additional ramifications of this national catastrophe exist. The effects of ninth grade failure drastically worsen when we consider that few students ever recover from this event. Allensworth and Easton (2005) tracked student academic progress and concluded that approximately 70% to 80% of students who don't make it in the freshman year will not graduate from high school. The students' ability to negotiate the transition challenges

of ninth grade will largely determine their ability to graduate from high school with a diploma. The ninth-grade transition period provides educators and other stakeholders a brief and critical window of opportunity to intervene and support students to successfully graduate from high school (Horwitz & Snipes, 2008). In addition, supporting students at this critical juncture seems to be the logical starting point for tackling the larger problem of high national student dropout rates. What is evident from the data thus far is that we can no longer ignore the transition problems students encounter in the ninth grade.

General Economic and Social Problems Related to Dropping Out

According to the EPE in the United States, nearly 1.23 million public school students from the class of 2008 failed to graduate within four years with a high school diploma. Further analysis of this staggering figure shows a loss of 6,829 students from U.S. high schools each day (EPE Research Center, 2008, p.1). Not finishing high school has incredible unintended social, economic, and related problems for individuals, their families, communities, and nation.

Shore and Shore (2009) noted that the costs of dropping out have always been high, and the trend has continued to increase. Individuals without a High School diploma have experienced a substantial decrease in their earnings over the past several decades and have slipped further below those individuals with more schooling and education.

In addition, students who have dropped out of High School are more likely than others to experience negative life challenges such as unemployment, underemployment,

and incarceration (National Center on Secondary Education and Transition (NCSET), 2004).

Based on the research conducted by Rouse (2005, September), each student who drops out of high school will end up costing the nation approximately \$260,000 in his/her lifetime. Multiplying this figure by the number of students dropping out each year, we estimate that the nation will lose more than \$3 trillion in the next decade (Amos, 2008).

Research shows that both individuals and society can benefit from education. Educated individuals tend to earn higher incomes, are less likely to be involved in criminal activities, are healthier, and are less likely to be on welfare. In addition, educated individuals pay more in taxes and promote reductions in government spending on health, crime, and welfare (Belfield & Levin, 2007). Students who are high school and college graduates are considerably more likely to be working (68% for males and 50% for females) than are those who are not high school and college graduates. While working, they are more likely to have jobs with health insurance and pension plans, compared with students who have dropped out (18% and 20% higher, respectively).

In the state of California in 2005, approximately four million individuals/adults (18–64 years old) had not graduated from high school. In California, each year, 120,000 individuals will fail to graduate by the time they reach age 20 (Belfield & Levin, 2007). Research results, even when adjusted for other factors such as family disadvantage or academic aptitude, hold true. Individuals with less education are more likely to suffer from health problems, stroke, hypertension, high cholesterol, depression, and diabetes than are those with more education. These individuals are also plagued with numerous

negative behaviors contributing to poor health, such as smoking (Belfield & Levin, 2007). The probability of incarceration for African American males who do not graduate from high school increases to 60%. Graduating from high school reduces crimes for murder, rape, and other violent crimes by 20%, by 11% for property crime, and by 12% for drug-related offenses. Approximately 70% of individuals who drop out of high school will use food stamps during their working life, as opposed to high school graduates who are 68% less likely to be on any welfare program (Belfield & Levin, 2007). Higher graduation rates would benefit the state of California immensely by saving taxpayer money, lowering crime, and reducing expenditures on health, criminal justice, and welfare services. Considering California as a whole, the net losses from each dropout cohort add up to approximately \$46.1 billion or approximately 3% of the annual gross state product (Belfield & Levin, 2007).

The overall economic benefits of increasing California's high school graduation rate are considerable. If the California dropout rate were to be reduced by only 30%, in a single year the combined savings to the state and local governments would be \$1.9 billion, or approximately 1% of the gross state product in California. Reducing the high school dropout rate to 50% would generate savings of approximately \$3.2 billion, while also generating \$23.2 billion in social gains (Belfield & Levin, 2007).

Research on the Predictors of Dropping Out

Scholars have indicated that understanding certain factors that contribute to the dropout problem would be a great starting point in the quest to reverse this problematic

situation (Kennelly & Monrad, 2007). However, this is not easy task. Dropout rates are influenced many factors, individual, family, school, and community factors. All work together to influence the student (as cited in Orfield et al., 2004). Some of the predictors that researchers have examined and found valuable are school climate, including school size, teacher morale, student achievement, and student engagement (Orfield et al., 2004).

Allensworth and Easton (2007) conducted in-depth research that examined the dropout problem and its causes. While agreeing with other scholars that managing the dropout problem is challenging to direct because of the complexity of its causes, they did successfully arrive at several valuable conclusions. They suggested that inadequate credit accumulation during the ninth grade was a key factor. This was usually related to course failures. This low credit generation was a strong predictor of dropping out and also of later failing to graduate in four years. Freshman GPA, the number of course failures, and freshman-year absences were strong predictors of graduation rates (Allensworth & Easton, 2007). Furthermore, Neild and Balfanz (2006) found that absence rates are strong predictors of dropping out, and that not only is extremely low attendance a problem (missing one month of instruction or more per semester), but even moderate levels of absences seemed to be problematic. For example, missing just one or two weeks of school is associated with a considerably reduced probability of graduating. Among the 2000–2001 Chicago cohort, researchers found that of those who missed one week of school or more, only 63% graduated in four years, compared with 87% of students who missed less than one week of school (Allensworth & Easton, 2007; Neild & Balfanz, 2006). Furthermore, Allensworth and Easton concluded, based on evidence collected in

their study of Chicago schools, that attendance was the most crucial factor related to course failure. They also concluded that more than 50% of non-graduates can be detected by the conclusion of the first semester, based on absence or failure rates. GPA specifically yields information about students who are likely to face future difficulty and is the optimal predictor of non-graduates (Roderick et al., 2006).

In addition, Simmons and Blyth (1987) argued that difficulties experienced by urban students entering ninth grade can also be associated with limited access to family resources that may provide support when navigating the challenges of the transition. Roderick and Camburn (1999) showed that additional factors to consider as reasons for dropping out are weak mathematics and reading comprehension skills, coupled with teachers lacking adequate preparation in curriculum and teaching expertise to work with students who have considerable academic deficiencies. Schiller (1999) emphasized the stresses and opportunities of a new social environment, particularly when multiple middle schools “feed” into a single high school. Unfamiliar, considerably larger, anonymous, and a complex school structure proved challenging for many students (V. E. Lee & Smith, 2001). Weiss demonstrated that the disorganization of many large urban high schools in course scheduling contributed negatively to overall student success and increased the probability of course failure (Weiss, 2001). Finally, a study conducted by Neild et al. (2001) controlled for numerous factors such as pre-high school student characteristics found that ninth grade course failure and attendance were the factors that had a significant impact on likelihood a student would drop out.

Transition Programs and Intervention Strategies

Scholarly research convincingly shows that the ninth year of high school is a critical year of transition for students, especially at risk students. It is fraught with incredible challenges that can influence students to experience a decline in attendance and grades. This in-turn leads to failure and the likelihood such a failing student will drop out of high school without graduating (Barone et al., 1991).

Barber and Olsen (2004) examined student self-reports in which many students felt that having more support would have helped them through this 8th-grade to 9th grade transition period. When they compared their previous support to their experience as freshmen, most perceived they received less support and monitoring from both teachers and principals than their previous year. Freshmen also reported being less involved in school activities, more depressed and having lower self-esteem.

In order to help with transitions, some school systems implement programs to offer support to incoming high school freshman students that will help increase their chances of graduating. According to Reents (2002), schools that effectively implemented transition programs observed a dropout rate of only 8%, compared with schools without a transition program, which averaged a 24% dropout rate.

Herlihy and Quint (2006) of MDRC evaluated four promising high school reform models: Career Academies, First Things First, Project Graduation Really Achieves Dreams (GRAD), and Talent Development. Contained within this last program is Ninth Grade Academy or Freshmen Academy. The Career Academies program incorporates a “school-within-a-school” structure integrating academic and occupational curriculum,

where students are offered partnerships with employers who provide career awareness activities and work internships. In the First Things First program, schoolwide theme-based small learning communities are created that contain a Family Advocate System or a teacher support program and provide academic support for students. The GRAD project supported funding for students who meet academic and involvement goals. The GRAD project also organized summer programs on various university sites designed to strengthen the academic competence of students as well as cultivate familiarity with the university environment. In addition, parental and community involvement is emphasized in an effort to promote involvement and foster university appreciation. Social supports are available at the school site, and academic enrichment programs are designed to support student learning. GRAD also provides extra supports in the “feeder schools” of partner high schools. The Talent Development model has received positive attention and emphasizes Ninth Grade Success Academy, followed by Career Academies for students who are sophomores and higher. They also utilize the expanded block schedule and provide support classes in literacy and math for ninth graders with deficient abilities. Herlihy and Quint (2006) conclude that instructional improvement and personalization of student experience are key in school improvement. Extending class time so students can learn more, providing specific support courses for struggling students, and training teachers to deliver more engaging differentiated instruction and work on building positive relationships with their students are effective ways to support students who are behind when entering ninth grade.

By examining the four transition programs, researchers have gained valuable insights into what actually works in supporting students to successfully transition and graduate from high school in four years. Although all four programs have demonstrated positive results, we will focus on the Talent Development model that emphasizes Ninth Grade Academy and its potential benefits and features as a transitional program. The model was developed by the Center for Research on the Education of Students Placed at Risk (CRESPAR) located at Johns Hopkins University. The Talent Development model taps into a nationwide trend that looks at ways to change the school structure and processes to be more conducive to improving student participation and learning. (Kemple, Herlihy, & Smith, 2005).

In addition, the model is based on the Talent Development Theory of Change that posits that students who find school more attractive and attend more frequently take and pass more courses and tend to remain in school. Consequently, they are more likely to be promoted and eventually graduate (Kemple et al., 2005). The theoretical framework emphasizes four successive and causally related phases in the Talent Development model. The theory hypothesizes that these phases will result in improved student performance outcomes. The four phases consist of structural elements, support and learning opportunities, mediating outcomes, and performance outcomes (Kemple et al., 2005).

For example, in order to assist students entering high school with poor academic skills, the Talent Development model, through its use of the Ninth Grade or Freshmen Academy, created changes in scheduling and curricula. More specifically, they

implemented double-blocked class schedules to allow students to earn more credits per year than other scheduling systems would. As opposed to the traditional 50-minute class, a single-blocked schedule with a class meeting 80–90 minutes every other day allows students and teachers to meet for extended periods. Double-blocked classes have the advantage of meeting one years' worth of curriculum in a single semester; hence, students can earn considerably more credits compared with traditional scheduling. In addition, Ninth Grade or Freshmen Academy provides catch-up courses that are semester long and intensive with the aim of strengthening ninth-grade students' skills, primarily in reading and mathematics. The effect of the Ninth Grade Academy models on the performance of students taking an Algebra I course was an incredible 25%-point increase (Herlihy, 2007)

In the Ninth Grade Academy model, teachers receive training on curricula and benefit from ongoing coaching to assist them in improving the use of even well-designed curricula. Teachers who participated in training on instructing and designing Talent Development's catch-up courses reported feeling more confident in delivering instruction (Herlihy, 2007).

Through the Talent Development model, Freshman Academies are implemented for incoming ninth graders, organizing them into separate Freshman Academies, resulting in increased attendance rates, and equaling a gain of approximately nine school days per year for each student attending a Freshman Academy. These interventions have resulted in an 8% impact on the rate of advancement to 10th grade (Herlihy, 2007).

A California Prevention Case Study

Accelerating Academic Achievement Academy

This study focuses on a California high school using a Talent Development model called Accelerating Academic Achievement (AAA) Academy to help support incoming ninth graders who were designated based on generally accepted metrics to be at highest risk of dropping out. The AAA Academy will be discussed in detail in the next chapter.

The district collected student data and identified three general problems incoming ninth graders faced: student isolation, declining student expectations, and inadequate student readiness. Hence, the district designed and organized the AAA Academy to address each of the three major problems identified. We will examine the areas of focus in the following.

Problem 1: Student Isolation

Students frequently self-report that one of the greatest reasons they dropped out of high school was the feeling of disconnectedness, isolation, and distance between themselves and their high school teachers and administrators. Researchers have estimated that 40%–60% of students have strong feelings of disengagement by the time they reach high school (Altenbaugh, 1998; Blum, 2005). Larger class size, transition from a smaller and more personal middle school environment to a large comprehensive high school at a critical developmental period of adolescence, along with frequent changes in peer groups and classroom composition frequently lead to a developing sense of isolation and anonymity. In order to address this challenge, the AAA model organizational framework is centered around a self-contained school-within-a-school framework where teachers

work in teams, serve the same group of students, and share a common daily planning block. This organizational structure encourages positive student-teacher relationship building as well as student-to-student contact and reduced additional transitional challenges, while increasing familiarity and a sense of connectedness. Teachers become familiar with all the students in a short period, learn and share information with each other about unique challenges the students are facing, and are able to address those challenges quickly and effectively.

Problem 2: Declining Student Expectations

The second area these intervention programs try to address is student expectations of themselves, primarily their perception of teacher expectations of them. I recently spoke to a student who was not performing up to his ability and asked him to explain what was going on. The student explained that the teacher treated the students as if they were not capable of learning anything new and that the material the teacher was teaching was old and had already been presented. Students in this class showed signs of clear boredom and disinterest. They were not being challenged and the content was not stimulating or presented in an interesting manner. No connection was made between the content and the students' own interests and goals.

In addition, students often find themselves in classes aimed at students not expected to attend college. Research is clear that both high teacher expectations and low student expectations have a profound effect on student performance (Good, 1981). The AAA model applies both organizational and instructional modifications designed to combat feelings of low expectations by training teachers to actively seek out and learn

their student's interests, goals, and aspirations, and connect those to learning outcomes and exciting learning experiences. All students are exposed to college preparation curriculum while also addressing career exploration designed to connect students' interests to the teaching curriculum. In addition, students' time spent mastering core subjects such as mathematics and English is increased through using 90-minute blocks, allowing teachers ample time to utilize various teaching strategies and learning activities. Students are instructed to use collaborative and individual learning and are also required to master science and social science curricula designed to prepare them for the rigors of college.

Problem 3: Inadequate Student Readiness

The third area the AAA Academy and similar intervention programs target are student readiness. Academic and social/emotional development vary greatly, depending on prior preparation and life experiences. Intervention programs such as the AAA Academy expose students to rigorous standards based on common core curriculum and provide extended learning time as well as effective recovery opportunities for students identified as struggling and in need of additional support. Students who are struggling because of poor behavior or attendance issues are supported. The following features are specifically designed to address the problem of inadequate student readiness: Power up, a course designed to enhance student skills in the area of social-emotional learning, organization, goal setting, note taking, study skills, and time management. Not only are students exposed to this information, but they also have opportunities to practice and role play as well as hear outside speakers specifically invited to address topics of interest. The

modified block schedule consists of four 90-minute daily periods of four courses per day. This model allows teachers and students to spend considerably more time on core courses than would otherwise be possible. Support courses are offered during the first semester and designed to offer students the opportunity to close the knowledge and skill gap before proceeding. Students at risk are quickly identified in the first few weeks and placed in these courses where their skills can be strengthened.

Creating Caring School Communities

The AAA and other transition programs can be viewed as part of a larger movement to reinfuse schools with more community nurturing attitudes, activities, and actions that focus on relational building. For years, this movement was spearheaded by Thomas Sergiovanni. His (1994) work on “school as community” compels us to view schools not merely as bureaucratic organizations that require complex administration, but as places where social community is crucial for development. Sergiovanni argues that scholars have tended to borrow extensively from the economic theoretical framework when examining schools, leading them to emphasize issues of productivity, efficiency, quality, and management, aiming to increase profit and reduce loss. However, schools must also keep their social and even “family” “community” characteristics. A concern for profit analysis and labor segmentation must be counterbalanced with attention to creating a dense network of meaningful relationships where individuals are bonded to each other not solely because of business contracts, but because of mutual shared commitments, shared values and ideals, and caring relationships. Schools can organize their work to

provide such “family” like experience (Sergiovanni, 1994). Furthermore, Sergiovanni proposes that children today have a strong desire for belonging and connectedness, particularly those from disadvantaged families. Understanding and applying the school-as-community model has the potential to compensate for the loss of belonging and provide a critically important layer of support.

Enomoto extended Sergiovanni’s work by suggesting that we need to consider schools as communities that are “nested” within other communities and connected with the fiber of relationship networks. Schools as communities do not function in isolation and are profoundly affected by the other communities they are nested in, such as the local neighborhood, town/city, county, state, and so on (Enomoto, 1997). If the communities the school is “nested in aren’t as healthy, strong, and supportive, and lack basic resources it is even more imperative that schools function as caring and supportive communities that are able to buffer the negative social effects of the communities they are nested in.

Furthermore, in his article on how best to organize schools for improvement, Anthony Bryk clearly stated that one of the five essential and critical factors that drive school improvement is the capacity of a school to function as a caring, supportive community (Bryk, 2010). The capacity of the school leadership and staff to build positive caring relationships with each other, students, and community was directly related to the school’s capacity to change for the better.

Finally, John Hattie’s extensive work on what factors impact school achievement concluded that a caring school community that values and fosters supportive relationships has the capacity to increase student achievement at an above average rate (Hattie, 2012).

Considering that the graduation rates are substantially if not alarmingly lower for minority students, students affected by poverty, students with special needs, and English language learners this theoretical framework provides a powerful imperative for educational leaders to support and nurture a caring, relational school community.

Conclusion

This chapter reviewed literature on dropout trends, the negative personal and societal consequences of dropping out, transitional issues for ninth graders, and the literature on transitional intervention programs. Three key discoveries of this review significantly informed this study:

1. Nationally, approximately 20% of students drop out of high school and the dropout rates vary considerably from region to region. Furthermore, graduation rates are abysmally low for minority students, the poor, English language learners, and students receiving special education services who often attend urban schools in large metropolitan cities. More females also tend to graduate than males. In the current global economy, obtaining a high-quality education is imperative in assuring that one can attain a reasonably good standard of living and be competitive in a dynamic and predominantly knowledge-based economy. High school graduation is crucial to that opportunity.

Most students who fail to graduate from high school essentially end up living a life of poverty, have a decreased life span, poor health, increased risk of disease, increased risk of incarceration, commit more crimes, and have higher

levels of depression than do their high school graduate counterparts. They also draw on the social resources of the communities where they reside by utilizing welfare and other social services. They are not able to contribute funds to the state in taxes, thereby reducing the potential of the state to generate revenue and pay for various necessary services.

2. The ninth-grade transition year is crucial for most students, considering that more students fail ninth grade than any other year and are unable to graduate thereafter within four years. Data clearly show that students who do not successfully complete ninth grade have a high probability of dropping out of high school.
3. Providing support to ninth graders through transition intervention programs such as the Talent Development Program, which supports the Freshmen Academy design, has proven effective both in ameliorating students' academic deficiencies and in improving their probability of graduating from high school in a timely manner.

This literature and these general conclusions will be used to inform a study of a California suburban high school freshman transition program, the AAA Academy.

CHAPTER 3

METHODOLOGY

The purpose of this study is to utilize the quantitative causal comparative method to compare a group of ninth-grade students who attended the AAA Academy with a group of ninth-grade students who did not attend.

This chapter reviews the methodology used in the study. The first objective of the study is to determine whether a significant difference exists in the criterion variable of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to their demographic characteristics (e.g., gender, ethnicity, socioeconomic status). Specifically, this study will determine the influence on academic achievement and behavior of a ninth-grade high school transition program which is designed to support pre-identified students and help them succeed through the critical ninth-grade year that research reveals is pivotal. The two groups of students were called experimental and control groups. The experimental group consisted of students who participated in the transition program. while the control group consisted of students who did not participate in the transition program but went through a general or normal high school program. The groups differ in some distinct ways including class size; in the experimental group the size was capped at 25 as opposed to a maximum of 36 in the control group.

In this chapter, the research design is described. Each of the research questions and the respective hypotheses will be restated. A background on the selected population and geographic location will also be provided. The instrumentation, including the validity and reliability, will be discussed. Next, the data collection and data analysis procedures will be outlined. Lastly, the chapter will conclude with a summary of the key information about the methodology.

Restatement of Research Question and Hypotheses

The aim of this study is to answer these research questions:

Research Question 1

Is there a significant difference between the GPA of those who participated in the transition program and those who did not in the presence of Mathematics CST scores, Language CST scores, GPA, credits earned, student attendance, and student discipline as covariates?

Research Question 2

Is there a significant difference between the GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to the demographic characteristics of gender, socioeconomic status, ethnicity?

The hypotheses used to test these research questions can be found in Appendix A.

Research Design and its Appropriateness

This research employs a quantitative causal comparative method. Quantitative research is designed to ensure objectivity, generalizability, and reliability (Creswell, 2014). According to Johnson and Christensen (2010), the quantitative research design theory tests, explains, predicts, and standardizes data collection and statistical analysis. The basic design of this causal comparative study is for the purpose of identifying a significant difference between groups (experimental and control group) and differences in students' demographic characteristics (e.g., gender, ethnicity, socioeconomic status) as a function of the identified criterion variable, which for this study was the GPA, with the presence of covariates such as the Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline.

A quantitative analysis is used in this study to provide the researcher with the ability to compare two variables with one another to determine whether there is a significant relationship between the two (Moore et al., 2009). A comparison is made between an independent variable (intervention, i.e., control group and experimental group; characteristics, i.e., gender, ethnicity, socioeconomic status) and a dependent variable (GPA,) with the presence of covariates (i.e., Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline). The researcher is able to quantitatively assign numerical values to the variables so that a comparison can be determined (Punch, 2014), allowing for the quantification of the results by using various statistical procedures. This can be done because the school database used provides all the information on the academic measures of the students, along with key information pertaining to the variables required for this study.

Furthermore, causal comparative research is used in studies seeking to identify differences between groups as a function of an identified dependent variable (Babones, 2014). In addition, causal comparative research is used in studies aiming to determine the cause for, or consequences of, existing differences in groups of individuals (Della Porta & Keating, 2008). Since the purpose of this study is to compare variables from two groups of students exposed to different programming, then this research method is appropriate. Archival data from the district wide academic database was used. Specifically, aggregate data collected over a one-year period of student attendance, discipline, and academic performance from the selected students was examined.

Population and Sampling Procedures

The population for a study is defined as the group of individuals or subjects in which inferences are to be made (Creswell, 2014). The target population for this study includes all ninth-grade students in one high school in Southern California. I used a convenience sampling plan, a form of non-probability sampling. This was preferred to the probability sampling method (i.e. random sampling technique) as I was able to obtain more observations in a shorter period of time. As the researcher, I had direct access to this data because I was an employee of the school district. I also had the benefit of having observed some of the dynamics of the two groups over a brief period (Punch, 2014). The convenience sampling plan was used because the information for this study was collected from a pre-existing database. For this reason, the researcher did not select a random group of participants from the target population. Existing group assignments and the resulting data preexisted and could not be based on a research random assignment.

Both the experimental and control groups were comprised of students from the same population who had similar characteristics because of the way the school ran its intervention program. Both groups shared several characteristics. During their eighth-grade year their attendance percent did not drop below 60%, they had no out-of-school suspensions, had a grade of F in mathematics and English, were not Special Education students, and were not ELL level 1 or 2 students. In terms of the process of dividing the population into experimental and control groups, the school district office compiled a list of potential candidates (See Table 1). Invitations were sent out to all eligible candidates and the first 105 who got through the orientation process and signed up were accepted and became the AAA Cohort (experimental group). The control group was randomly selected from the remainder of eligible students by the computer.

Intervention

Participants in the experimental/intervention group received the following services:

- A. Class Size.** The AAA Academy has a lower maximum number of students per classroom, thereby increasing students' individual time with the teacher and teacher attention. This intervention is supported by Ehrenberg, Brewer, Gamoran, and Willms (2001) who show the relationship between class size and student achievement. Having more students in class limits the teacher's ability to adequately address all student needs as well as limits how much time a teacher is able to devote to each student.

- B. Daily Periods.** The AAA Academy employed a four-period block schedule where each block was 85 minutes long, as opposed to the traditional six periods a day schedule where each period was 50-55 minutes long. Eineder and Bishop (1997) suggest that block scheduling has the potential to improve the academic performance of students, especially minority students.
- C. Athletics.** The AAA Academy model did not allow students to participate in athletic programs in an effort to reduce student absences from class due to practice, games, or potential injuries. This promised to allow students to focus on academic work exclusively. Broh (2002) suggested that research is inconclusive regarding whether extracurricular activities have any positive or negative impact on student achievement.
- D. Teacher collaboration.** Teachers in the AAA Academy have a minimum day each Wednesday, allowing them to collaborate on lesson plans, curriculum design, and other learning activities for a period of 2-3 hours, which is considerably more time than that allotted for teachers in the regular high school. Higher levels of teacher collaboration have been associated with increased student achievement according to Goddard, Goddard, and Tschannen-Moran (2007).
- E. Student support period.** Students in the AAA Academy are offered a support period during which they receive social emotional support, conflict mediation strategies, organizational skills, and decision-making strategies. Students in regular high school do not have such a specific content class. Research has shown that providing social emotional support and training for students helps them

become more engaged and more successful in school (Weissberg & Cascarino, 2013).

F. Monthly student recognition, incentives, and celebrations. Students in the AAA Academy program benefit from monthly “Fun Fridays” when they are offered food, drink, and the opportunity to play games and have a fun time with their peers and teachers as a reward for accomplishing pre-set goals. They also have semester celebrations when parents and school dignitaries congratulate students who have achieved a certain level of academic proficiency. Students are recognized and receive a certificate of recognition. Research has shown that creating a positive school environment that recognizes positive student behaviors leads toward more positive student outcomes (Horner et al., 2004).

G. Discipline model. The AAA Academy employs a diverse discipline model that is based on coaching, restorative justice principles, clarifying expectations, and frequent communication with parents, resulting in fewer referrals to the office. At a typical high school, teachers more quickly refer students to the office, attempt fewer interventions with students in class, and have less contact with parents. Research has suggested this coaching and restorative approach to discipline is much more effective than the previous zero tolerance policies (Losen, 2015).

Differences between the daily experience of students attending the ninth grade AAA Academy and students in the typical high school are displayed in Table 1.

Table 1
Differences on the Daily Experiences of Students

	AAA Academy	High School
Maximum class size	25	36
Daily periods	4 period block schedule 85 minutes per block	6 periods schedule 55 minutes per period
Participation in Athletics	No	Yes
Teacher collaboration	Weekly – 2-3 hours	On the average twice per month – 1-2 hours
Character development student support period	Yes	No
Monthly incentives and celebrations	Yes	No
Discipline model	Multi-tiered, slow progression toward severe consequences	Progressive, yet much quicker pace toward severe consequences

Sample Size

Three factors are used to calculate the appropriate sample size for a study. The power of the test is used and it measures the probability of rejecting a false null hypothesis. That is typically set at 80% (Cohen, 1988). In this study, a power of 95% was selected because a power of this magnitude rejects a false null hypothesis more appropriately and the researcher had sufficient potential data participants to analyze in the study (Creswell, 2014).

The effect size is the second factor. It is the strength of the relationship between the variables in the study (Cohen, 1988). Cohen defined the effect size for different tests by using three different categories: small effect, moderate effect, and large effect. For this study a medium effect size ($d = 0.25$ for an ANCOVA) was selected because this would provide evidence of a relationship between the independent and dependent variables without being too strict or too lenient.

The third and final factor is the level of significance. This is the probability of rejecting a true null-hypothesis and is typically defined as being equal to 5% (Moore et al., 2009). For this study the level of significance selected was 5% because this is the most commonly used level.

The sample size also depends on the type of analysis being conducted. For this study, the analysis is an ANCOVA with two groups of the independent variable and five covariates. Based on a power analysis, the minimum sample size required for this study was 210 for both experimental and control groups, based on a level of significance equal to .05, a power equal to .95, and a moderate effect size (See Figure 1). We recruited 210 students and divided them equally into the two groups; that is, 105 students each for the experimental group and the control group.

Study Variables

The operationalization of the variables for this study is important because this allows the researcher to provide information on the type of analysis that is conducted for the study. For this reason, the operational definitions for the variables in this study are presented below. A summary of the variables for the study is shown in Table 2.

Figure 1. Results of Sample Size Computation using G*power

Dependent Variable

The dependent variable for this study is the student's GPA, a continuous variable based on cumulative GPA. All information for the dependent variable was obtained from an existing academic database where students are enrolled. This dependent variable was chosen because it best reflects the performance of students. Moreover, GPA is considered one of the best estimators for the performance of students because it gives a bigger picture of the overall performance of a student.

Independent Variable

The independent variables considered in this study were the group assignment and demographic characteristics. Participants were either in the control group or in the experimental group. The control group consisted of students who have not participated in the transition program but went through a general or normal high school program. The experimental group, on the other hand, consisted of students who participated in the transition program for ninth-grade students. Demographic characteristics include gender, ethnicity, and socioeconomic status. Gender has two categories: (a) female and (b) male. Ethnicity includes the race groups of (a) Caucasian, (b) African American, and (c) Hispanic students. Socioeconomic status has two categories: (a) no free/reduced lunch (SES) and (b) have free/reduced lunch.

Covariates

The covariates for this study were the Mathematics CST scores, Language CST scores, credits earned, student attendance, and disciplinary incidents of the student. All the covariates are continuous variables based on the actual Mathematics CST, Language CST scores, and credits earned, the actual frequencies of student absences and tardies, and incidents of student behavior requiring disciplinary measures. All information for the covariates was obtained through an existing academic database where students are enrolled.

Data Collection

Data for this study was obtained by collecting the required information from the pre-existing academic database used by the school district. The raw data from the district academic database was then exported into a Microsoft Excel® spreadsheet for future analyses. The data were saved to a flash drive and stored in a filing cabinet or on a personal computer that only the researcher could access.

Table 2
Variables of the Study

Variable name	Definition	Type
Grade Point Average	A dependent variable for the study that is calculated by taking the number of cumulative grade points a student earned in a given period of time (e.g., middle school to high school)	Continuous
Mathematics CST scores	A covariate of the study that refers to the mathematics scores of students in the CST	Continuous
Language CST scores	A covariate of the study that refers to the language scores of students in the CST	Continuous
Credits earned	A covariate for the study that refers to the number of credits a student earned in a school year.	Continuous
Attendance	A covariate for the study that refers to the number of times a student was absent per period per day within a school year	Continuous
Discipline	A covariate for the study that refers to the number of behavioral incidents within a school year.	Continuous
Participation in the transition program	An independent variable for the study that enables the researcher to divide the participants into groups. Participants who have participated in the transition program are placed in the experimental group while participants who have not participated in the transition program are placed in the control group.	Categorical

Table 2
Variables of the Study (continued)

Variable name	Definition	Type
Gender	An independent variable for the study consisting of two categories, male and female	Categorical
SES	An independent variable for the study indicating whether a student belongs no free/reduced lunch (SES) and having free/reduced lunch.	Categorical
Ethnicity	An independent variable for the study indicating ethnic categories: Caucasian, African American, and Hispanic	Categorical

Validity and Reliability

This section reports the psychometric properties of California Standardized Test scores, which is a standardized testing used in California to measure student knowledge. The CST assesses students' knowledge of Mathematics, English Language Arts, Science and Social Studies. The assessments are primarily composed of stand-alone multiple choice questions and multiple choice questions based on various texts students are asked to read and analyze.

Three types of assembly targets reported in the CST scores are total test target, linking block target, and (reporting) cluster targets. CST assessments for the year 2010 were designed following the item response theory (IRT). Calculations for each test indicated that the instrument was able to produce consistent outcomes and that the concepts being measured by each item in the instrument were accurately measured.

Data Analysis

This study examines the significant difference between the GPA of the students who have and who have not participated in a ninth-grade high school transition program in the presence of Mathematics CST scores, Language CST scores, GPA, student attendance, and student discipline as covariates. The dependent variable for the study is the student's GPA and the independent variable for the study is participation in the transition program and demographic characteristics (e.g., gender, ethnicity, socioeconomic status).

The covariates are the Mathematics CST scores, Language CST scores, student attendance, and student discipline. The control variables are the demographic variables of gender, ethnicity, and socioeconomic status. Determining the significant relationship between the dependent variable and independent variable and the control variable in the presence of covariates of this study involve statistical analysis (Tabachnick & Fidell, 2012).

Several different statistical tools are appropriate and could be considered. For this study, an ANCOVA was selected. In addition, descriptive statistics are reported to summarize the control variables. Statistical Package for the Social Sciences (SPSS) 19.0 was the statistical program used in performing the statistical tests.

Descriptive Statistics

Descriptive statistics reported frequency distribution and measures of central tendency with respect to test results for the independent variable, dependent variable and covariates as indicated in the tables. The tables also showed the frequency distributions.

Specifically, I recorded the percentage of occurrences as well as the number of occurrences of the variable. I also recorded and presented the standard deviation and the mean for the specific variable which indicate measures of central tendency. I used descriptive statistics in order to present a summary of the most basic data used in the study. Descriptive statistics are not concerned with the interpretation of the data and simply represent and summarize the data used in the study (Moore et al., 2009).

Analysis of Covariance (ANCOVA)

ANCOVA was used to determine whether a single or multiple categorical variables significantly explains the variation in a continuous dependent variable that incorporates the presence of covariates (Tabachnick & Fidell, 2012). If a significant relationship between the dependent variable and independent variable was found, this could suggest that the independent variable is able to explain the variation in the dependent variable. ANCOVA is a parametric test that should follow these assumptions: (a) linearity (b) independence of the covariate and the independent variable (c) the covariate is measured without error (d) the groups should be independent, and (e) homogeneity of regression slopes (Lomax, 2007, pg 91).

The ANCOVA tests whether or not the means of the GPA scores of students are equal across the variation of the independent variables, while controlling the effects of the covariates. An equal mean indicates a significant difference in the dependent variable student's GPA by the independent variables of student grouping for the analysis of research question one. Also, there is a significant difference in the dependent variable student's GPA by the independent variables of demographic variables of gender,

socioeconomic status, and ethnicity for the analysis of research question two. This indicates that a variation of these different variables leads to a change in the student's GPA.

The computation of ANCOVA tests the null hypothesis that the means of all the groups being compared are equal or have no significant difference; it produces a statistic called F that is equivalent to the t-statistic from a t-test (Tabachnick & Fidell, 2012). The null hypothesis is rejected once the computed p-value is equal to or less than the 5% level of significance. This indicates there is a significant relationship between the dependent and independent variables (Creswell, 2014). However, the degree of effect or relationship cannot be analyzed through ANCOVA. Other statistical tests such as a correlation test or linear regression are statistical tests that determine if the relationship between variables is positive or negative.

Summary

This chapter provided a detailed discussion of the methodology that guided this study on the difference between those who participated in a ninth-grade high school transition program and those who did not participate. It explained the variables: GPA, Mathematics CST scores, Language CST scores, GPA, student attendance, and student discipline as covariates. The chapter explained how to determine whether a significant difference exists in the criterion variable of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to their demographic characteristics (e.g., gender, ethnicity, socioeconomic status). Further, the use of academic records of students in order

to evaluate the effectiveness of the transition program under study was explained and the use of the causal comparative quantitative research design was justified. The chapter also provided a discussion of the setting, sampling, and data collection procedures. Chapter 4 will present the results of data analysis.

CHAPTER 4

RESULTS

Introduction

The purpose of this quantitative causal comparative study was to identify whether a significant difference existed in the criterion variable of GPA in the presence of Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates between a group of ninth-grade students who attended the AAA Academy and a group of ninth-grade students who did not attend. Another objective of the study was to determine whether a significant difference exists in the criterion variable of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to their demographic characteristics (e.g., gender, socioeconomic status). This chapter restates the research questions and hypothesis. It reviews the participants and provides the results of the descriptive data, data analysis using descriptive statistics and ANCOVA, and data findings structured by the study question. IBM®SPSS® Statistics Version 22 was utilized to conduct the data analysis. In line with this, the following research questions guided this study:²

² Hypotheses for research questions can be found in Appendix A.

Research Question 1

Is there a significant difference between the GPA of those who participated in the transition program and those who did not in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates?

Research Question 2

Is there a significant difference between the GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to their demographic characteristics (gender, socioeconomic status)?

The purpose of this chapter was to provide an explanation of the results of the analysis using descriptive statistics and ANCOVA to address the purpose of the study. IBM®SPSS® Statistics Version 22 was utilized to conduct the data analysis. To end the chapter, this chapter presented the summary of the results of the analysis to address the different objectives of the study.

Participants

Data was collected on 208 ninth-graders, 104 involved in the AAA Academy intervention and 104 with matching characteristics in the control group. Table 3 reviews the demographic characteristics of these groups. In both groups, the majority were males (69.2% in control; 65.4% in experimental; 67.3% overall). For ethnicity, in both groups,

the majority were Latinos (75% in control; 79.8% in experimental; 77.4% overall). In terms of socio-economic status, in both groups, the majority of the ninth-grade students have free/reduced lunch (69.2% in control; 75% in experimental; 72.1% overall).

Table 3
Frequency and Percentage Summary of Demographic Information by Grouping

			Grouping		Total
			Control	Experimental	
Gender	Female	n	32	36	68
			31%	35%	33%
	Male	n	72	68	140
			69%	65%	67%
Total		n	104	104	208
			100.0%	100.0%	100.0%
Ethnicity	Caucasian	n	22	14	36
			21%	15%	18%
	African American	n	3	5	8
			4%	5%	4%
	Latino	n	78	83	161
			75.0%	80%	78%
	Other	n	1	2	3
			1.0%	2%	1%
Total		n	104	104	208
			100.0%	100.0%	100.0%
Free/Reduced Lunch (SES)	No	n	32	26	58
			31%	25%	28%
	Yes	n	72	78	150
			69%	75%	72%
Total		n	104	104	208
			100.0%	100.0%	100.0%

Table 4 shows the descriptive statistics summaries of the scores in the Mathematics CST scores, Language CST scores, GPA, student attendance, credits

earned, and student discipline of the samples of ninth grade students in the experimental and control group. For the Mathematics CST scores, those in the experimental group ($M = 303.90$; $SD = 38.87$) have higher mean Mathematics CST scores than do those in the control group ($M = 284.97$; $SD = 68.86$). For the Language CST scores, those in the experimental group ($M = 310.03$; $SD = 38.83$) have higher mean Language CST scores than do those in the control group ($M = 291.93$; $SD = 99.28$). For the GPA, those in the experimental group ($M = 2.10$; $SD = 0.89$) have higher mean GPA than do those in the control group ($M = 1.54$; $SD = 0.63$). For credits earned, those in the experimental group ($M = 70.96$; $SD = 20.06$) have higher mean credits earned than do those in the control group ($M = 42.40$; $SD = 12.69$). For student behavior in terms of number of absences, those in the experimental group ($M = 11.96$; $SD = 13.58$) have lower mean number of absences than do those in the control group ($M = 16.95$; $SD = 17.42$). For student behavior in terms of the number of tardies, those in the experimental group ($M = 10.11$; $SD = 7.92$) have a higher mean number of tardies than do those in the control group ($M = 9.12$; $SD = 7.80$). For student disciplines in terms of behavior incidents, those in the experimental group ($M = 2.14$; $SD = 3.79$) have a lower mean number of student disciplines than do those in the control group ($M = 3.02$; $SD = 5.89$).

Table 4

Descriptive Statistics Summaries of Mathematics CST Scores, Language CST Scores, GPA, Student Attendance, Credits earned, and Student discipline by Grouping

Grouping		2013 GPA	Credits Earned	Absences (Student Attendance)	Tardiness (Student Attendance)	Behavior Incidents	2013 Math CST	2013 Lang CST
Control	Mean	1.54	42.40	16.95	9.11	3.02	284.97	291.93
	N	104	104	100	104	104	104	104
	SD	0.63	12.69	17.42	7.80	5.89	68.86	99.28
	Min	0.00	0.00	0.00	0.00	0.00	100.00	100.00
	Max	3.33	60.00	105	37.00	42.00	437.00	430.00
Experimental	Mean	2.10	70.96	11.96	10.11	2.14	303.90	310.03
	N	104	104	104	104	104	104	104
	SD	0.89	20.06	13.58	7.92	3.79	38.87	38.83
	Min	0.50	15.00	0.00	0.00	0.00	225.00	221.00
	Max	3.75	90.00	70	42.00	22.00	417.00	401.00
Total	Mean	1.82	56.68	14.46	9.61	2.58	294.44	300.98
	N	208	208	200	208	208	208	208
	SD	0.82	22.03	15.78	7.86	4.96	56.58	75.74
	Min	0.00	0.00	0.00	0.00	0.00	100.00	100.00
	Max	3.75	90.00	105	42.00	42.00	437.00	430.00

Normal Distribution Testing

Prior to inferential statistics, the assumption of normal distribution of the dependent variable should be first tested. It is a requirement of the parametric statistical test of ANCOVA that data of the dependent variable be numerical data representing samples from normally distributed populations. Normality testing is conducted using Kolmogorov-Smirnov test. Results of the Kolmogorov-Smirnov test in Table 5 show that data of the dependent variable were normally distributed across the control group ($KS(104) = 0.08, p = 0.07$) and experimental group ($KS(104) = 0.07, p = 0.20$). This was because the p-value of the Kolmogorov-Smirnov test is greater than the level of

significance value set at 0.05.

Table 5
Results of Kolmogorov-Smirnov Test of Normality

Dependent Variable	Grouping of Independent Variable	Kolmogorov-Smirnov ^a		
		Statistic	df	Sig.
2013 GPA	Control	0.08	104	0.07
	Experimental	0.07	104	0.20

ANCOVA Results for Hypothesis Testing

Research Question 1

An analysis of covariance (ANCOVA) was performed to address research question one to determine if there is a significant difference in GPA in the presence of the Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates between students who participated in the transition program and those who did not participate in the transition program or who were exposed to a general and normal high school program. In the ANCOVA, GPA is the dependent variable; Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline are the covariates; and groupings of control and experimental groups are the independent variables. A level of significance of 0.05 was used in the ANCOVA. There are significant differences in the GPA if the p -value is less than or equal to the level of significance value.

Table 6 summarizes the results of Levene's test of equality or homogeneity of variances. The result of Levene's test showed that the variance of the GPA ($F(1, 206) = 20.59, p < 0.001$) was not homogeneous or unequal across the different categories of the independent variables of groupings of control and experimental groups. This was because the p -value was less than the level of significance of 0.05. Thus, the required assumption of the ANCOVA of equality of homogeneity of variances was violated. Nevertheless, the equal numbers of participants in the experimental and control groups mitigate this violation.

Table 6
Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
20.59	1	206	0.00

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

- a. Design: Intercept + Grouping + Gender + Ethnicity + Free Reduced Lunch + 2013MathCST + 2013LangCST + Credits Earned + Absences + Tardiness + Behavior Incidents
- b. Dependent Variable: 2013 GPA

A test of between-subjects effects was conducted to determine whether the GPA was significantly different between students who participated in the transition program and those who did not participate in the transition program or who were exposed to a general and normal high school program in the presence of Mathematics CST scores,

Language CST scores, credits earned, student attendance, and student discipline as covariates. The ANCOVA test results are presented in Table 7.

The ANCOVA results showed that the GPA ($F(1, 207) = 16.09, p < 0.001$) between students who participated in the transition program (experimental group) and those students who did not participate in the transition program or who were exposed to a general and normal high school program (control group) were significantly different when controlling for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Partial Eta squared was .05, which is small. With this result, the null hypothesis one “There is no significant difference between the experimental and control group in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates” was rejected based on the results of the ANCOVA. The alternative hypothesis one “there is a significant difference between the experimental and control group in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates” was instead supported by the ANCOVA results. In addition, the ANCOVA results also showed that the Language CST scores ($F(1, 207) = 8.92, p = 0.003$), credits earned ($F(1, 207) = 203.56, p < 0.001$), and student attendance in terms of absences ($F(1, 207) = 10.26, p = 0.002$) have significant confounding effects on GPA and their confounding effects were statistically controlled in determining the difference in GPA between the experimental and control group.

Table 7

ANCOVA Tests of Between-Subjects Effects of Difference of GPA by Groupings, Gender, Ethnicity, and Socioeconomic Status

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	96.33 ^a	7	13.76	65.91	0.00*	0.74
Intercept	0.67	1	0.67	3.22	0.07	0.01
2013 Math CST	0.02	1	0.02	0.09	0.77	0.00*
2013 Lang CST	1.86	1	1.86	8.93	0.00*	0.11
Credits Earned	42.50	1	42.50	203.56	0.00*	0.53
Absences	2.14	1	2.14	10.26	0.00*	0.07
Tardiness	0.03	1	0.03	0.15	0.70	0.00*
Behavior Incidents	0.07	1	0.07	0.32	0.57	0.00
Grouping	3.36	1	3.36	16.09	0.00*	0.05*
Error	41.75	200				
Total	828.83	208				
Corrected Total	138.08	207				

a. R Squared = 0.70

b. Dependent Variable: 2013 GPA

*Significant at level of significance of 0.05

Table 8 reports the unadjusted values before controlling for the effects of the covariates. Mean comparison showed that students who participated in the transition program ($M = 2.10$, $SD = 0.90$) had a higher GPA than did those students who did not participate in the transition program or who were exposed to a general and normal high school program ($M = 1.54$, $SD = 0.63$).

Table 9 reports the adjusted values after controlling for the effects of the covariates. Mean comparison showed that students in the control group or those who did not participate in the transition program ($M = 2.00$, $SE = 0.06$) had a higher GPA than did those students in the experimental group or than those who participated in the transition

program or were exposed to a general and normal high school program ($M = 1.64$, $SE = 0.06$).

Table 8

Descriptive Statistics Summaries of Unadjusted Values of GPA by Groupings

Grouping	Mean	Std. Deviation	N
Control	1.54	0.63	104
Experimental	2.10	0.90	104
Total	1.82	0.82	208

Table 9

Descriptive Statistics Summaries of Adjusted Values of GPA by Groupings

Grouping	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	2.00 _a	0.06	1.89	2.11
Experimental	1.64 _a	0.06	1.53	1.75

- a. Covariates appearing in the model are evaluated at the following values: Credits Earned = 56.68, Absences (Student Attendance) = 104.89, Tardies (Student Attendance) = 9.61, Behavior Incidents = 2.58, 2013 Math CST = 294.44, 2013 Lang CST = 300.98.

Research Question 2

An analysis of covariance (ANCOVA) was performed to determine if there is a significant difference in the GPA in the presence of the Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates according to demographic characteristics of gender, ethnicity, and socioeconomic status in the context of treatment conditions for research question two. A

level of significance of 0.05 was also used in the ANCOVA. There are significant differences in the GPA if the p -value is less than or equal to the level of significance value.

Table 10 summarizes the results of Levene's test of equality or homogeneity of variances. The result of Levene's test showed that the variances of the GPA ($F(15, 192) = 1.55, p = 0.09$) were homogeneous or equal across the different categories of the independent variables of grouping, gender, ethnicity, and socioeconomic status. This was because the p -value was greater than the level of significance of 0.05. Thus, the required assumption of the ANCOVA of equality or homogeneity of variances was not violated.

Table 10
Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
1.55	15	192	0.09

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

- c. Design: Intercept + Gender + Ethnicity + Free Reduced Lunch + Grouping + 2013MathCST + 2013LangCST + Credits Earned + Absences + Tardiness + Behavior Incidents + Gender * Grouping + Ethnicity * Grouping + Free Reduced Lunch * Grouping
- d. Dependent Variable: 2013 GPA

A test of between-subjects effects was conducted to determine whether the GPA was significantly different between students who participated in the transition program and those students who did not participate in the transition program or were exposed to a

general and normal high school program by gender, race, and socioeconomic status in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. It should be noted that the race variable was recoded into two groupings of Latinos/Hispanics versus other races of Caucasian, African American, and Other. The ANCOVA test results are presented in Table 11.

The ANCOVA results also showed that the GPA ($F(1, 208) = 7.73, p = 0.01$) was significantly different between the two ethnicity groups of ninth grade students when controlling for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. In addition, the interaction effect of ethnicity and grouping ($F(1, 208) = 9.95, p < 0.001$) on GPA was also significant. This means that the GPA between students who participated in the transition program (experimental group) and those students who did not participate in the transition program or were exposed to a general and normal high school program (control group) were also significantly different across differences of race when controlling for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. With this result, the null hypothesis four “There is no significant difference between the Caucasian, African American and Hispanic students in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates” was rejected based on the ANCOVA results. The alternative hypothesis four “There is a significant difference between Caucasian, African American, and Hispanic students in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates” was instead supported by

the ANCOVA results. There was significant group and ethnicity interaction effect. This suggests that differences between the experimental and control after controlling for CST scores, credits earned, attendance and discipline is dependent upon ethnicity.

Comparison by groupings showed that Latino/Hispanic students in the experimental grouping or students who participated in the transition program had a significantly greater GPA ($M = 2.05$, $SD = 0.64$) than did Latino/Hispanic students in the control grouping or than students who did not participate in the transition program ($M = 1.54$, $SD = 0.64$). Caucasian, African American, and Other students in the experimental grouping or students who participated in the transition program also had significantly greater GPA ($M = 2.32$, $SD = 1.08$) than did Latino/Hispanic students in the control grouping or students who did not participate in the transition program ($M = 1.55$, $SD = 0.59$).

However, the ANCOVA results also showed that GPA was not significantly different across different genders ($F(1, 208) = 1.75$, $p = 0.19$) and socioeconomic status ($F(1, 208) = 1.31$, $p = 0.25$) of ninth grade students when controlling for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. The interaction effects of gender and grouping ($F(1, 208) = 0.20$, $p = 0.66$) and socioeconomic status and grouping ($F(1, 208) = 0.96$, $p = 0.33$) of ninth grade students' GPA when controlling for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates were also insignificant. With this result, null hypothesis two "There is no significant difference between males and females in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and

student discipline as covariates” and three “There is no significant difference between socioeconomically disadvantaged students and non-socioeconomically disadvantaged students in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates” were not rejected by the ANCOVA results. The ANCOVA results also showed that Language CST scores ($F(1, 208) = 7.68, p = 0.01$), credits earned ($F(1, 208) = 230.52, p < 0.001$), and student attendance in terms of absences ($F(1, 208) = 8.87, p < 0.001$) have significant confounding effect on GPA and these confounding effects were statistically controlled in determining the difference in GPA by gender, ethnicity, and socioeconomic status in the context of treatment.

Table 12 shows the unadjusted values before controlling for the effects of the covariates. The mean comparison showed that students in other race groups of Caucasian, African American, and Other ($M = 1.89, SD = 0.92$) had a greater GPA than did Latino/Hispanic students ($M = 1.80, SD = 0.79$).

Table 13 shows the descriptive statistics summaries of unadjusted values of GPA by ethnicity and grouping, indicating that Latino students in the experimental group ($M = 2.05, SD = 0.83$) had a higher GPA than did Latino students in the control group ($M = 1.54, SD = 0.64$). The same trend was demonstrated with respect to Caucasian, African American, and Other students who had a higher GPA in the experimental group ($M = 2.32, SD = 1.08$) as opposed to the control group ($M = 1.54, SD = 0.63$).

Table 11

ANCOVA Tests of Between-Subjects Effects of Difference in GPA by Gender, Ethnicity, and Socioeconomic Status

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	100.596 ^a	13	7.74	40.05	0.00*	0.76
Intercept	0.72	1	0.72	3.75	0.05*	0.07
Gender	0.34	1	0.34	1.75	0.19	0.00
Ethnicity	1.42	1	1.42	7.37	0.01*	0.03
Free Reduced Lunch	0.25	1	0.25	1.31	0.25	0.00
Grouping	1.03	1	1.03	5.32	0.02*	0.02
2013 Math CST	0.07	1	0.07	0.34	0.56	0.00
2013 Lang CST	1.48	1	1.48	7.68	0.01*	0.03
Credits Earned	44.54	1	44.54	230.52	0.00*	0.54
Absences	1.71	1	1.71	8.87	0.00*	0.04
Tardiness	0.02	1	0.02	0.09	0.77	0.00
Behavior Incidents	0.01	1	0.01	0.03	0.86	0.00
Ethnicity * Grouping	1.92	1	1.92	9.95	0.00*	0.05
Free Reduced Lunch *						
Grouping	0.04	1	0.04	0.20	0.66	0.00
Gender * Grouping	0.19	1	0.19	0.96	0.33	0.00
Error	37.48	194	0.19			
Total	828.83	208				
Corrected Total	138.08	207				

a. R Squared = 0.73

b. Dependent Variable: 2013 GPA

*Significant at level of significance of 0.05

Table 12

Descriptive Statistics Summaries of Unadjusted Values of GPA by Ethnicity

Ethnicity	Mean	N	Std. Deviation
1.0 Latino/Hispanic	1.80	161	0.79
2.0 Caucasian, African American, and Other	1.89	47	0.92
Total	1.82	208	0.82

Table 13

Descriptive Statistics Summaries of Unadjusted Values of GPA by Ethnicity and Groupings

Ethnicity	Grouping	Mean	SD	N
1.0 Latino/Hispanic	Control	1.54	0.64	78
	Experimental	2.05	0.83	83
	Total	1.80	0.79	161
2.0 Caucasian, African American, (Other)	Control	1.55	0.59	26
	Experimental	2.32	1.08	21
	Total	1.89	0.92	47
Total	Control	1.54	0.63	104
	Experimental	2.10	0.89	104
	Total	1.82	0.82	208

Table 14 shows the adjusted values after controlling for the effects of the covariates. The mean comparison showed that students in other race groups of Caucasian, African American, and Other ($M = 2.02$, $SE = 0.07$) had a greater GPA than did Latino/Hispanic students ($M = 1.81$, $SE = 0.04$).

Table 14

Descriptive Statistics Summaries of Adjusted Values of GPA by Ethnicity

Ethnicity	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1.0 Latino/Hispanic	1.81 _a	0.04	1.73	1.90
2.0 Caucasian, African American, and Other	2.02 _a	0.07	1.89	2.15

a. Covariates appearing in the model are evaluated according to the following values: Credits Earned = 56.68, Absences (Student Attendance) = 104.89, Tardies (Student Attendance) = 9.61, Behavior Incidents = 2.58, 2013 Math CST = 294.44, 2013 Lang CST = 300.98.

Table 15 shows that after adjustment, “Caucasian, African American, and Other” students ($M = 2.03$) scored significantly higher than did Latino students ($M=1.58$) in the experimental group, but that there appear to be no significant differences in the control group (Caucasian, African American, and Other, $M = 2.02$, and Latino, $M = 2.05$).

Table 15

Descriptive Statistics Summaries of Adjusted Values of GPA by Ethnicity and Groupings

Ethnicity	Grouping	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1.0 Latino/Hispanic	Control	2.05 _a	0.07	1.92	2.18
	Experimental	1.58 _a	0.07	1.45	1.71
2.0 Caucasian, African American, and Other	Control	2.02 _a	0.09	1.83	2.20
	Experimental	2.03 _a	0.10	1.83	2.23

a. Covariates appearing in the model are evaluated according to the following values: Credits Earned = 56.68, Absences (Student Attendance) = 104.89, Tardies (Student Attendance) = 9.61, Behavior Incidents = 2.58, 2013 Math CST = 294.44, 2013 Lang CST = 300.98.

Summary

This chapter presented data and statistical analysis comparing two groups of ninth graders, one in an experimental group AAA Academy and one in a control group. Descriptive statistics showed differences between these two groups. Inferential statistics were reviewed to address the two research questions.

The purpose of this quantitative study was to utilize the causal comparative method to identify whether a significant difference existed in the criterion variable of GPA in the presence of Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates between a group of ninth-grade students who attended the AAA Academy and a group of ninth-grade students who did not attend. A further objective of the study was to determine whether a significant difference exists in the criterion variable of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to their demographic characteristics (e.g., gender, ethnicity, socioeconomic status). This chapter presented the results and analysis of the statistical analysis to address the two research questions of the study. For research question one, the ANCOVA results showed a significant difference between the experimental and control group in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Specifically, students who participated in the transition program had lower adjusted GPA than did those students who did not participate in the transition program or were exposed to a general and normal high school program. For research question two, the ANCOVA results showed a significant difference in GPA between the

Latino/Hispanic students and students from other races in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Specifically, students in other race groups of Caucasian, African American, and Other had a greater GPA than did Latino/Hispanic students. Also, there was no significant difference in GPA between males and females and between socioeconomically disadvantaged students and non-socioeconomically disadvantaged students in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. In addition, there was a significant interaction effect of ethnicity and grouping on GPA. This means that student GPA significantly differed with differences in ethnicity and the treatment the students were exposed to. This suggests that differences between the experimental and control after controlling for CST scores, credits earned, attendance and discipline is dependent upon ethnicity. Comparison by groupings showed that Latino/Hispanic students in the experimental grouping had a significantly greater GPA than did Latino/Hispanic students in the control grouping. Caucasian, African American, and Other students in the experimental grouping also had a significantly greater GPA than did Latino/Hispanic students in the control grouping. The following chapter includes further discussion of the results presented in this chapter. The results of each research question will be reviewed and potential implications for the analysis results will be discussed.

CHAPTER 5

SUMMARY, DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Introduction

Approximately one-fourth of high school students do not graduate from high school within four years, and many of these eventually drop out (Balfanz & Legters, 2004; McFarland et al., 2017; Swanson, 2004).

This often causes severe financial and social problems for the student, their families, and for state and federal systems. Research strongly indicates that ninth grade is a "make it or break it" year for many of these students because ninth grade involves new experiences that often create obstacles for students (Capstick, 2007; Gifford et al., 2011; Kinney, 1993; Neild, 2009; Neild et al., 2001; Torres, 2004; West, 2009). Students seem to struggle the most in ninth grade as compared to any other grade. This struggle often leads to students losing credits which substantially increases their chance of dropping out (Herlihy, 2007). Dropout rates continue to be considerably lower for minority students, male students, and students living in low income families (Christle, Jolivet, & Nelson, 2007). Hence offering student support during this critical juncture could prove to be indispensable while supporting ongoing efforts to reduce the achievement gap.

This chapter reviews findings from one California high school program designed to provide such support. First, it reviews the background problem and purpose of the study. Second, it reviews the research questions, hypothesis, methodology, and

participants of the study. Third, it summarizes the findings of the study. Fourth, it discusses those findings, relating them to the research literature. Finally, it provides concluding statements from this study and suggestions for practitioners and policy makers.

Problem & Purpose of the Study

Federal legislation such as the *No Child Left Behind Act*, is an example of initiatives aimed at ameliorating achievement gaps among high school students and an attempt to improve graduation rates. Particularly troubling are the large disparities in graduation rates between White, Asian, Hispanic, and African American students; even more alarming is the fact that 46% of African American students and 39% of Hispanic students attend high schools where a 50% graduation rate is the norm (Balfanz & Legters, 2004). Scholars have observed that minority students do not earn a high school diploma at the same rate as their White peers do (Cataldi & KewalRamani, 2009). More recent research from the National Center for Education Statistics suggests that the overall national graduation rate has increased, however graduation rates for low socioeconomic students, minority students, and English language learners has remained low, where a low SES national graduation rate is approximately 78%, the African American graduation rate is 76%, and the English Language Learner graduation rate is 67% (McFarland et al., 2017). Searching for potential solutions to the graduation crisis, scholars have examined data that points to ninth grade as the “make it or break it” year. In particular, students who fail to successfully negotiate the challenges of the first year of high school experience greatly reduced chances of graduating from high school and receiving a

diploma (Allensworth & Easton, 2005; Neild et al., 2001). Therefore, many school districts have begun to consider developing and implementing creative transition programs aimed at supporting students who are identified as most likely to struggle during ninth grade.

Given that the freshman year has been identified as the critical point for some of these students, certain interventions have been created to help students at risk to navigate through this transition period. Enhanced understanding of these programs is necessary. One of those programs is the Accelerated Academic Achievement Academy or the AAA Academy program. Recognizing the effectiveness of this intervention can help us understand this crucial area of high school success.

The purpose of this study was to utilize the quantitative causal comparative method to identify whether a significant difference exists in the criterion variable of GPA in the presence of Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates between a group of ninth-grade students who attended the AAA Academy and a group of ninth-grade students who did not attend. Another objective of the study was to determine whether a significant difference exist sin the criterion variable of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to their demographic characteristics (e.g., gender, ethnicity, socioeconomic status).

Summary of the Methodology

Research Questions

The central question under examination was whether a statistically significant difference exists in the GPA between students who participated in the AAA academy program and the control group and across differences in demographic characteristics after controlling for Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. The research questions are as follows:³

Research Question 1

Is there a significant difference between the GPA of those who participated in the transition program and those who did not in the presence of Mathematics CST scores, Language CST scores, GPA, credits earned, student attendance, and student discipline as covariates?

Research Question 2

Is there a significant difference between the GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates of students according to their demographic characteristics (gender, socioeconomic status, ethnicity)?

Research Design, Intervention & Participants

This research employed a quantitative causal comparative method. The basic design of this causal comparative study was to identify a significant difference between

³ Hypotheses for research questions can be found in Appendix A.

different groups of students as a function of the identified criterion variable of GPA, in the presence of Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates.

A comparison was made between independent variables (intervention, i.e., control group and experimental group; and demographic characteristics, i.e., gender, ethnicity, socioeconomic status) and the dependent variable (GPA) while controlling for the effects of covariates (Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, and student discipline as covariates). I was able to quantitatively assign numerical values to the variables so that a comparison could be determined (Punch, 2014), allowing for the quantification of the results using various statistical procedures. This is appropriate because the database I used provided complete information on the academic measures of the students, along with key information pertaining to the variables required for this study. Archival data was collected from the district-wide academic database used by the participating school for this study. Specifically, aggregate data of demographic characteristics, Mathematics CST scores, English Language Arts CST scores, credits earned, student attendance, student discipline, and academic performance in terms of GPA from selected students was examined.

The AAA model attempts to change the way schools are organized, as well as school policies and curriculum content. Specifically, the AAA model is identified by: organizing students into a small learning community, using curriculum that is standards based and designed to support all students toward mastery in mathematics and English, providing additional sources of support for struggling students, staff professional development, collaboration time for teachers, emphasis on college and career readiness,

reduced class size, reduced outside time constraints such as the inability to sign up for afterschool sports, thereby increasing the amount of time a student must work on academics, teaching and implementing a social-emotional curriculum within specific classes, and built-in incentives for meeting both behavioral and academic targets.

Participants for both the experimental and control groups comprised students from the same population with similar characteristics because of the way the school ran its intervention program. In terms of the process of dividing the population into experimental and control groups, the school district office compiled a list of potential candidates (See Table 1). Invitations were sent out to all eligible candidates and the first 105 to participate in the orientation process and sign up were accepted to become the AAA Cohort (experimental group). The control group was comprised of 105 randomly computer selected students from the remaining eligible students.

Summary of Major Findings

Descriptive statistics showed that students in the experimental group ($M = 2.10$; $SD = 0.89$) had a higher unadjusted mean GPA than did those in the control group ($M = 1.54$; $SD = 0.63$). In addition, GPA scores in the experimental group reached as high as 3.75. Students in the experimental group ($M = 70.965$; $SD = 20.06$) also earned on average many more credits than did students in the control group ($M = 42.40$; $SD = 12.69$). Students in the experimental group ($M = 11.96$; $SD = 13.58$) had a lower mean number of absences than did students in the control group ($M = 16.95$; $SD = 17.42$). Oddly, those in the experimental group ($M = 10.13$; $SD = 8.00$) had a slightly higher number of tardies than did those in the control group ($M = 9.45$; $SD = 7.76$). Furthermore, the number of

behavior incidents was lower for those in the experimental group ($M = 2.12$; $SD = 3.83$) than for those in the control group ($M = 3.17$; $SD = 5.96$). Another positive finding was that students in the experimental group had higher mathematics CST scores ($M = 302.69$; $SD = 39.14$) than did students in the control group ($M = 269.91$; $SD = 42.33$). Language CST scores were also higher in the experimental group ($M = 308.89$; $SD = 38.88$) than in the control group ($M = 322.01$; $SD = 47.88$).

ANCOVA results showed that the GPA between students who participated in the transition program (experimental group) and those students who did not (control) were significantly different when controlling for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. The unadjusted means showed that students who participated in the transition program had significantly greater GPA than did those students who did not participate in the transition program or were exposed to a general and normal high school program. However, when investigating the adjusted means, comparison showed that students who did not participate in the transition program had a greater GPA than did those students who participated in the transition program after adjusting for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline.

I was also interested in examining whether statistically significant differences existed between the AAA Academy students and the control group students in terms of GPA and ethnicity, socioeconomic status, and gender in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. The ANCOVA results showed that GPA was significantly

different between the two ethnicity groups of ninth grade students when controlling for the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Specifically, investigation of the unadjusted means showed that students in other race groups of Caucasian, African American, and Other had a greater GPA than did Latino/Hispanic students. The adjusted means also showed students in other race groups of Caucasian, African American, and Other as having a greater GPA than did Latino/Hispanic students after adjusting for the covariates of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. However, there was no significant difference in the GPA between males and females and between socioeconomically disadvantaged students and non-socioeconomically disadvantaged students in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

Furthermore, there was a significant interaction effect of ethnicity and grouping on GPA. This means that the GPA of the students significantly differed with differences in both ethnicity and the treatment students were exposed to. This suggests that differences between the experimental and control groups after controlling for CST scores, credits earned, attendance, and discipline are dependent upon ethnicity. In general, students in other race groups of Caucasian, African American, and Other had a greater GPA than did Latino/Hispanic students. Comparison by groupings showed that Latino/Hispanic students in the experimental grouping had a significantly greater GPA than did Latino/Hispanic students in the control grouping. Caucasian, African American, and

Other students in the experimental grouping also had a significantly greater GPA than did Caucasian, African American, and Other students in the control grouping.

Discussion of Major Findings

Several findings emerged from this study that confirmed previous research and several contradicted it. Both the confirming and contradicting data provide vital information in understanding the impact of AAA Academy that can guide AAA Academy administrators and assist in designing enhanced intervention strategies to support those at risk or those not doing well in ninth grade. First, I discuss the positive descriptive findings. I then explain and elaborate on the main results of the tested hypothesis, offer recommendations for practitioners, policy makers, and future research, and offer concluding remarks.

Descriptive statistics showed consistently better results for those in the intervention group than for those in the control group. As a group, intervention students had fewer absences, fewer behavior incidents, and earned overall more credits than did students in the control group. This is in keeping with other general findings on the positive impact of interventions as shown in other studies. For instance, according to Reents (2002), schools that effectively implemented transition programs observed a dropout rate of only 8%, compared with schools without a transition program, which averaged a 24% dropout rate. This further solidified the claim that students attending schools that implemented transition programs had better academic achievement than did students attending schools that did not implement transition programs. This general positive result for intervention programs also applies to overall dropout programs. For example, Kemple et al. (2005)

and McPartland, Balfanz, Jordan, and Legters (1998) showed that intervention programs that emphasize instructional improvements and high quality curriculum combined with effective organizational reforms that foster supportive and personalized learning environments have the potential to reduce the number of students dropping out of school.

Part of this discussion connects well to the broader scholarship on creating school community as suggested by Sergiovanni's (1994) "gemeinschaft" arguments. He argued for creating more relational supports that "soften" the strong bureaucratic "coldness" of schools. School as community would value relationship building in smaller groups by "personalizing instruction," whereby teachers and students would come to know each other better, work more closely together over a longer, more sustained period of time. As a result, we would expect students to be more engaged and more receptive to teacher direction and guidance. This is exactly what we observed occurring in the AAA program. Students and teachers worked together in longer chunks of time, in smaller groups engaged in not just academic, but social activities during "Fun Fridays" where they played games with each other and their teachers, designed to create a sense of community and to help foster development of positive relationships. Hence it is not surprising that we found a lower number of absences, a lower number of behavior incidents, and a higher number of credits earned by students who attended the AAA program.

Descriptive data did show a higher number of tardies for AAA Academy students, which was somewhat unexpected. However, one plausible explanation for this observation is that the higher number of tardies recorded may have been caused not so much by lack of student engagement as much as it being a function of unstable transportation that the district was responsible for. Students and teachers often

complained that busses arrived late, causing tardies for all the students on the bus. Hence, a higher frequency of tardies in my opinion was more a function of external factors that students may not have been able to control.

An additional finding was not entirely consistent with the overall positive impact of the AAA program, nor was it consistent with our expectations based on the theoretical framework of school as community proposed by Sergiovanni. I expected to find higher GPA's among the AAA Academy students as the intervention program contained all the components that the research and theory indicated would contribute to higher student achievement. However, when examining the adjusted means, students in the AAA group had lower GPA's than did students in the control group. This finding somewhat questioned the utility of the AAA program. After all, a higher GPA would tend to indicate higher student achievement. Adjusting the means in this study indicated that we took in to account the effects of the covariates that had the potential to explain some of the variability. The results showed that when the covariates were included in the statistical model resulting in the adjusted GPA, the students in the AAA program had a decreased mean GPA score. The covariates seem to explain away a considerable amount of variability with respect to GPA.

This result seems to contradict our theoretical framework, as Sergiovanni's work indicated that we should expect students attending a program like the AAA Academy (community/gemeinschaft) to have higher academic achievement as measured by GPA than students in the control group. Utilizing my experience as an educational leader with over twenty years of experience in the field I would like to propose three reasons for this seemingly incongruent observation. First, whenever students are struggling in school one

of the first questions administrators ask is whether the struggling student participates in any sports at school or not. Students who are engaged in athletics must maintain a GPA of 2.0 to maintain athletic eligibility and stay on the team, compete, and possibly earn a college athletic scholarship. Student athletes whose grades have dropped have numerous sources of support and both internal and external pressure to improve their grades. The coaches will get involved and often tutor their student athletes until their grades improve and the parents are more alert to their child's struggles and desire for a possible college scholarship and so will engage tutors and offer support for their child to ensure they stay on track. Other athletes on the team will often offer support in the form of tutoring or simply moral support, "Hey, get your grades up, we have a game on Thursday and we need you." The student themselves rally to take care of this sports requirement, which can be a transactional and utilitarian motivation that helps students improve. This is where *gesellschaft* and *gemeinschaft* may be working together in the control group in a more effective way to produce a desired effect. The "coldness" of an external requirement (*gesellschaft*) that will automatically apply perfunctory justice may be motivating relational support, motivation, and positive peer pressure to "gather" around the student athletes in a powerful way that boosts GPA results. I have seen students turn their grades around in days, and yet this "motivation" may not be available to students attending the AAA Academy.

Could there be a necessary tension in the high school years that can blend "bureaucratic pressure" that prepares individuals for "work life" that also retains community? Sports may include elements of both perfunctory performance expectation and relationship building. By stimulating a heightened concern for meeting a policy (2.0

GPA) to stay in a sports community, both the student, their teammates, and their coaches undergo external pressure that can rally and activate a caring community (i.e. the team) to provide a combination of motivation and accountability. The demands of the *gesellschaft* reinforce the *gemeinschaft* nuance but within a focused and serious environment. This may be what is needed to help both students and their support group become socialized to enhance academic performance.

Other realities may also be at play in understanding GPA differences. Second, there seem to be differences in the way teachers assess students in the AAA Academy compared to a comprehensive high school where the control group of students attended, possibly skewing the letter grades and therefore overall GPA. Teachers in the AAA Academy embraced standards-based grading practices, suggesting that student grades should be based solely on student mastery of standards taught by the teacher. Students participating in the control group were exposed to more traditional grading practices where grades could easily be inflated with bonus points, points for participation, points for attendance, and where various assignment categories varied from teacher to teacher so that Teacher A could have a category for tests and assign a weight of 50%. whereas Teacher B could weigh the same category at 40%. Students whose test scores were not as high would feel the overall impact on their final grade much less in a classroom where tests were weighted only 40%. A third possible explanation is that GPA is often used as a measure of academic achievement; however, it may not be the best predictor of overall student success in life. Take the Perry Preschool Project for example, which was implemented in Ypsilanti Michigan in the 1960's and designed to boost academic achievement of children from poor families. The program creators strongly embraced

Sergiovanni's ideas of "school as community" and had teachers visit their students at their homes to build positive relationships and invited parents into the classroom to collaboratively solve common challenges. Students were taken to local banks, airports, and libraries to learn about their community and interact in small groups. Measuring the data a couple of years after the program implementation showed that the children's academic scores did not increase at all. The program was heavily criticized and considered a failure at the time. However, the researchers decided to track the children into adulthood and discovered that those who attended the program had surprisingly more positive life outcomes than did children from the control group. More specifically, children exposed to the program earned more money, had longer and more stable relationships, were healthier, and had considerably less negative interaction with the law. They were also more likely to graduate from high school, go on to college, and displayed much better social emotional skills than did children who did not participate in the program (Heckman & LaFontaine, 2010).

I would like to posit that while the overall adjusted GPA of students who attended the AAA Academy is lower than the control group, we may come to find that they too, like the children from the Perry Preschool Project, will display positive outcomes in other important areas of life that we were not able to measure or capture with the GPA metric. The biggest obstacles for children of poverty frequently stem from the lack of "soft skills" and a lack of engagement or sense of belonging that programs such as the AAA Academy seem to address. The AAA Academy may provide at-risk students with skills in social-emotional well-being, self-efficacy, confidence, communication skills, grit,

resilience, and perseverance, which are all far better predictors of success in life than GPA.

On the issue of ethnicity, the findings of this study showed that ninth-grade students who are Caucasian, African American, and Other had a significantly greater GPA than did Latino/Hispanic students. This was supported by the findings of Swanson (2004) showing that the gap between the White graduation rate and the graduation rates of American Indian, African American, and Hispanic students is incredibly large.

On the issue of attendance, the findings of this current study showed that student attendance in terms of student absences also have an effect on academic achievement measured in terms of GPA. This is in line with the finding of Allensworth and Easton (2007) showing that accurate predictors of whether a student will graduate from high school in four years is the number of freshman-year absences. Neild and Balfanz (2006) found that absence rates are strong predictors of dropping out, and that not only is extremely low attendance a problem (missing one month of instruction or more per semester), but even moderate levels of absences are problematic. The findings of this current study showed that students who participated in the transition program had a lower number of absences than did those students who did not participate. A study conducted by Neild et al. (2001) that controlled for numerous factors such as pre-high school student characteristics also found that ninth grade course failure and attendance have a substantial impact on the probability of student drop outs, which is confirmed by a study conducted by Caldarella and McKee who showed that low attendance and course failure are solid indicators of students dropping out (McKee & Caldarella, 2016).

On the issue of CST scores in Language and GPA I found that the Language CST scores of students also have an effect on academic achievement measured in terms of their GPA. Similarly, Roderick and Camburn (1999) showed that additional factors to consider as reasons for dropping out are weak mathematics and reading comprehension skills.

For contrasting results, the findings of this study showed that the GPA of ninth grade students of different gender and socioeconomic status was not significantly different in both groupings (experimental and control). This contradicts findings in previous studies (Swanson, 2004) that the difference of females outperforming males holds true and steady. The Innovate Public Schools (2015) also showed that gender differences in California for the 2008 cohort showed that 13% more females than males graduated from high school. There is no similar study investigating the effect of socioeconomic status on GPA. Little attention was given to these different groups regarding the effects of SES on graduation rates (Orfield et al., 2004).

Roderick and Camburn (1999) showed that weak mathematical and reading comprehension skills are reasons students struggle with the transition from eighth grade into successful high school careers. Barber and Olsen (2004) analyzed students' self-reports which indicated that students desired more transitional support. Furthermore, Allensworth and Easton (2007) concluded that freshmen-year GPA is one of the strongest predictors of whether a student will graduate from high school in four years. Hence, it was surprising that the adjusted mean for the control group composed of ninth grade students attending regular high school program was higher than the adjusted mean of the experimental AAA Academy group. The AAA Academy program was designed to

address the issues of additional student support during the transitional year with smaller class size, extended instructional time using the block schedule, and strategies that Sergiovanni's work on school as community would support. What could account for this result is unclear. The GPA of a few students was considerably higher in the AAA Academy program, boosting the overall mean. Once the outlier GPA's were removed in order to calculate the adjusted mean, the GPA dropped considerably. Therefore, it seems that the program may have worked very well for a few students in the program and gave them a chance to secure higher GPA's. However, not all may have had that experience. The comparison of the adjusted mean scores showed that students who participated in the transition program had a lower adjusted GPA than did those students who did not participate in the transition program or were exposed to a general and normal high school program after adjusting for or controlling the effects of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline.

In the article "Gender differences in GPA and ACT performance" Buddin (2014) reports that female students consistently receive higher scores in several academic areas including mathematics, social studies, and English language arts and have a higher GPA than do their male counterparts. Swanson (2004) also points out that female students have a higher graduation rate than do their male counterparts, 72% and 64% respectively. It was therefore reasonable to hypothesize that female students would outperform their male counterparts in the AAA Academy program, but that was not the case. According to the results of the ANCOVA, GPA was not significantly different across different genders, neither was there significant difference in terms of GPA when we considered the SES of students, and yet research indicates that SES affects student achievement in profound

ways (Jensen, 2009). Again, the AAA Academy program was designed to provide support for students who need more support with their academic work as they may lack academic support at home. This may have been the case for students in a lower SES who do not have academic support at home and lack academic expertise to assist the student due to their inadequate educational attainment or language barrier.

Finally, the results also indicated a significant interaction between ethnicity and grouping. Hispanic/Latino students in the control group (students attending a regular high school program) had a higher GPA than did the Hispanic/Latino students who were part of the AAA Academy program, which again was surprising and contrary to the expected outcomes.

I asked a few students who finished the AAA Academy program to describe their experience:

“AAA put me back on track,” “I was lazy in eighth grade but the AAA teachers were really involved and monitored me closely,” “I would have procrastinated were it not for AAA Teachers,” “the AAA teachers are really good, they motivate you and keep encouraging you to reach your goals,” “I would have struggled were it not for AAA, teachers helped me, classes are larger in the regular high school, in AAA I had more time to do my work and more time to ask questions and get help from my teachers.” Clearly some students felt that the AAA Program worked for them and benefitted them. One student mentioned, “Mr. M, were it not for the AAA Academy I would not have graduated from high school.” The sentiments that students shared are supported by literature. For example, Herlihy and Quint (2006) in their analysis of improvement programs state that students entering ninth grade can succeed if given the opportunity to

benefit from transition programs that are supportive, where learning is more personalized, and there are special support classes for students. Therefore, while the AAA Academy program worked for some, it may not work for other students. As I began to reflect on conversations I had with the AAA teachers and staff, as well as reflect on my personal experience as an educational leader, potential causes of the AAA Academy ineffectiveness began to surface. I identified several implementation challenges which I strongly believe limit the effectiveness of the AAA Academy program and if addressed could improve the program effectiveness.

Conclusions

Six major conclusions from this study:

1. Those students in the AAA transition program had more positive overall scores than did those in the control group. They had higher unadjusted GPA, better attendance, considerably more credits earned, lower frequency of behavior incidents, and higher CST mathematics and language scores. Only in tardiness did they have more negative results, which was possibly not something students could control.
2. However, the adjusted means suggest that after controlling for the effect of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline students who participated in the transition program had lower adjusted GPA than did those students who did not participate in the AAA transition program.
3. While the adjusted GPA of students attending the AAA program was lower as

compared to the control group, credits earned were higher, thereby helping AAA students to more easily stay on track and graduate within four years.

4. Gender difference was not evident related to the performance measure of GPA, which differs from other findings. This suggested that the GPA between male and female ninth-grade students was not significantly different.
5. The SES difference was not evident related to the performance measure of GPA, which differs from other findings. This suggested that the GPA between socioeconomically disadvantaged students and non-socioeconomically disadvantaged students was not significantly different.
6. There was a significant difference in the GPA between Latino/Hispanic students and students of other races in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates. Specifically, ninth-grade students who were Caucasian, African American, and Other had greater academic achievement in terms of GPA than did Latino/Hispanic students in both programs.

Recommendations

Our findings and conclusions raise some serious questions. First, before making recommendations I wish to provide some anecdotal context in which to frame my recommendations. Those anecdotal discoveries are reviewed first and then used with the data from this study to suggest recommendations to AAA administrators and teachers and then more generally to policy makers and researchers interested in understanding and improving high school retention rates.

Overall Lack of Instructional Leadership

It became evident in the data collection process that AAA did not have an onsite instructional leader. Apparently, to save money the district has not hired an administrator to guide, support, monitor, and lead the AAA Academy program. The program is housed on the campus of the largest high school in the district; however, the “official” principal of the program is located at another school several miles away and tasked with other responsibilities. Hence several teachers find themselves extremely isolated, unsupervised, and unable to receive day-to-day feedback or support from a designated school administrator, which would be the case at any other school. In this type of situation, establishing instructional goals, monitoring, and reviewing or implementing data to drive improvement efforts becomes very difficult, resulting in great variation in terms of instructional quality and delivery between classrooms. Ineffective practices are difficult to spot and correct and effective practices go unnoticed and are not reinforced because the principal is not present and the teachers operate autonomously and independently. Research has shown that after teachers, school principals are the second most important variable in terms of student achievement. While their effect is indirect, it is of paramount importance (Witziers, Bosker, & Krüger, 2003).

Negative Stigma Associated with Attending the AAA Program

One student commented, “AAA has a bad name Mr. M, I felt disappointed to be in this program.” Another student stated, “When you think AAA, you think kids that are not smart.” I also heard from a student that their middle school teachers threatened them with AAA Academy by saying that “if you fail my class you are going to be sent to the

AAA Academy where all the other F students go and you will not get to do sports or anything.” Clearly, students are entering the AAA Academy with very negative, preconceived notions about the AAA Academy and overall negative feelings about the school culture and school environment. These negative feelings and sentiments have been shown by research to be associated with lowered academic achievement (MacNeil, Prater, & Busch, 2009).

Problematic Selection and Vetting of Students Selected for the Program

According to the district selection policy principals must choose only those students who fit the selection criteria. The following students should not be selected for the AAA program: English Language Learners levels 1 and 2, Special Education Students with an IEP, students who have been suspended or expelled for violations such as fighting, drugs, chronic defiance, and weapons violations. These students require additional support, services, and accommodations that the AAA program is unable to monitor, coordinate, or provide. Nevertheless, teachers report having to work with challenging students only to find out that the student is a special needs student requiring special services and accommodations and has been incorrectly placed in the AAA program or has never been tested for Special Education Services and should have been. In addition, teachers and staff report working with behaviorally challenged students who often disrupt the learning of others and are difficult to manage, only to discover that the student has been suspended in the recent past for fighting or other serious issues, such as chronic defiance. These students bring drugs to the AAA program along with their negative influence, such as fighting with other students, gang affiliations, which often lead to the student trying to recruit other students to join the gang, bullying other

students, threatening other students, which in turn negatively affects the learning environment and makes the job of teachers and staff more challenging.

Several school improvement efforts in education have become all too often victims of poor implementation and execution efforts. Well-designed programs often fail because of a variety of reasons such as unstable funding for schools, which differs from state-to-state and may change several times in a given school year, forcing educational leaders to cut costs by pink slipping staff or inadequately funding and staffing promising programs or cutting them entirely. At times well designed programs fail to produce because of ineffective implementation efforts by those educational leaders charged with its operation who may lack understanding or experience in program implementation and approach the task with an overly simplistic mindset.

Recommendation to AAA and Similar Intervention Programs

The AAA Academy program showed some positive results, especially in descriptive analysis. An increased number of credits earned, improved attendance, reduced number of behavior incidents, and higher scores on CST math assessment are all positive benefits of the program that may help students stay on track. AAA Academy leaders and educators may enhance the program by improved implementation and effective instructional leadership. In order to assure effective and maximum operational benefit from the AAA Academy program the following actions should be considered:

1. Hire an experienced, skilled, on-site principal fully dedicated to the AAA

Academy program whose sole task would be to build teacher capacity, unify the instructional program, help craft a vision for the program, maintain instructional

integrity, set high expectations for teaching and learning as well as student behavior, and lead the staff in the continuous data-driven instructional improvement process.

2. Engage in collaborative dialogue with principals and teachers of the feeder middle schools about the negative stereotype of the AAA Academy and begin to change the prevalent faulty and negative assumptions.
3. Hire a full time counselor to work closely with students and their families and attend to not just academic and scheduling needs, but to the social-emotional needs of the students and their families and work closely with teachers and the principal to create a positive, nurturing, and supportive school climate.
4. Improve the vetting process of potential AAA Academy candidates by utilizing enhanced data collection and data analysis techniques and enhanced screening processes to ensure that only students who fit the criteria and have a high chance of succeeding in the program are invited.
5. Consider allowing students to engage in extracurricular activities, athletics, and clubs with students from the comprehensive high school to increase student motivation and a sense of belonging and connectedness, ultimately resulting in higher student achievement.
6. Pair up each AAA student with a role model in order to increase a sense of belonging, connectedness, and support.

Recommendations for Policy

Historically, the main focus of state education policy mechanisms have been the three goals of public education – equity, efficiency, and quality. States have utilized seven unique policy mechanisms to impact the three goals – structural organization, revenue generation, resource allocation, program definition, personnel training and certification, student testing and assessment, and curriculum materials development (Mitchell & Encarnation, 1984). However, policies tend to interact and at times conflict with each other so that a program definition policy which aims to create novel intervention programs for students may conflict with revenue generation policy aimed at more efficient use of resources. Policy makers need to make sure that they strategically structure policies in such a way that they complement each other so that cost-effective delivery of novel intervention programs becomes available to all students who need them and not just those who attend districts that can afford them.

In addition, despite the best intentions of policy makers, schools have been plagued with rapidly changing policies and programs that are rarely adequately evaluated. As a result, educators in the field, teachers, and administrators have limited knowledge of the program’s immediate or long lasting efficacy and benefit, resulting in paucity of actionable data and “initiative fatigue.” Therefore, policy makers should consider taking more time to support studies such as this one, that offer valuable information on program effectiveness, and should support additional evaluation efforts by researchers and practitioners, allowing for a better

understanding of program/policy impact prior to initiating any new policies and initiatives.

Recommendations for Further Research

Future studies could also examine other possible predictors of student achievement or GPA. These could include school related factors such as school climate, school size, and teacher factors such as teacher morale and teacher efficacy related to the AAA program, and curricula training as well as school leadership and school governance. Future studies could also investigate the contribution of teaching skills to the academic achievement of students. Other factors that impact the academic achievement of ninth-grade students are factors related to their household. These include the type of parent households (one parent or two parents), family traits, religion, and other social factors. Notably, urban students entering ninth grade experience difficulties associated with limited access to family resources that may provide support when navigating transition challenges. This should be investigated in future research.

Concluding Thoughts

While the national graduation rate (84%) and California graduation rate (82%) have steadily risen over the past five years from the low 70%, challenges remain that demand our attention. Namely, students of color (71%), Hispanic/Latino students (79%), low socioeconomic students (78%), students with special needs (65%), and English Language Learners (69%) continue to lag behind their Caucasian (88%) and Asian (93%) peers considerably (DePaoli, Balfanz, & Bridgeland, 2016). If these differences in

student achievement are left unaddressed by schools and school districts we will continue to see an inequitable distribution of access to resources and the continued social ills that plague poor and minority communities and individuals with special needs who are often unable to advocate for themselves. What is needed are compassionate committed school districts that are willing to try new approaches to help students succeed. One such approach is the AAA Academy approach. My research was not able to substantiate that this program helped students increase their GPA appreciably in the presence of covariates; however, the unadjusted or actual GPA was higher in the experimental group and could be higher if students were allowed to participate in sports and join clubs to increase their engagement and connectedness. In addition, my data showed some positive numbers for those who participated in the program, increasing my hope that more can be done to help create innovative interventions and effectively implement them to serve our students. This hope sustained me while conducting this study, even with some of its less than ideal findings and continues to motivate and inspire me as an educator.

APPENDIX A

Hypotheses for Research Questions

Hypotheses for Research Question 1

H₀. There is no significant difference between the experimental and control group in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

H_a. There is a significant difference between the experimental and control group in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

Hypotheses for Research Question 2

Hypotheses-Gender

H₀. There is no significant difference between males and females in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

H_a. There is a significant difference between males and females in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

Hypotheses-Socioeconomic Status

H₀. There is no significant difference between socioeconomically disadvantaged students and non-socioeconomically disadvantaged students in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

H_a. There is a significant difference between socioeconomically disadvantaged students and non-socioeconomically disadvantaged students in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

Hypotheses-Ethnicity

*H*₀. There is no significant difference between Caucasian, African American, and Hispanic students in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

*H*_a. There is a significant difference between Caucasian, African American, and Hispanic students in terms of GPA in the presence of Mathematics CST scores, Language CST scores, credits earned, student attendance, and student discipline as covariates.

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