

A Qualitative Analysis of School Leadership Behaviors and Levels of
Representation of One Minority Population in Advanced Placement Courses in
One Southeastern Virginia School District

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ABSTRACT

This qualitative case study analyzes the underrepresentation of minority students in Advanced Placement (AP) courses in Virginia high schools and examines the influences that encourage school leaders to lessen the existing gaps at their assigned schools. Data from a division in southeastern Virginia summarizing each school's minority representation in its AP courses were analyzed. After identifying the schools' minority representation levels, qualitative research methods were used to determine the impact, if any, of school leaders on student participation rates. Additionally, qualitative data from individual interviews were considered to determine if school leaders who had a higher representation of minority populations at their schools demonstrated intentional actions to address AP participation in their schools.

The results of this study indicate that principals believed that all capable students should have access to AP courses and that teachers and counselors influence students' decisions to enroll in AP courses. Additionally, principals found that sharing data reflecting their school's representation rates helped justify the need to improve student participation in AP courses. Principals with high participation rates placed importance on communicating to students the opportunities obtained by participating in AP courses and expected school staff to encourage students with potential to participate in more rigorous courses.

Principals with higher minority representation rates in advanced courses were also found to frequently remind a variety of stakeholders to encourage students to participate in AP courses. Furthermore, principals with higher minority representation in AP programs used more "we," "us," and "our" statements and references to a team approach when asked about their work. Finally, this study found that specialized academies create environments where stronger student representation rates can occur in AP courses for all student groups. The results of the study have the potential to impact high school leaders as they seek to improve outcomes for the students they serve.

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GENERAL AUDIENCE ABSTRACT

This study analyzes the participation rates of African-American students in Advanced Placement (AP) courses in Virginia high schools and examines the actions school leaders take to lessen the existing gaps at their assigned schools. After identifying the schools' minority representation levels from one school division, methods were used to determine the impact, if any, of school leaders on student participation rates. Additionally, information from individual interviews was considered to determine if school leaders with higher representation of minority populations demonstrated intentional actions to address AP participation in their schools.

The results of this study indicate that principals believed that all capable students should have access to AP courses and that teachers and counselors influence students' decisions to enroll in AP courses. Additionally, principals found that sharing data reflecting their school's representation rates helped justify the need to improve student participation in AP courses. Principals with higher participation rates placed importance on communicating to students the opportunities obtained by participating in AP courses and expected school staff to encourage students with potential to participate in AP courses. Principals with higher minority representation rates were also found to frequently remind a variety of stakeholders to encourage students to participate in AP courses. Furthermore, principals with higher minority representation in AP programs used more "we," "us," and "our" statements and references to a team approach when asked about their work. Finally, this study found that specialized academies create environments where stronger student representation rates can occur in AP courses for all student groups. The results of the study have the potential to impact high school leaders as they seek to improve outcomes for the students they serve.

Dedication

This dissertation is dedicated to my father-in-law, James Porter Sr. For as long as I have known him, he has challenged me to consider what is next. He has always believed in me and seen things in me that I could not yet see. I am thankful for our times together, especially our morning coffee before everyone else in the house would wake. Thank you, Dad, for inspiring me to take this step in my journey.

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Chapter 1

Introduction

High schools are responsible for preparing students for various postsecondary destinations (Achieve, 2014). However, the world that high schools were designed to support has become a global knowledge-based economy in which almost all careers require some postsecondary education or training beyond high school (Achieve, 2014; Rowlett, 2013). Ensuring equitable student access to rigorous coursework is a challenge for our schools and stakeholders in education (Adelman, 2006; Styron & Styron, 2011). Advancing equity in schools is not only a moral issue, but it also results in higher achievement levels for students and makes for more successful school outcomes (Blankstein, Noguera, Kelly, & Tutu, 2015).

Participation in rigorous high school coursework, as found in Advanced Placement (AP) courses, leads to equity in the labor force, military, higher education, and society (Oliver 2012). Enhanced understanding of demographic representation in rigorous high school courses, such as that found in AP classes, promotes social justice through equitable education attainment (Brown, 2006). There is underrepresentation of minorities in AP participation and minority AP college credit acquisition in US high schools (College Board, 2014). Effective principals create a climate that seeks improvement for their students (Strouse, 2004). The objective of this study is to determine whether leadership beliefs and actions influence AP participation rates, and if so, what school leaders can glean from this information to increase minority AP participation and AP success rates in the United States.

Overview of the Study

This qualitative study focuses on understanding of the beliefs and actions with regard to proportional representation taken from the principal's perspective with the purpose of improving school leaders' impact in their schools (Brooks & Normore, 2015). The objective of this study is to investigate the contemporary phenomenon of underrepresentation of Black student participation in AP courses within the real-life context of American high schools (Handwerk, Tognatta, Coley, & Gitomer, 2008). A phenomenological approach was utilized to develop a clear understanding of the particular beliefs and actions of the participants (Merriam, 2009). The study was completed using interpretive, in-depth research of a purposeful, criterion sample of

principals from a school division in the southeastern region of Virginia (Brooks & Normore, 2015).

The subject pool for this study included seven high school principals from one school district in southeastern Virginia, which is committed to offering AP courses at each high school. The population was selected based on the varied levels of participation in AP evident at the high schools where they serve as principals. Inductive investigative strategies were employed to collect the data from the high school principals. Within the seven high schools in the division, this study focused on the varied levels of Black student participation in AP courses.

Data collection primarily consisted of a series of qualitative interviews and document analysis (Fowler, 2009). Open-ended, informal interview techniques were utilized in the individual interview sessions, and the data were documented through interview transcripts, field notes, and emails. Using an inductive analysis of data, emerging critical themes were used to inform practitioners of the findings and implications for professional consideration (Merriam, 2009).

Historical Perspective

The educational organization in the United States is a central topic of debate regarding our country's impending future (Tui, 2016). Providing high school students with access to rigorous coursework has been deemed essential for preparing students for professional and educational success after graduation (Handwerk et al., 2008). In 1983, the *A Nation at Risk* report suggested that high school education must be strengthened to address the country's increasing need for employees with proficiency and skills in the realms of business, manufacturing, science, and technology (U.S. National Commission on Excellence in Education, 1983). When the No Child Left Behind Act passed in 2001, the educational system in the United States was challenged to educate all of America's children effectively (Tui, 2016). More recently, a 2006 study, *The Toolbox Revisited*, affirmed that the rigor and intensity of high school courses are the most substantial predictors of success in college (Adelman, 2006).

Providing students with opportunities to take advanced coursework in high school better prepares them for success in higher education (College Board, 2014; National Academy of Sciences, 2007). Candidates who experience AP courses in high school are often placed ahead and do better in college programs (Cassery, 1986). Research shows that access to academic rigor

often varies among racial and ethnic groups in American high schools (Lord, 2000; Adelman, 2006; Saravia-Shore, 2008), and several studies have revealed that a student's socioeconomic status and race may influence course placement and subsequent academic achievement for students in the minority (Corra, Carter, & Carter, 2011; Dougherty, Mellor, & Jian, 2006).

Statement of the Problem

A disparity exists in the participation and performance of minority students in AP courses (College Board, 2014). Despite numerous interventions and increased federal and state monitoring systems (No Child Left Behind, 2001; USDOE, 2010; VADOE, 2015), an obvious participation and success gap continues to be present for students in the minority, which limits their access to higher education and career opportunities (Oliver, 2015).

The principal's role, by its very nature, might be the single most determining element in the success or failure of a school (Tui, 2016) because the principal's actions and beliefs alone could change the level of participation by minority students (Velasco, Edmondson, & Slate, 2012). Thus, a study that investigates student participation and success in rigorous courses by way of school leaders acting with intention could address this problem and ultimately result in more equitable representation in higher-level courses. This study addresses this need. It is the school leader's responsibility to ensure that every learner receives a quality education (Hill, 2014).

Purpose of the Study

The purpose of this study is to identify the differences, if any, in the expressed beliefs and actions of school principals in schools with varying levels of minority student representation in their AP courses. This study therefore collects and analyzes data to determine whether school leaders who demonstrated intentional actions to address AP participation in their schools had a higher representation of minority populations at their schools. The results of the study have the potential to impact high school leaders as they seek to improve outcomes for the students they serve.

Justification of the Study

Evidence suggests that, while students who take AP courses and tests in high school typically achieve greater success at the university level than those who do not (Southern

Regional Education Board, 2005), a discrepancy remains among the subgroups of pupils who leave high school qualified for college admittance (Greene, 2005). Research also suggests that notable race inequities remain in AP enrollment and test scores (College Board, 2014; Corra et al., 2011; JBHE Foundation, 2004; Venkateswaran, 2004)

As agents of the federal, state, and local government, school leaders are required to ensure equity of educational experience and opportunity (Oliver, 2015). Thus, using a team approach, school leaders can be more effective in addressing such high priority matters (Hill, 2014). Ensuring equitable student access to rigorous coursework should be a priority for our schools and stakeholders in education (Adelman, 2006; Styron & Styron, 2011). Strouse (2004) proved that effective principals seek improvement for their students. Therefore, studying the actions and beliefs of effective school principals with smaller gaps in AP participation could provide considerations that have the potential to turnaround participation rates at other schools (Tui, 2016).

Research Questions

The main questions of this research study are as follows:

1. *What are the principals' beliefs about the levels of minority representation and success in Advanced Placement courses?*
2. *What actions are principals taking to address the levels of Advanced Placement student representation and success?*
3. *What do principals of schools with high levels of participation in Advanced Placement courses do to contribute to the higher levels of participation?*
4. *What differences exist in the beliefs and actions of principals who have varying levels of minority success and participation in upper-level courses?*

Conceptual Framework

Many factors influence student AP participation and success: peer influence, self-drive and interest, teacher's beliefs and actions, course accessibility, and principal's beliefs and actions (Corra et al., 2011; Osterman, 2000). As Figure 1 shows, this study attempts to isolate the principal beliefs and actions used to support students that result in increased levels of minority AP participation.

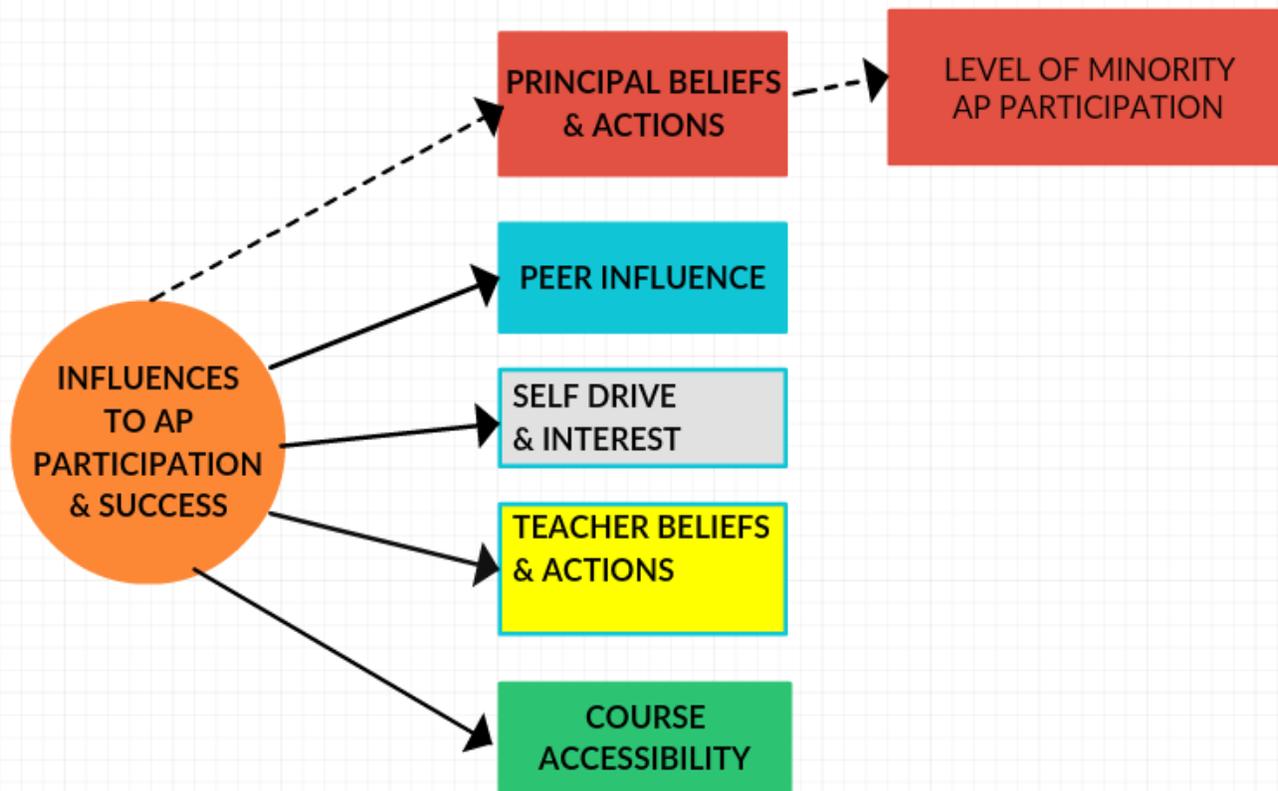


Figure 1. Factors that influence minority student AP participation.

Definition of Terms

To avoid any ambiguity, the following operational definitions will be used for the purposes of this study:

Achievement Gap. The “achievement gap” in education refers to the disparity in academic performance between groups of students. The achievement gap is evident among grades, standardized-test scores, course selection, dropout rates, and college-completion rates, among other success measures (Education Week, 2011).

Action. The process of doing something, especially for a particular purpose (Cambridge academic content dictionary, 2009).

Advanced Placement. AP is a program in the United States and Canada created by the College Board that offers college-level curricula and examinations to high school students. American colleges and universities can grant placement and course credit to students who obtain high scores on the examinations (College Board, 2014).

Beliefs. The feeling of being certain that something exists or is true (Cambridge academic content dictionary, 2009).

Critical Themes. Patterns across data sets that are important to the description of a phenomenon and are associated to a specific research question (Daly, Kellehear, & Glicksman, 1997).

Equity. The quality, state, or ideal of being just, fair, and impartial (Webster's new college dictionary, 2008).

High School. In North America, a high school typically comprises grades 9 through 12, and is attended after elementary and middle schools (Webster's new college dictionary, 2008).

Impact. The strong effect or influence that something has on a situation or person (Cambridge academic content dictionary, 2008).

Minority Students. A group of students who share some characteristic by birth that makes their group smaller than other groups in society (Cambridge academic content dictionary, 2009).

Personal Bias. An inclination or preference that interferes with impartial judgment; prejudice (Webster's new college dictionary, 2008).

Postsecondary School. Relating to education taking place following high school such as trade schools, traditional colleges or universities, or graduate schools (Webster's new college dictionary, 2008).

Success. The achieving of desired results (Cambridge academic content dictionary, 2009). In this study, proportional representation is a measure of success.

Underrepresented. Representation of numbers that is disproportionately low or inadequately represented (Webster's new college dictionary, 2008).

Limitations/Delimitations

While qualitative research studies are valuable for the insight they provide into beliefs, thoughts, perceptions, and processes, they are not without inherent weaknesses (Brooks & Normore, 2015). Although knowledge gleaned using qualitative methods cannot automatically be generalized to other populations and other settings, the researcher can provide sufficiently detailed information to allow the reader to determine whether the findings are applicable and transferable to another specific environment (Curry, Nembhard, & Bradley, 2009). Another

related limitation is the inability to make quantitative predictions based on qualitative results. The researcher assumes that the participants in this study will be open and honest in their responses; however, the results of the study will be limited by the level of honesty and depth of the responses.

This study was delimited because the interviews were limited to principals from one school division and not multiple ones. Another delimitation in this study was the researcher's decision not to interview other stakeholders, such as counselors, parents, or teachers, who play a role in supporting students' course selection decisions. Additionally, this study only addresses the representation in AP courses and does not consider other advanced programs such as International Baccalaureate, Cambridge, dual enrollment, or honors courses.

Organization of the Study

This study is organized into five chapters. Chapter One provides an overview of the study, the historical perspective, the statement of the problem, the purpose and justification of the study, and the research questions. Chapter One also describes the conceptual framework of the study, provides definitions of important terms, and explains the limitations and delimitations. The chapter concludes with a brief description of the organization of the study.

Chapter Two presents the literature review of the context, important findings, topics, and discussions related to the study. The main sections of Chapter Two are (a) the purpose of the literature review, (b) an explanation of the search process, (c) a restatement of the purpose and research questions, (d) a brief history of education, (b) high school roles and responsibilities, (c) AP background and benefits, (d) equitable access to AP courses, (e) evidence of underrepresentation in AP courses, and (f) school leadership impact. This chapter closes with a brief summary of the literature review.

Chapter Three opens with a restatement of the purpose of the study, followed by a description of the research design and the methodology utilized. Explanation of the site and sample selection, the data collection and data gathering procedures, and the instrument design and validation steps are also provided. This chapter closes with a description of the data management and the data analysis techniques utilized.

Chapter Four provides a quick review of the research questions, the interview questions, and the purpose of the study and presents the raw data collected from the interviews. The data

are organized by research question, presented primarily in narrative form with tables to organize and represent the emerging themes discovered in this work.

Chapter Five synthesizes and summarizes the overall analysis of the study. It contains a summary and implications of the findings and presents the conclusions gleaned from this project. This final chapter also provides implications for practitioners to consider and recommendations for further study. Finally, the researcher shares her reflections of the study process and results.

Chapter 2

Review of the Research Literature

Purpose of the Literature Review

This chapter presents a review of the literature related to the representation of minorities in United States AP courses and examines the impact that their level of participation might have on students as they transition to college or the workplace. This section also reviews existing research that highlights the impact of leadership on narrowing the achievement and participation gaps. An enhanced understanding of the demographic representation in rigorous high school coursework such as AP classes could promote social justice through equitable education attainment. This literature review is delineated by the following themes: background of education and role of American high schools, the background and significance of AP programs, the value of providing equitable access to advanced courses, the representation of minorities in AP courses, and the impact school leadership has on students and learning. Ultimately, this literature review provides insight into the value of school leaders that are working to provide minority students access to higher-level courses at the high school level.

Literature Search Process

The search guiding this literature review involved a variety of sources and approaches. First, background reading related to school leadership, minority underrepresentation, and equitable access helped to provide the general context and foundation for this work. Second, the literature search was performed primarily online using Google Scholar, Education Resources Information Center (ERIC), and the Virginia Tech Library Summons program to search for numerous dissertations and scholarly, peer-reviewed articles. Search terms included *AP programs*, *underrepresentation in upper level courses*, *AP participation*, *school leadership impact*, and *AP benefits*. Search parameters included publication dates after the year 2000 and results that were available in full text format. Google Scholar and Virginia Tech Summons search engines yielded approximately 91,000 sources on the topic of underrepresentation; this was reduced to 4,100 after refining the search by adding additional search terms of dissertations, *equitable access*, and limiting the findings to those written after 2005. The search was further narrowed by reviewing relevant titles and searching for full-text sources. Additional journal

articles and sources were obtained by seeking works cited by other authors.

Purpose of the Study

The purpose of this study is to identify the differences, if any, in the expressed beliefs and actions of school principals in schools with varying levels of minority student representation in their AP courses. Data were collected and analyzed to determine whether school leaders who demonstrated intentional actions to address AP participation in their schools had a higher representation of minority populations at their schools. The results of the study have the potential to impact high school leaders as they seek to improve outcomes for their students.

Research Questions

The main questions of this research are as follows:

1. *What are principals' beliefs about the levels of minority representation and success in Advanced Placement courses?*
2. *What actions are principals taking to address the levels of Advanced Placement student representation and success?*
3. *What do principals of schools with high levels of participation in Advanced Placement courses do to contribute to the higher levels of participation?*
4. *What differences exist in the beliefs and actions of principals who have varying levels of minority success and participation in upper-level courses?*

Background History of Education

The United States was founded on the premise of providing equality for all countrymen (Declaration of Independence, 1776), and as agents of the federal, state, and local government, schools are required to ensure equity of educational experience and opportunity (Oliver, 2015). Over the years, American educators have accepted the undertaking of educating America's diverse population (Brown v. Board of Education, 1954; No Child Left Behind Act of 2001; Title 1, 1967), and educational initiatives have driven the focus in our schools and mandated improved student learning for many generations (Rowlett, 2013). The influence of schooling on students has long been of importance to educational scholars and policymakers (Anderson, 1982; Adelman, 2006; Hattie, 2015; Velasco, Edmondson, & Slate, 2012).

The Elementary and Secondary Education Act (ESEA) was signed into law in 1965 under

the premise that full educational opportunity should be our first national goal. The law provided federal grants to state educational agencies to improve the quality of elementary and secondary education (United States Department of Education, 2010; Styron & Styron, 2011). In 2001, a significant shift occurred when Congress reauthorized ESEA under the new title, No Child Left Behind (NCLB). The No Child Left Behind Act challenged the educational system to refocus its efforts to educate all of America's children effectively (Tui, 2016). NCLB put measures in place that exposed achievement gaps among traditionally underserved students and their peers and started a national discussion about educational improvement (Styron & Styron, 2011, United States Department of Education, 2010).

In 2009, President Obama and the Obama administration created *Race to the Top*, an educational reform initiative intended to endorse innovation and excellence in America's schools to prepare every student for the demands of the 21st Century. One of the primary emphases of *Race to the Top* was to encourage states to be inventive about raising standards and equipping students for university and occupations (United States Department of Education, 2010).

Recently, ESEA was reauthorized as the Every Student Succeeds Act (ESSA), and in this reauthorization, Congress redefined the federal role in elementary and secondary education (Education Week, 2016). Undoubtedly, no matter the initiative, ensuring equitable student access to rigorous coursework should be a priority for our schools and stakeholders in education (Adelman, 2006; Styron & Styron, 2011). However, these numerous educational reform movements in the United States over the past three decades have not yet resulted in the outcomes educators and policymakers are seeking (Tui, 2016).

High School Roles and Responsibilities

High schools are responsible for preparing students for various postsecondary destinations, including higher education, vocational training, and participation in jobs that require hard work with minimal skills (Achieve, 2014). In recent years, increased consideration has been given to matters of diversity and the achievement of learners from all backgrounds in the school system (Conner, Rabovsky, Thaddieus, & Thomas, 2011). The world that high schools were designed to support has been replaced by a global knowledge-based economy in which almost all careers require some postsecondary education or training beyond high school (Achieve, 2014). Thus, high schools play a central role in helping the United States sustain long-

term economic growth. Low high school graduation and college-readiness rates, particularly among the fastest-growing segments of the population—minority and low-income youth—require a response from educators who are tasked with improving these outcomes (Conklin, 2005). Moreover, the current school environment of high-stakes testing and increased accountability results in an environment that continues to be challenging for today’s school leaders (Velasco et al., 2012).

Evidence suggests that a discrepancy exists among the subgroups of pupils who leave high school qualified for college admittance (Greene, 2005). Without modifications in the educational attainment of these student populations, the share of the U.S. workforce with post-high school education will not meet the needs of our nation and the skill demands of future jobs. In 2005, Conklin predicted that in the next decade, 80% of all new jobs would require postsecondary skills (Conklin, 2005). As predicted, many of these jobs were filled by or subcontracted to trained adults in China, India, and other major countries of the industrialized world and not occupied by Americans (Amadeo, 2017).

In this age of greater accountability, educators are encouraged to seek best practices that meet the needs of today’s diverse classroom populations. As a result, school officials understand the importance of monitoring the progress of student subgroups, especially at-risk populations such as minorities, low income students, and special education students (Rowlett, 2013). Minorities and students in poverty often perform poorer than their more advantaged peers on tests, and achievement gaps are present (College Board, 2014; Saravia-Shore, 2008).

Academic optimism, the teachers’ confidence about teaching and learning in their school, has been connected to the opportunities afforded to students from all backgrounds (Woolfolk – Hoy, 2012). The implication of improving access to quality instruction beyond high school for students of various backgrounds is essential in “addressing the growing gaps between the haves and have-nots” (Conner et al., 2011, p. 106). Thus, building connections and providing access to more demanding courses, such as AP and honors classes, could help to bridge achievement gaps that exist for minority students (Saravia-Shore, 2008).

Considering the subject of providing equal access to rigorous courses aligns with what high schools should consider when ensuring equal opportunity and meritocracy (Anthony & Stephen, 2003). Improving the underrepresentation of African Americans and other underserved student groups in higher level educational programs requires an intentional effort (Michael-

Chadwell, 2011). Individuals are continually shaped by the situations they encounter, both encouraging and destructive, and these experiences often change people's perspectives as they reorder their priorities. As such, "blaming skin color" for underachievement in courses is "merely a convenient scapegoat" (Rowlett, 2013, p. 4). An increase in minority representation in honors and AP courses at the high school level would require more minority students to participate in advanced level courses at the middle and junior high levels, which could reduce the achievement gap that exists between minority students and their White peers (Killingsworth, 2011).

Even for those not in the instruction arena, AP plays a significant role in measuring school quality (Santoli, 2002). The nation's top 100 public high schools, listed in a March 2001 issue of Newsweek, were ranked "based on the number of Advanced Placement exams" students took (Russo, 2000, p. 2); there is no question that more opportunities are available to students who successfully complete AP courses in high school (College Board, 2014).

AP Background

The AP Program, launched by the College Board in 1955, provides high school students with the prospect of earning college credit while still in high school (Southern Regional Education Board, 2005). The AP Program began with a project financed by the Fund for the Advancement of Education of the Ford Foundation (Santoli, 2002), which addressed the problem of academically capable students repeating classes they had completed in high school during their preliminary courses at university. A group of college and high school educators suggested that achievement examinations be set up in major subjects to allow students to obtain college credit while in high school (Casserly, 1986; Kreider, 1979).

This project brought together high school teachers, university professors, and representatives from the Educational Testing Service, who established high school course frameworks, curriculums, and assessments that were first offered to students in 1954. In 1955, the College Board acquired the program and converted it into the AP Program. The first assessments under the College Board took place in 1956. The foundational concepts behind the program were that many high school students were adept and capable of accomplishing college-level work, and many school divisions had the desire and ability to offer college level courses. The course prospectuses and rigorous course standards were avenues to the program's success

(Kreider, 1979).

The AP Program currently provides 37 courses and exams taught by specially trained instructors (College Board, 2014). Table 1 lists the available AP courses.

Table 1

AP Course Titles and Departments

Course Title	Department
AP Research	Capstone
AP Seminar	Capstone
AP Art History	Art
AP Music Theory	Art
AP Studio Art: 2-D Design	Art
AP Studio Art: 3-D Design	Art
AP Studio Art: Drawing	Art
AP English Literature and Composition	English
AP English Language and Composition	English
AP Comparative Government & Politics	History & Social Science
AP European History	History & Social Science
AP Human Geography	History & Social Science
AP Macroeconomics	History & Social Science
AP Microeconomics	History & Social Science
AP Psychology	History & Social Science
AP US Government & Politics	History & Social Science
AP US History	History & Social Science
AP World History	History & Social Science
AP Calculus AB	Math & Computer Science
AP Calculus BC	Math & Computer Science
AP Computer Science A	Math & Computer Science
AP Computer Science Principles	Math & Computer Science
AP Statistics	Math & Computer Science
AP Biology	Sciences
AP Chemistry	Sciences
AP Environmental Science	Sciences
AP Physics C: Electricity & Magnetism	Sciences
AP Physics C: Mechanics	Sciences
AP Physics 1: Algebra-Based	Sciences
AP Physics 2: Algebra-Based	Sciences
AP Chinese Languages and Culture	World Languages & Cultures
AP French Language and Culture	World Languages & Cultures
AP German Language and Culture	World Languages & Cultures
AP Italian Language and Culture	World Languages & Cultures
AP Japanese Language and Culture	World Languages & Cultures
AP Latin	World Languages & Cultures
AP Spanish Language and Culture	World Languages & Cultures
AP Spanish Literature and Culture	World Languages & Cultures

Because AP teachers develop courses with educational thoroughness and rigor that

enable the learner to successfully pass a college-level examination in these subjects (College Board, 2014), many universities grant transferable college credit to students who receive a passing score of between three and five on the AP exam (Southern Regional Education Board, 2005). AP tests are scored on a scale of 1 to 5, ranging from 1 for no recommendation to 5 for extremely well qualified to one (AP Central, 2015). A 3 is required to qualify for college credit to be considered (College Board, 2014).

Grading AP tests is a process: the multiple-choice questions are scored by a computer, and the open reply and essay responses are scored by specially trained, qualified teachers at the AP Reading each June. Multiple reviews and statistical analyses are performed during the grading event to ensure consistent and reliable scoring. The overall goal is for the outcomes to reflect a scale of performance that can be equated over time (AP Central, 2015; College Board, 2014).

Of major implication to universities are the skills imparted and the organization of AP classes (Santoli, 2002). While course outlines, symposiums and workshops, sample examinations, and sample prospectuses are often provided by the College Board, university faculties provide input and contribute to the AP course descriptions, assessments, and criteria (College Board, 2014). Additionally, the College Board scrutinizes each component of the exam, commonly reviews assessments and course submissions, and permits educators to have the composition portions of their examinations returned to the school for feedback purposes (Santoli, 2002).

Furthermore, students who participate in the AP program are exposed to highly qualified teachers and a rigorous curriculum (Contreras, 2005): “AP programs can provide an atmosphere of high anticipations for students, a venue where a college-going philosophy may be promoted” (Dosal, 2008, p. 1). Thus, if undergraduates successfully complete an AP course and receive a passing grade for the exam, they may obtain college credit and potentially decrease the time needed to earn a college degree (Contreras, 2005).

Over one-half of all U.S. high schools provide AP courses as an option for their students (College Board, 2014; Lord, 2000; Santoli 2002), and the College Board is continually increasing the quantity of available AP courses (College Board, 2014). Additionally, while AP courses were initially designed for students in the 11th and 12th grades, they are now also open to 9th and 10th graders (Santoli, 2002).

AP students tend to be ready and enthusiastic for more challenging coursework that prepares them for the future (Casserly, 1986; Dosal, 2008), and students who take AP courses and tests achieve greater success in their first year of university than those who do not; the advantage is even apparent for those who fail to obtain university credit (Southern Regional Education Board, 2005).

The College Board provides recommendations to schools to assist them in helping students determine their inclination and readiness for AP coursework. Using a student's GPA or letter grade in a prerequisite class might be considered in their recommendation (College Board, 2014). One of the most reliable predictors of success in AP courses is considered to be one's results on the Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT®) sections, which are highly associated with achievement in AP (Ewing, Camara, & Milsap, 2006). From these PSAT/NMSQT results, the AP Potential™ tool can identify learners with a 60% or higher probability of succeeding in specific AP areas (College Board, 2014).

Student participation in AP programs has grown significantly over the years. In 1955, 1,229 students participated in AP programs, and the results were sent to a few dozen colleges (Alpern, 1984; College Board, 2014). However, in 2013, more than 2,342,528 students participated in AP programs in 19 subject areas, and the results were sent to 4,121 colleges (College Board, 2014). Figure 1 shows the significant increase in the number of AP exams taken and the number of students participating in AP testing over the decades (College Board, 2014).

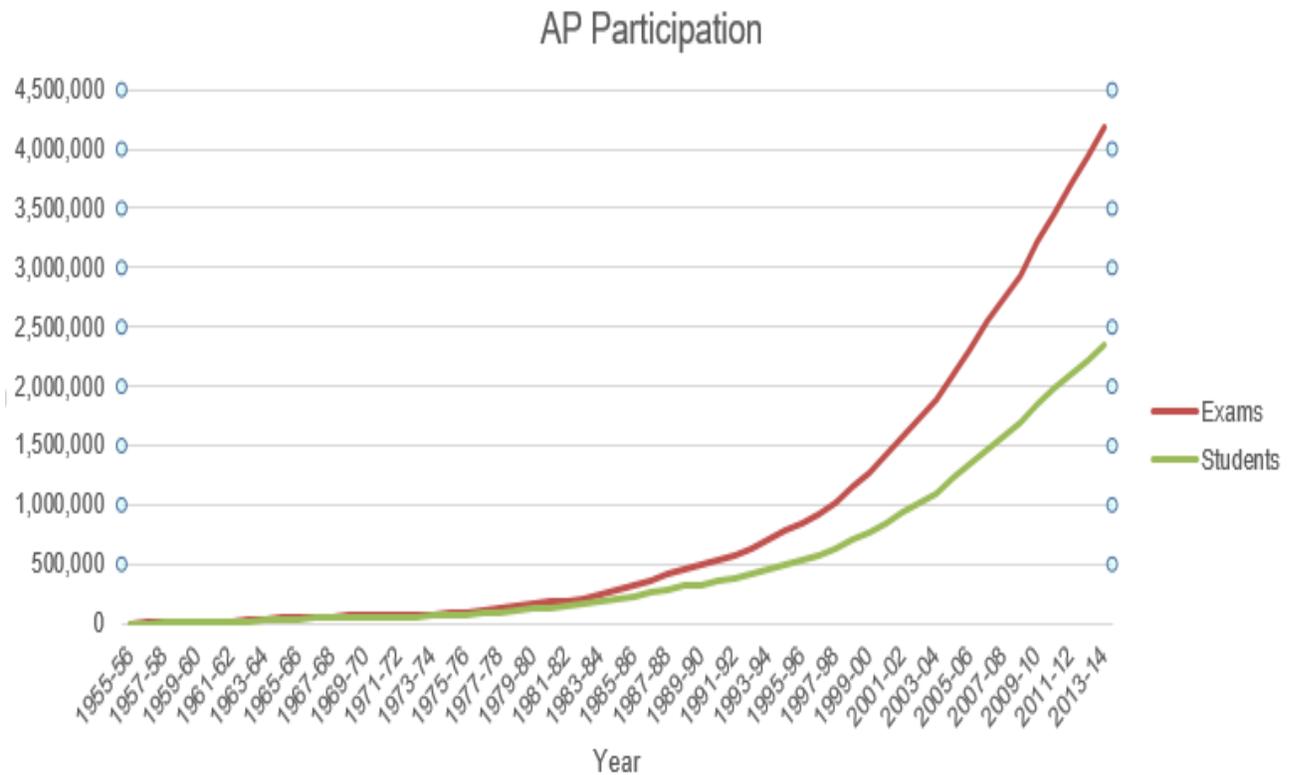


Figure 2. AP participation from 1955 to 2013 (College Board, Report to the Nation, 2014).

AP Benefits

The benefits of taking AP courses in high school are significant (College Board, 2014). Not only are these classes more thought-provoking than regular general education classes, but the impact these courses have on one's admission to college and the ability to test out of college courses are also obvious reasons to take AP classes (Mason, 2010; Santoli, 2002). Thus, AP courses have become the desired options for those with ambitions of attending a university or college after high school (Killingsworth, 2011). Additionally, the successful completion of AP coursework helps qualify students for various scholarships; 31% of colleges and universities consider the level of AP involvement when making recommendations for scholarships (College Board, 2014; AP Central, 2015).

Research results clearly point to the benefits of the advanced or accelerated classes on the secondary school level (Alford, 1992; Casserly, 1986; College Board, 2014; Killingsworth, 2011; Mason, 2010). Some colleges use AP test scores to exempt students from introductory coursework, others use them to place students in higher-level courses, and some do both (College

Board, 2014; AP Central, 2015). Because AP courses are among the most demanding learners can take, they allow college-bound students to gain the skills needed for success in college (Killingsworth, 2011).

AP courses are not only advantageous for college admission and obtaining scholarships, but they also indicate a higher chance finishing college (Casserly, 1986; Mason, 2010). Dropout rates are lower among AP students, which is likely because rigorous high school courses better prepare students for college work (Lord, 2000; Mason, 2010; Santoli, 2002). Honors courses help learners prepare for the challenge presented by AP courses and the more rigorous college environment (Killingsworth, 2011). Thus, students who submitted AP scores to colleges were likely to continue with courses in those fields (Santoli, 2002).

The growing number of students taking AP options indicates a belief in the benefits of the AP Program (Killingsworth, 2011; Lord, 2000; Russo, 2000; Santoli, 2002), and existing research supports that AP advantages for students, teachers, schools, and universities exist (College Board, 2014; Lord, 2000; Santoli, 2002). Students in AP courses benefit from high quality, motivated teachers; can receive college credit for high school courses; and are better prepared for attending college (Santoli, 2002; Willingham & Morris, 1986). Students can also save college tuition money with successful scores on AP exams and do not waste time or money retaking a course they have already mastered (College Board, 2014; Mason, 2010; Santoli, 2002).

Schools benefit from the recognition that comes from offering AP courses and having students successfully obtain credit on AP exams because they might attract more motivated students and teachers (Santoli, 2002). Student enrollment and success in AP classes is especially important because the results of these courses are included in college admission criteria (Klopfenstein, 2004).

Universities benefit from enrolling students who are better equipped to finish college courses successfully and who are proven to be motivated and skilled students. Economically, institutions benefit because students who have successfully completed AP courses are more inclined to graduate and seek higher degrees. Therefore, apportioning resources for AP courses seems to be a cost that pays off educationally and economically for all involved (Santoli, 2002).

Equitable Access to AP Courses

According to the College Board (2014), “all students who are academically ready for the rigor of AP—no matter their location, background, or socioeconomic status—have the right to fulfill that potential” (p. 28). However, research suggests that race inequities remain in AP enrollment and AP test scores (Corra et al., 2011; JBHE Foundation, 2004; Venkateswaran, 2004), and thousands of qualified learners in the U.S. have failed to take courses in existing AP subjects in which they had the potential to be successful (College Board, 2014).

Research shows that students who feel safe and acknowledged are more likely to display independence and self-regulation, while students who experience rejection often reveal a reluctance or incapacity to adapt to standards and appear less capable of acting autonomously (Osterman, 2000). Although many school mission statements state that all students will be challenged, faculties often build hurdles to student independence with inflexible tracking guidelines that hamper student admittance to AP classes (Alford, 1992; Hattie, 2015). Many of the changes needed to satisfy students’ desires for acceptance and building relationships involve sweeping changes in the social norms, procedures, and policies that govern schools, predominantly at the secondary level (Osterman, 2000). The importance of addressing students’ needs for relatedness and making connections within the context of the school has been researched, but much remains to be learned about the significance of the issue (Osterman, 2000).

Existing literature discusses varying elucidations of inequalities for minority students in education (Alford, 1992; Corra et al., 2011; Osterman, 2000). While some researchers contend that inconsistencies result from variances in ability, others hypothesize that social influences—such as stereotype risk, a disparity in expectations, and race hostility—result in imbalanced educational outcomes (Corra et al., 2011).

The honors and AP classroom environments might reflect what has been characterized as “White space,” where minority students feel alienated from the teachers, classmates, and course materials (Corra et al., 2011). As a result, the challenges of equitable enrollment appear not only in access and placement, but also in student motivation (Darity, Castellino, Tyson, Cobb, & McMillen, 2001). Multiple sources have noted that Black and Hispanic learners do not have equitable access to AP classes and, more significantly, they are not achieving at the same levels as their White and Asian counterparts (College Board, 2014; Southern Regional Education Board, n.d.).

The disproportionality found in AP testing and performance might also reflect the disparities among schools' AP class offerings (College Board, 2014). Not all schools have vigorous AP programs. Therefore, to increase prospects for students, AP course offerings could be expanded in schools, especially those with the highest minority enrollments (Dosal, 2008).

Underrepresentation in AP Courses

“African Americans are underrepresented at every level of higher education, and their unemployment rate has hovered at more than double that of their non-Hispanic, Caucasian counterparts for the last 20 years” (Parris & Holbert-quince, 2010, p. 418). This is likely because Black, Hispanic, and Native American high school students are underrepresented in AP courses that are known to provide students with a jumpstart on college preparation and serve as a forecaster of future college success (College Board, 2014; Hayes, 2007). For equitable representation to exist, the ratio of any subgroup of students in advanced courses should approximate its percentage of the school population. However, obvious gaps are present between minority (specifically Black, Hispanic, and American Indian) students and White and Asian students in comparative proportions of students participating in honors and AP programs (Darity et al., 2001).

Michael-Chadwell (2011) suggested that an underlying discrimination agenda exists in American public schools, and Council, May, and Chubin (2003) surmised that the national K-12 educational system has failed to prepare minority students in science, mathematics, engineering, or technology. The reality is that African American students are disproportionately taking lower-level courses than their White counterparts (Rowlett, 2013): “Black/African American students in the graduating class of 2013 were the most underrepresented racial group in AP classrooms and in the population of successful AP Exam takers” (College Board, 2014, p. 30).

The impact of this reality carries over to careers and the workforce; there is not equal representation found in science, technology, engineering, and mathematics (STEM) occupations in our country. Although they total nearly 13% of the total workforce, African Americans represent only about 5% of the STEM occupations, such as mathematicians, scientists, and technologists (Alliman-Brissett & Turner, 2010), and it is believed that this lack of Black students' representation in STEM-related fields is a direct result of their underrepresentation in high school college preparatory and AP classes. In 2006, for example, only 25% of African

American high school graduates participated in college preparatory programs at their high schools (Palmer, Davis, & Moore, 2010). As a result, African Americans are underrepresented on AP examinations, and, according to Alliman-Bissett and Turner (2010), the few who took AP examinations left solid evidence of achievement gaps along racial lines and failed to perform as well as their White counterparts. According to Polite (1994) and Riegle-Crumb and Humphries (2012), part of the responsibility falls on teachers and counselors who inexplicably track minorities into lower-level courses, steering them directly away from college preparatory courses that provide a foundation for entering STEM fields. African American participation is no better in schools that allow open enrollment into advanced math courses. In those schools, even the African American students who are mathematically savvy often self-enroll in lower-level courses (Corra et al., 2011).

The College Board recognizes that many more students demonstrate high potential for success in AP coursework than take part in the courses. As an example, 60% of American students are not participating in any AP science courses for which they have high potential (College Board, 2014). Many educators are familiar with the Pygmalion Effect, which contends that students achieve at the levels of their teachers' beliefs and expectations (Friedrich, Flunger, Nagengast, Jonkmann, & Trautwein, 2015). It is believed that the opposite is also true; students will descend to teachers' lower levels of expectations (Rowlett, 2013).

Additionally, other, more subtle barriers prevent African Americans' success in math-based careers: actual and perceived racism, peer and parental influence, math efficacy, and teachers' and counselors' expectations (Maton, Hrabowski, & Schmitt, 2000). African American students are consistently found to be concentrated in lower-track classes at the elementary and high school levels (Corra et al., 2011). This racial discrepancy includes underrepresentation of African American students on AP examinations (U. S. Department of Education, 2010), racial gaps on AP exam scores (JBHE Foundation, 2004; Venkateswaran, 2004), and lower levels of participation in honors, AP, and other college preparatory classes (Hubbard & Mehan, 1999; College Board, 2014). For example, in 2013, Black students made up only 9% of AP test-takers but 14.5% of the population (College Board, 2014). In addition, while White students had a 61.3% pass rate on AP exams, Black students passed at a rate of only 4.6% (College Board, 2014). Some believe that AP classes serve as "gatekeepers" that limit academic opportunities for African American students (Mathews, 1998), and minority students are often denied access or

not encouraged to enroll in these classes that are intended to prepare high school students for postsecondary school (Corra et al., 2011). African American students who enroll in AP classes are often treated by their White classmates and teachers as if they do not belong (Corra et al., 2011; Hubbard & Mehan, 1999).

Nationally, fewer African American, Hispanic, and American Indian students take advanced mathematics and science courses than do White and Asian American students. “Although underrepresented minority students are nearly 25 percent of the population, they are only five to ten percent of AP test-takers in computer science, calculus, physics, chemistry, and biology” (Council et al., 2003, p. 29). Empirical evidence indicates that Black students take fewer advanced courses than White students, even when such courses were available and enrollment is open. Furthermore, current analysis suggests that the underrepresentation of Black students in advanced high school courses may have less to do with scholastic ability than social factors (Corra et al. 2011; Nguyen et al., 2010).

Although for the past 30 years, the U.S. Congress has had numerous initiatives addressing the under-representation of minorities, persons with disabilities, and women in STEM fields, persistent challenges remain (Alvarez, Edwards, & Harris, 2010). A challenge many African Americans face is forged by schooling practices that begin long before they enter high school. In fact, before they finish elementary school, many African Americans suffer from classroom experiences and teacher practices that underprepare them for high school. Thus, when African Americans begin to struggle with secondary coursework, they become emotionally and cognitively disconnected from academic work (Rowlett, 2013). The challenges Black students face tend to be addressed using race as an explanation, especially where there is a noticeable cultural pattern of academic placement and student accomplishment (Darity et al., 2001; Nguyen et al., 2010).

Another factor linked to the underrepresentation of minority students in honors and advanced courses focuses on teachers’ behaviors and practices (Killingsworth, 2011; Nguyen et al., 2010). The Mason Study (2010) found that teachers play an important part in determining pupil access to AP courses, and they often do not promote their courses to historically underrepresented students.

Figure 3 demonstrates the disparity between race and the successful completion of AP exams in the United States between 2011 and 2013 (College Board, 2014). This information

clearly shows the disproportionality in AP success by race and ethnicity.

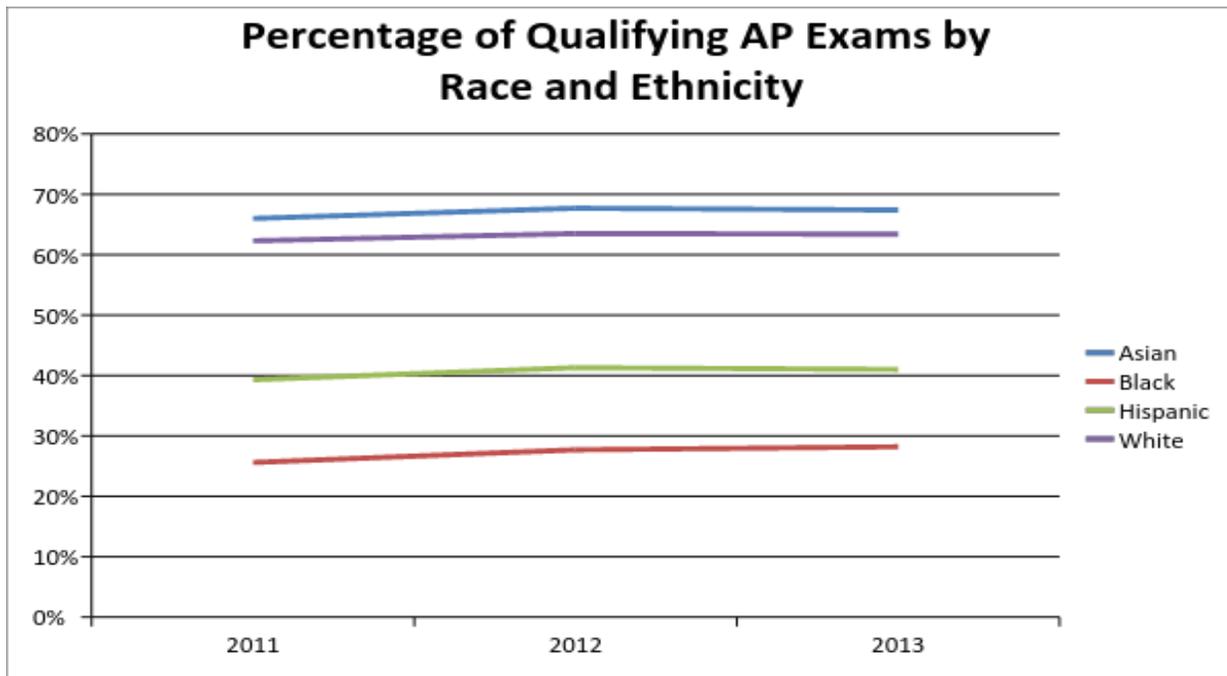


Figure 3. Percentage of qualifying AP exams by race (College Board, Report to the Nation, 2014).

School Leadership Impact

Local, state, and federal achievement standards that ensure learning for all children have changed the landscape of scholastic accountability (Leithwood & Riehl, 2003). The need for strong educational leaders and their impacts on student achievement have been researched for decades (Adelman, 2006; Alford, 1992; Quinn, 2002; Rice, 2010; Robinson, Lloyd, & Rowe, 2008; Tui, 2016). Principals have been found to play a critical part in their schools' responses to accountability and school improvement (Strouse, 2004); however, many facets of school leadership correspond with student success and academic achievement; for example, providing necessary resources, supplying instructional support, communicating, being a visible presence, and providing an atmosphere that supports effective and engaging teaching (Caudle, 2014; Quinn, 2002). By contrast, Supovitz, Sirinides, and May (2009) suggested that the impact of principals is less direct on student performance than that of teachers who interact with students on a daily basis.

While school leaders are accountable for creating an environment that supports teaching and promotes student learning, the principal is often recognized for the failure or success of a

school (Tui, 2016). It is thus important for principals to be mindful of their school's organizational climate because a positive school climate plays an essential role in reaching the current educational requirements and attaining thriving school improvement outcomes (Velasco et al., 2012). School leaders should assess and analyze their beliefs and make them known before making the required changes in their schools (Brown, 2006). By collaborating with staff members who impact teachers, principals can affect the instructional practice of teachers that yields better outcomes in student learning (Supovitz et al., 2009).

Since the mid-nineties, increasing evidence has supported transformational leadership theory (Griffith, 2004), which suggests that, through transformational leadership, administrators can serve as catalysts for change from restrictive to inclusive advanced high school classes (Alford, 1992; Velasco et al., 2012). According to Hallinger and Murphy (2013), leadership effects on learning are achieved *indirectly* by affecting people, work structures and processes, and school culture. Existing literature also supports that the principals' leadership can have a meaningful effect on student achievement (Walker & Slear, 2011) and that leadership interventions yield a higher likelihood of attaining positive outcomes on a variety of measures (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009; Caudle, 2014).

Velasco, Edmondson, and Slate (2012) indicated that leadership behaviors have a strong correlation with student academic achievement, and Hill (2014) claimed that a strong factor in school success is directly attributed to the school leaders being student-centered. In addition, Alford (1992) acknowledged that, when access to the more rigorous courses is denied, students can have little effect on their exposure to the subjects and cannot participate in AP courses if the door is closed to them. According to Velasco et al. (2012), administrative direction provides teachers with the ability to succeed and encourages students to thrive academically, while Hattie (2015) suggested that, when school leaders have high-impact intentions, more visible learning and change take place. Another study reported that principal transformational leadership has an indirect effect on student achievement through administrative staff's satisfaction with work (Griffith, 2004), and administrators with high levels of emotional intelligence have been found to be more effective in navigating change (Caudle, 2014). Building a shared vision with important stakeholders can result in remarkable improvements in schools (Tui, 2016).

To reduce the academic gap with minority students who are less likely to be placed in more rigorous programs, a transformation in leadership behavior and follower mindset must

occur (Michael-Chadwell, 2011). Effective leadership is needed to implement tracking that could achieve more equity in schools (Alford, 1992). Those in educational leadership positions must be willing to challenge current nomination, assessment, and identification policies and practices to improve the educational opportunities for the underrepresented (Michael-Chadwell, 2011). Some leaders who witness a pattern of academic placement and achievement are courageous enough to address the situation, while others excuse such patterns as “the way things work” and thus perpetuate racial hierarchy (Darity et al., 2001).

Connections exist between school policy calls for change and the increased demand on what steps a principal must take to run a successful school (Tui, 2016). Until scholars shift their research focus to underrepresentation, which informs policy and serves as a catalyst for change within the school environment, African Americans will continue to be underserved in our nation’s schools (Rowlett, 2013). Darity et al. (2001) claimed that some schools approach a proportional enrollment in advanced courses for their minority students, and Council, May, and Chubin (2003) studied various factors that contribute to the success of minority students in rigorous engineering programs. They determined that school leaders could consider the following to encourage and increase representation of African American students in AP classes: Freshmen Orientation, Clustering, Structured Study Groups, Intervention Programs, Financial Support, and Study Centers (Council, May, & Chubin, 2003).

Only a small percentage of teachers actively promote AP courses to minority students and students not already in honors or AP courses (Mason, 2010). An important aspect of the challenge to ensure access is the willingness to do something about it (Darity et al., 2001). AP teachers have been found to be an influence in closing the AP participation gap for traditionally underrepresented students and in providing access to AP courses as a whole (Mason, 2010). While challenges persist, benefits are attained when educators proactively seek to increase participation in advanced level courses (Hallinger & Murphy, 2013). Evidence from Pearson’s 2014 study entitled, “The Impact of School-Level Factors on Minority Students’ Performance in AP Calculus,” strongly suggested that when a culture of expectation and success was present in a school, the participation rates and success rates on AP exams would increase (Pearson, 2014).

According to Mason (2010), educational leaders concerned about the gap in AP participation could consider teacher input as an influence in placement recommendations. Darity et al. (2001) indicated that effort must be made to raise mindfulness of teachers and staff, to

inspire students to consider more rigorous coursework, and to persuade more minority students to consider AP courses before they reach the high school level. Pressure is on all players, including students, teachers, principals, and superintendents. In these times of heightened concern for student learning, school leaders are being held accountable for how much students learn and how well teachers teach (Leithwood & Riehl, 2003).

In a phenomenological study by Michael-Chadwell (2011), exploring teachers and African American parents' perceptions of the underrepresentation of African American students in high achieving and gifted programs, four themes emerged: "(a) misperceptions regarding a student's race and ability; (b) the lack of parent awareness programs about issues related to gifted and talented education; (c) the need for professional development training related to the needs of minority gifted students; and (d) issues related to testing and assessment instrumentation. A paradigm shift in leadership and educational practices must occur to reduce identification and placement gaps" (Michael-Chadwell, 2011, p. 99). The influence of a school leader is critical in developing a school's culture and affecting the overall performance at their school (Hill, 2014).

Summary

High schools are responsible for preparing students for various post-secondary destinations (Achieve, 2014). However, the world that high schools were designed to support has been replaced by a global knowledge-based economy in which almost all careers require some postsecondary education or training beyond high school (Achieve, 2014; Rowlett, 2013). Nevertheless, ensuring equitable student access to rigorous coursework is a challenge for our schools and stakeholders in education (Adelman, 2006; Styron & Styron, 2011), and despite the numerous educational reform movements the United States over the past three decades, the outcomes educators and policymakers are seeking have not yet been met (Tui, 2016).

A plethora of research exists on the importance of a rigorous high school preparatory program to college success (Banchero, 2010; Conner et al., 2011; Dougherty, Mellor, & Jian, 2006; Styron & Styron, 2011; United States Department of Education, 2010) and the advantages of completing AP programs at the high school level (Board, 2005; College Board, 2014; Conteras, 2005; Corra et al., 2011; Dosal, 2008; Killingsworth, 2011; Mason, 2010; Santoli, 2002; Southern Regional Education). AP programs are widely recognized as a measure of

secondary rigor (College Board, 2014; Santoli, 2002) and have been experienced disproportionately (College Board, 2014). Specifically, Black students, not only in Virginia but throughout the nation, are less likely to take AP exams than learners of all other ethnic groups (College Board, 2014).

The College Board (2014) reported that many localities are investigating various initiatives and approaches intended to expand access to AP courses and improve student performance. Award-winning districts have utilized the following strategies: aligning curriculum and instruction, removing financial barriers, supporting teacher professional development, and identifying and recruiting students with potential (College Board, 2014).

A review of the literature identified peer and adult influence, cultural norms, and teacher expectations as factors inhibiting African Americans' success in upper level courses (Michael-Chadwell, 2011; Corra et al., 2011; Rowlett, 2013). Experts have indicated that checking teacher bias and improving identification of qualified Black students can help their success (Corra et al., 2011; Hayes, 2007).

Tui (2016) claimed that links exist between school policy demands for change and the steps a principal must take to run a successful school, and Velasco, Edmondson, and Slate (2012) indicated that school leadership behaviors have a strong correlation with student achievement. Leadership interventions have been proven to have an impact on a variety of outcomes in schools (Avolio et al., 2009; Caudle, 2014), and principal transformational leadership has been found to have an indirect effect on student achievement through administrative staff's satisfaction with work (Griffith, 2004). Individuals in school leadership roles might hold the keys to improving the AP underrepresentation trends that are evident in the research (Oliver, 2012; Osterman, 2000). Thus, building a shared vision with important stakeholders can result in remarkable improvements in schools (Tui, 2016).

Chapter 3

Methodology

Purpose of the Study

This study aims to identify the differences in the expressed beliefs and actions of school principals in schools with varying levels of minority student representation in AP courses. Data were analyzed to determine whether school leaders who demonstrated intentional actions to address AP participation in their schools had a higher representation of minority populations at their schools. The results of the study could impact high school leaders as they seek to improve their student outcomes.

Research Design/Methodology

This qualitative study is considered a phenomenological study because it “describes meaning for several individuals of their lived experiences of a concept or phenomenon” (Creswell, 2009, p. 57). This study investigates the contemporary phenomenon of underrepresentation of minority student participation in AP courses within the real-life context of American high schools in an interpretive, in-depth case study of a purposeful, criterion sample of principals from a school division in the southeastern region of Virginia. A phenomenological approach was utilized to develop a clear understanding of the particular beliefs and actions of the participants (Merriam, 2009). Qualitative methods were chosen to capture essential characteristics of a phenomenon using the perspective of participating principals (Curry, Nembhard, & Bradley, 2009).

The researcher in a qualitative study is responsible for collecting and interpreting the data (Creswell, 2009). To uphold the integrity of the study, the interview questions were read to the interviewees exactly as they were written (Fowler, 2009). Open-ended interview techniques were utilized for individual interview sessions, and data were documented as interview transcripts, field notes, and emails. Using an inductive analysis of data, emerging critical themes were used to form models, theories, and concepts for future studies (Brooks & Normore, 2015; Opdenakker, 2006).

Research Design Justification

The researcher utilized a qualitative process for this study. Qualitative research is

appropriate for this study because it focuses on discovery, insight, and understanding (Brooks & Normore, 2015) from the principal's perspective, with the purpose of improving school leaders' impact. Qualitative methods allow for engaging in systematic inquiry about current practices in education (Brooks & Normore, 2015; Creswell, 2014). A phenomenological approach was utilized to develop a clear understanding of the particular beliefs and actions of the participants (Merriam, 2009). Qualitative research is valuable in providing rich explanations of complex occurrences; conducting explorations to develop theories and to generate and test hypotheses, and moving toward explanations (Brooks & Normore, 2015; Curry et al., 2009). Methodical, rigorous, and qualitative research seeks to reduce bias and error and identify evidence that disproves initial or developing theories (Sofaer, 1999). The researcher used purposeful sampling for this study. Because this study involves working with principals from multiple schools, it is considered a multi-site, or comparative, case study (Merriam, 2009).

Research Questions

The main questions of this research study are as follows:

1. *What are the principals' beliefs about the levels of minority representation and success in Advanced Placement courses?*
2. *What actions are principals taking to address the levels of Advanced Placement student representation and success?*
3. *What do principals of schools with high levels of participation in Advanced Placement courses do to contribute to the higher levels of participation?*
4. *What differences exist in the beliefs and actions of principals who have varying levels of minority success and participation in upper-level courses?*

Site and Sample Selection

The subject pool for this study comprises seven high school principals from one school district located in southeastern Virginia, which is committed to offering AP courses at each high school. The population was selected based on the varied levels of participation in AP evident at the high schools where they serve as principals. Inductive investigative strategies were employed to collect the data. Within the seven high schools in the division, this study focused on varied levels of Black student participation in AP courses. Table 2 provides a summary of the Black

student population representation and the proportional representation that exists in AP courses at each of the seven high schools in the district being studied.

Table 2

AP Representation Rates

Principal	Students in AP	Black students in AP courses	Black students overall (%)	Black students that should be in AP courses based on population	Proportionate representation of Black AP students (%) (100%= proportionate representation)	Division rank of AP representation
P1	334	28	18	60	28/60 (47%)	6
P2	584	96	19	111	96/111 (86%)	1
P3	189	63	49	93	63/93 (67%)	3
P4	206	48	43	89	48/89 (53%)	4
P5	303	59	42	127	59/127 (47%)	5
P6	526	11	6	32	11/32 (34%)	7
P7	238	100	56	133	100/133 (75%)	2

AP decisions are based on a variety of prerequisites set by each school district (College Board, 2014). Table 3 defines the AP course prerequisites in place in the school division being studied.

Table 3

AP Course Offerings and Division Prerequisites

<i>Course Offering</i>	<i>Division Prerequisite(s)</i>
AP Drawing	Art I – V
AP Art History	World History 1, World History 2 AP European History highly recommended
AP Studio Art	Art III or Art IV
AP English Language & Composition	English 10 or Honors English 10
AP English Literature & Composition	English 11, Honors English 11 or AP English 11 Language & Comp
AP French, German, Spanish or Latin	Level V of the corresponding language
AP Statistics	Algebra II
AP Calculus AB	Calculus strongly recommended OR Math Analysis with teacher recommend
AP Calculus BC	AP Calculus AB
AP Computer Science	Computer Science
AP Music Theory	Music Theory and/or teacher recommendation
AP Biology	Biology and Chemistry Earth Science strongly recommended
AP Chemistry	Chemistry; Earth Science and Biology strongly
AP Physics I	Math: Algebra II; higher math is recommended Science: Earth Science. Biology and Chemistry strongly recommended
AP Physics II	Physics or AP Physics required Algebra II and concurrently taking Math Analysis or equivalent
AP European History	Honors placement recommended
AP World History	Honors placement recommended
AP US History	Honors placement recommended
AP Government	Honors placement recommended
AP Human Geography	Honors placement recommended
AP Psychology	Honors placement recommended
AP Comparative Government & Politics	Honors placement recommended

Data Collection Procedures

As part of the university requirements, the researcher completed Institutional Review Board (IRB) training before beginning the study to acquire the official IRB certification (see Appendix A). Upon receiving IRB approval from the Virginia Tech IRB Office (see Appendix B), the researcher requested and received approval from the school division invited to participate in this study (see Appendix C). All guidelines and protocols for the participating school division were followed for conducting the study with high school principals within the division.

The researcher sent an email invitation to potential respondents asking them to consider

participating in the interviews accompanied by a clear explanation of what would occur at the interview. All of the invited principals agreed to take part in the study. At the time of the interviews, the participants signed the university-approved informed consent form, confirming their willingness to participate, and each participant received a paper copy of the interview questions for their review and reference.

As in any research, there are trepidations about validity and reliability (Morrow, 2005; Merriam, 2009). According to Merriam (2009), multiple sources of data, leaving an audit trail, and using various approaches to confirm findings increase the internal reliability and credibility of findings. Therefore, to maintain the reliability of the study, the interview questions were read to the interviewees exactly as written (Fowler, 2009). The data received from the interviews were also validated by sharing the original transcripts with each respondent, giving them the opportunity to make corrections if deemed necessary by a specified date (Fowler, 2009). Then, to validate the data obtained, the use of member checks was employed. This involved sending the preliminary analysis of the interviews to the respondents to ask if the interpretation represented their intentions (Merriam, 2009).

Data Gathering Procedures

In this study, data collection primarily consisted of a series of qualitative interviews and document analysis (Fowler, 2009). The research occurred in natural school office settings and produced rich, text-based data through open-ended questioning (Curry et al., 2009). Individual, face-to-face interviews were conducted to provide an in-depth description and analysis of leadership impact on minority representation in high school AP courses. Face-to-face interviews were held at each principal's school, except for one, who elected to come to the researcher's office. To ensure accurate collection of the interviewees' responses, the researcher recorded the conversations, thus allowing synchronous communication in time and place (Opdenakker, 2006).

Securing the data obtained from the interviews was a priority. After completing each interview, the researcher transcribed the data and securely stored each coded file on her office computer and in a Google doc. Access to the information in the researcher's computer and Google drive is password protected and cannot be accessed by anyone other than the researcher.

Instrument Design

The interview questions were developed to provide the researcher with a consistent process of data collection across all interviews. The interview was designed to obtain the participants' perspectives about their beliefs and perceived actions taken toward the development of student schedules (Curry et al., 2009). The interview questions and research questions were aligned to increase the effectiveness of the questions utilized in the research process, confirming their purpose (Rubin & Rubin, 2012). Each interview question was created to help answer the study's primary research questions. Table 4 presents the research questions and their associated interview questions.

Table 4

Research Questions and Principal Interview Questions

Research Questions	Interview Questions for Principals
1. <i>What are the principals' beliefs about the levels of minority representation and success in AP courses?</i>	<p><i>What beliefs drive your school's actions in determining a student's schedule?</i></p> <p><i>What are your beliefs about students' participation in AP courses?</i></p> <p><i>How would you describe your leadership style?</i></p>
2. <i>What actions are principals taking to address the levels of AP student representation and success?</i>	<p><i>What best practices do you consider effective?</i></p> <p><i>What influences your minority student participation rates in AP courses?</i></p> <p><i>What might be hindering your school's rate of AP participation?</i></p>
3. <i>What do principals of schools with high levels of participation in AP courses do to contribute to the higher or lower levels of participation?</i>	<p><i>Can you identify what you do specifically to contribute to your school's rate of AP participation?</i></p> <p><i>What steps will you take to increase your school's AP participation?</i></p> <p><i>Is there anything else you would like to share on this topic?</i></p>
4. <i>What differences exist in the beliefs and actions of principals who have varying levels of minority participation in AP courses?</i>	

Instrument Validation

After reviewing several examples of interview questions, the researcher created the interview instrument. To improve the credibility of the qualitative questionnaire, an expert panel of fifteen educational leadership professionals reviewed the interview questions. These experts provided feedback and suggestions to reduce ambiguity, remove leading and emotive questions, and confirm the viability of the questions viable for this study (Merriam, 2009). Based on their feedback, the interview questions were finalized for this study (Creswell, 2014).

Data Management

The interviews, sets of field notes, and documents were given identifying notations to access as needed during analysis and for the final write up of the study. Coding was utilized to maintain a clear understanding of the data and participant demographics (Merriam, 2009; Creswell, 2014). Principals were coded sequentially in order of interview. For example, the first principal interviewed was coded as P1, the second principal interviewed was coded P2, and so on. Interviews were also coded in the order they occurred: Interview 1, Interview 2, and so on. The interview transcriptions were identified by question number and principal number (e.g., Q1P2, Q2P2). The school data were associated with the related principal number.

A clear file naming system was implemented by printing/typing a file name on the footer of all study documents. The file names include participant identifier, worksite code, and date of interview. All consent forms were reviewed and filed in hard copy and electronic formats. An inventory of the entire data set regarding interviews, field notes, documents, and memos was created and will be maintained for one year. This data set will be organized and labeled so that any piece of data can be accessed at any time.

One hard copy and one electronic copy of the entire data set will be stored in separate locations until after successful defense of the dissertation. At that time, all related documents will be destroyed. The remaining information will be secured in the researcher's office with password protection.

Data Analysis Techniques

The data collected from the interviews were added to the individual respondents' files and combined for analysis by interview question. The transcripts were reviewed several times

and coded when themes were discovered in the data. In preparation for Chapter Four, the researcher organized the data by research question. For each question, information was organized in the following order: data and findings, a description of data collected, an explanation of the data, and a summary of discovered emergent themes. A brief summary of the information is provided at the conclusion of Chapter Four.

Time Line

The preliminary exam for this study was approved in March 2016. The researcher completed and presented the prospectus exam to the dissertation committee in October 2016, and the IRB requests were submitted to the university and participating school division. Both IRB approvals were received in October 2016, and the interviews were conducted in November 2016 and December 2016. The interviews were transcribed and coded in December 2016. The respondents provided member checks to verify their responses were accurately reported. Chapters Four and Five of the study were completed in February 2017, and the dissertation was presented to the university committee in March 2017.

Chapter 4

Data Analysis

Introduction

This chapter presents the data and a detailed analysis of the information gathered during the collection process of this study. The data collection process included face-to-face interviews with seven high school principals from one southeastern Virginia school district. The principals were presented with nine open-ended interview questions, which directly related to three of the four research questions. The final research question explored any discovered differences in the principals' beliefs and actions with varied representation rates. Thus, the fourth research question was answered through an analysis and comparison of the principals' responses.

The interviews were completed over six weeks at either the principals' offices or the researcher's office at a time convenient for those being interviewed. The interviews were recorded using an electronic recorder on the researcher's cellular phone and tablet. The respondents were provided a copy of the interview questions for reference during the interviews. Principals were interviewed in no particular order and were coded sequentially in order of interview. For example, the first principal interviewed was coded as P1; the second principal interviewed was coded P2, and so on.

This chapter reports the data by research question. The raw data will be shared, followed by an explanation of the data and the identification of any emergent themes before moving to the next research question. A summary of all data collected will be presented at the conclusion of this chapter.

Research Questions and Interview Questions (IQ)

The research answered the following research questions and corresponding interview questions:

Research Question 1: What are the principals' beliefs about the levels of minority representation and success in Advanced Placement courses?

IQ1 - What beliefs drive your school's actions in determining a student's schedule?

IQ2 - What are your beliefs about student participation in AP courses?

IQ3 - How would you describe your leadership style?

Research Question 2: What actions are principals taking to address the levels of Advanced Placement student representation and success?

IQ4 - What best practices do you consider effective in addressing student AP representation?

IQ5 - What influences your minority student participation rates in AP courses?

IQ6 – What might be hindering your school’s rate of AP participation?

Research Question 3: What do principals of schools with high levels of participation in Advanced Placement courses do to contribute to the higher levels of participation?

IQ7 – Can you identify what you do specifically to contribute to your school’s rate of AP participation?

IQ8 – What steps will you take to increase your school’s AP participation?

IQ9 – Is there anything else you would like to share on this topic?

Research Question 4: What differences exist in the beliefs and actions of principals who have varying levels of minority success and participation in upper-level courses?

Purpose of the Study

This study aims to identify the differences, if any, in the expressed beliefs and actions of school principals in schools with varying levels of minority student representation in their AP courses. Data were collected to determine if school leaders who demonstrated intentional actions to address AP participation in their schools had a higher representation of minority populations at their schools. The results of the study could impact high school leaders seeking to improve their student outcomes.

Data for Research Question One

Table 5 displays the participants’ responses to interview question number 1, identifying the specific beliefs that drive their school’s actions in determining a student’s schedule.

Table 5

Interview Question 1 - What Beliefs Drive Your School's Actions in Determining a Student's Schedule?

Principal Response	P1	P2	P3	P4	P5	P6	P7
Teachers' input	X	X	X	X	X		X
Student needs and desires	X	X			X	X	
Informed students		X		X			X
Counselors' input	X	X				X	
Intentionally encourage students		X					X
Informed parents				X	X		
Standardized test results (SOL/AP Potential)				X	X		
Specialized programs/pathways		X					X
Parent needs and desires						X	

Six of the seven principals interviewed stated that teacher input impacted student schedule decisions at their school. P1 recommended “asking our teachers to really take a look at who’s in their classrooms outside of the AP curriculum to identify students who might be successful there” (P1, 18-10), while P2 said, “I think some of our teachers do promote the CLEP test. But at the end of the day, they are still taking the AP courses. That’s really our belief... they take challenging courses, and we want to support them through it” (P2, 115-17). P3 indicated that they relied upon “teacher recommendations,” adding, “but I also think there are conversations people have with certain groups of students” (P3, 11-2), and P4 said, “We impress upon our teachers that teach honors level courses to share with students ways they can kick it up a notch for AP” (P4, 12-4). P5 indicated that students are influenced by “recommendations from teachers, actually looking at student growth in academic areas” (P5, 13-4), and P7 stated that, “If they’re successful in honors, we start talking to them about AP” (P7, 15-6).

A few of the principals specified that the role of the school counselor impacts the students’ schedule at their schools. For example, P2 stated that “counselors will say, ‘Based on past performance, this is going to be a challenging course.’ They will encourage and not discourage them from taking it” (P2, 16-9), and P6 indicated that “counselors would make

recommendations from what they've seen" (P6, l3-4).

Several principals identified supporting the needs and desires of the students as a belief that drove decisions regarding student schedules. P5 felt that a student's desire and enthusiasm to learn influenced a student's schedule (P5, l4), while P6 indicated that, at their school, "it was really completely student and parent driven. It's not us" (P6, l1-2). P2 reported,

First and foremost, we believe it should be student driven based on their needs and their wants. So, unlike the middle school, where we had criterion to be placed in honors, we still have recommendations, but if a student says "I want to take an honors or an AP class," they're in. (P2, l1-4)

Another item that many of the principals referenced in their responses when discussing what they believed impacted student schedules at their schools was informing the students of the options before them. P2 reported, "Our counselors will say, 'this is going to be a challenging course. You need to know that going in. You are going to have to work harder'" (p2, l6-9), and P4 explained, "The first thing we do is, we come out with a course booklet in order for the students to know what is offered" (P4, l1-2). P7 stated, "Working with them just to get them to understand how much reading, how much independent work there is when you take AP work" (P7, l26-28).

Table 6 reflects the participants' responses to interview question number 2, identifying the specific beliefs that the principals have when it relates to students participating in AP course.

Table 6

Interview Question 2 - What Are Your Beliefs about Students' Participation in AP Courses?

Principal Response	P1	P2	P3	P4	P5	P6	P7
All students should have access	X	X	X		X	X	X
Make students aware of AP opportunities	X	X	X		X		X
AP rigor & challenges		X		X	X		X
Goal to improve access & representation			X		X		X
Need to encourage students to participate					X	X	

Six of the seven principals stated that they believed that all students should have access to AP courses. P1 said, “I believe everybody should have access to it” (P1, 114), and P2 stated, “I would like for all students to take one because... I’m hearing all of the colleges say, ‘We want them to challenge themselves’” (P2, 118-21). P3 agreed: “We need to be giving all students the same opportunities” (P3, 123), but he added, “I know we are not having those conversations with all students. I feel we are not yet doing what we should for every child that is capable of being in an AP course” (P3, 19-14). P5 shared, “I think that every student should be given the opportunity” (P5, 124), and P6 said, “I say if you can do it, go for it.” P7 stated, “I fully believe we should have AP classes” (P7, 138).

Of the seven principals interviewed, five of them shared the belief that they needed to make students aware (or more aware) of the AP opportunities in their schools. P1 admitted, “It is our job to make sure that they are at least aware of the opportunity” (P1, 114-15), and P3 agreed, “We need to be talking about placement for kids for every child that comes through the door” (P3, 118-20). P5 shared, “You must have that teacher to say, ‘You know what? I think this kid is misplaced. I think he would be better served if he or she was in an honors or AP class’” (P5, 141-43).

Several of the principals shared the value and worth of the rigor and challenges presented in the AP curriculum. P2 shared, “Even if it is a little bit above of where they are, we want students to challenge themselves and to get that rigor (p2, 121-23). P4 stated,

We work with them to understand that yes, it is more challenging, but if you are concerned with just your GPA alone, you’re not looking at the big picture of what it looks like on your transcript as far as having that challenge on there. (P4, 112-16)

P5 said, “I think when you are around individuals that are accustomed to dealing with that rigor, that are accustomed to sharing and discussing in groups and bringing it” (P5, 166-68). P7 said, “You are building good work habits for yourself in these courses” (P7, 137-38).

Three principals indicated they had a desire to improve access and minority representation in the AP programs at their schools. P3 indicated, “I feel we are not yet doing what we should be for every child that is capable of being in an Advanced Placement course” (P3, 112-14), and P5 explained, “I need to increase minority participation in AP and honors classes... to try and make sure that we are getting the word out and that we are doing our due

diligence in making sure that our kids are aware of their talents academically, and that they are taking advantage of that (P5, 179-80, 183-86). P7 said, “I really want to have it even more expanded than we have it right now” (P7, 147-48).

Two of the principals responded that they believed there was a need to encourage students to participate in AP courses. P6 stated, “We are going to encourage you to go for it and do what you need to do” (P6, 16-7), and P5 said,

If you want to push for equity, and you want to make sure our kids are ready for the challenges once they leave the halls of our high school, then you are going to have to push kids, you’re going to have to challenge kids, you’re going to have to communicate, and you are going to have to take some risk. (P5, 159-64)

Table 7 reflects the participants’ responses to interview question number 3, where the principals reflected on their personal leadership styles.

Table 7

Interview Question 3 - How Would You Describe Your Leadership Style?

Principal Response	P1	P2	P3	P4	P5	P6	P7
Collaborative	X	X	X	X			X
Teacher/staff driven		X		X	X	X	X
Delegate tasks		X	X	X			X
Shared control/no micromanaging		X	X	X			X
Servant leader		X		X			
Open door	X						
Participatory			X				
Visionary					X		
Realist					X		
Competitive					X		
Fair						X	
Consistent						X	

The principals’ responses regarding their leadership styles varied. P1 described their

leadership style as a collaborative leader with an open door policy, while P2 identified with characteristics of a servant leader. P3 acknowledged a participatory mindset, while P4 stated they were more of a leader who delegates and listens. P5 self-reported as being a visionary and a realist, and P6 felt that being fair, consistent, and a good listener were the strengths they brought to the table. P7 explained, “What I like to do is get smart people, make sure they understand what my vision is, and then let them use their own creativity and initiative” (P7, 153-55).

Principals shared the beliefs regarding the AP Program that existed within their schools and their personal beliefs relating to the AP Program. The majority of the principals identified that counselors and teachers have an impact on the courses that students pursue. Furthermore, many of the principals shared that it was their goal to improve minority representation in AP courses at their schools. The power of student inquiry in identifying their wants and needs was evident in many principals’ responses. The principals consistently indicated the value in intentionally informing and encouraging capable students to participate in the rigor and challenges of AP coursework.

In analyzing the data obtained for Research Question 1, the principals identified their schools’ beliefs and their personal beliefs regarding AP participation. The analysis resulted in the following identified themes: staff input impacting student scheduling decisions, students strongly influenced when staff encouraged them to participate in AP courses, the benefits to students when accessing AP rigor in high school, and parent input impacting student participation in AP programs.

Data for Research Question Two

Table 8 reflects participants’ responses to interview question number 4, where the principals identified the best practices they considered effective in addressing student AP representation.

Table 8

Interview Question 4 - What Best Practices do You Consider Effective in Addressing Student AP Representation?

Principal Response	P1	P2	P3	P4	P5	P6	P7
Encourage students to participate	X	X				X	X
Encourage/inform teachers with data			X	X		X	
Make students aware of AP opportunities	X	X					X
Conversations with parents						X	X
Provide resources				X	X		

Four of the principals identified that encouraging students to participate in AP courses was a practice schools could consider. P1 indicated,

The most important to change is the student’s mindset because they think if I can’t go in there and make an A or a B or score a five on my final exam then I don’t belong in there. But they do belong in there. (P1, 133-35)

P2 shared, “Letting the kids know what it is and what it’s about, and that we encourage you to challenge yourself and to take it” (P2, 143-44). P3 claimed, “They need to start looking at students in their current honors courses, especially beginning in 9th or 10th grade to see the potential in those kids before they reach the AP classes” (P3, 150-52), and P6 revealed the idea of “getting them informed and making them aware” (P6, 123). P7 disclosed,

Private, one-on-one conversations with kids that you see have the kind of potential. Sit down with them and talk them through what it is and what it looks like. You’ve investigated it, and you see that they have something to offer that they may not even realize that they have. I think that one-on-one is really important. (P7, 169-75)

Informing teachers and staff about school data and encouraging them to reach out was another practice noted by three of the principals. P3 indicated, “They were surprised when I gave them a spreadsheet with our data. They found the data mind boggling. I know we need to have

more conversations” (P3, 166-69), and P4 shared, “Share your data and your results (P4, 127).

Making students aware of AP opportunities was a best practice mentioned by three of the seven principals. P2 stated, “I think part of it is promoting the course, and letting the kids know what it is and what it’s about, and that we encourage you to challenge yourself and to take it (P2, 143-45). P7 said, “We try to bring kids in. I think that is pretty effective. When the kids know that their principal or principals know them and care about them and are invested in them, I think it means a lot” (P7, 179-81).

Two of the principals responded that a best practice was to have conversations to inform parents of the AP programs. P6 reported “talking to our PTA at meetings, Open House, parent conferences. Just making sure they are aware, that our parents are aware, of what is going on” (P6, 123-26). P7 stated that, at their school, they “do an AP night and we try to bring kids in” (P7, 168). Additionally, P4 and P5 felt that providing the needed resources was a solid practice in promoting their school’s AP programs.

Table 9 displays participants’ responses to interview question number 5, identifying what influences student minority student participation rates in AP Courses.

Table 9

Interview Question 5 - What Influences Your Minority Student Participation Rates in AP Courses?

Principal Response	P1	P2	P3	P4	P5	P6	P7
Teachers promote and encourage		X	X	X	X	X	X
Counselors promote and encourage	X	X	X	X			
Parent conversations					X	X	
Lack of student confidence	X					X	
Prior participation in honors courses	X						
Start promoting at lower levels	X						
Peer pressure		X					
Academy within the school		X					
Limited peer presence	X						
Teachers may hinder						X	
Administrators promote and encourage							X

Each of the seven principals reported the value of counselors and teachers promoting and encouraging student participation in AP courses at each of their schools. P1 indicated,

As a school, we gotta create a culture, and a climate, and a mindset that these kids can be successful in there and that we need to encourage them to do that. We need to do that through counseling. That is your first line of defense. (P1, 150-53)

P2 said, “I think when our guidance department meets with kids, they certainly encourage and promote the courses to try to get them in it. I think the teachers also do a good job of that” (P2, 153-56). P6 stated that for their minority students, they needed to “let them know it can be done” (P6, 133), and P4 shared,

We are using our resources from our ACCESS counselor, the TCC coach that we have in here, our job coach, and guidance counselors making sure that students have all of the information and just the push to help them know that you can do this. (P4, 138-41)

P7 expressed, “We insist, when we talk to the kids, especially when I talk to the kids, you have to be ready for a career (P7, 182). We do a whole lot of checking in with the kids” (P7, 1102).

Table 10 shows the participants’ responses to interview question number 6, pinpointing what might be hindering their schools’ rate of AP participation.

Table 10

Interview Question 6 - What Might be Hindering Your School's AP Participation Rate?

Principal Response	P1	P2	P3	P4	P5	P6	P7
Student fears of unknown			X	X	X	X	
Students worry about GPA impact		X		X			
Small number of minority students	X					X	
Lack of honors experience					X	X	
Small number of minority teachers		X					
Need changed mindsets	X						
Teachers need to encourage more			X				
Smaller school	X						
Staffing/enrollment					X		
Fear of college expenses					X		
Parent impact on decision						X	
Student reading level							X
Low educational stamina							X
Need to foster more student engagement							X

As Table 10 shows, four principals reported that the students' unfamiliarity or fears of the unknown hindered their selection of AP courses. P3 shared, "I don't think they even know what it involves. We have to get through that mindset" (P3, 193-95). Along the same lines, P4 stated that many students say, "That's a lot of work. I can't do that. I'd rather stay in the easy class where I can make my A.' They don't want to challenge themselves. They just don't know" (P4, 145-47). P5 mentioned that students don't think to explore other options, and this has an impact on their representation. At P6's school, many students often lacked the confidence to take AP courses, especially if they were going to be the only minority student in the class. P6 shared, "One kid said, 'I'm the only black person in there, and if I ask a question or say an answer that isn't right, they all look at me'" (P6, 147-49).

Another hindrance mentioned by principals was that students worry about the impact taking AP classes might have on their GPA. P2 stated that students say, "I'd rather get an A in honors and keep my GPA up there. Kids worry about their GPA more than they probably should" (P2, 183-85).

P4 agreed, “Kids are fearful that their GPA is going to drop. They are scared to try a class that’s weighted. They’re scared that it is gonna wreck their GPA. That’s probably one of the biggest things (P4, 142-44).”

P1 and P6 identified the small number of minority students in their overall population as a hindrance to AP participation. Additionally, P5 shared that there was a “lack of preparation on the middle and elementary levels in order to channel a student in that direction.” P7 indicated that a hindrance to student participation in AP courses was some students’ lack of educational stamina in their inability to read on grade level, limited study skills, and lack of ability to complete homework independently.

In identifying the specific actions that principals with varied levels of AP participation consider effective in their student AP representation, the data suggested that many of the principals saw the value in encouraging students to participate and making students aware of the opportunities in their schools. The principals acknowledged that many students feared the unknown and often worried about the impact taking AP courses might have on their GPA. Additionally, they recognized the importance of encouraging their teachers and informing them of existing participation rates with relevant data. The impact that teachers and counselors have when they promote and encourage students to participate in rigorous courses was found throughout the responses to these questions; whereas, responses regarding parent input and impact were not as prevalent in the responses to this research question.

The following themes emerged from the responses surrounding Research Question Two: reaching out and encouraging individual students to participate, using relevant school data to inform staff of existing rates, informing students of opportunities in AP courses, and providing exposure to rigorous courses for future success.

Data for Research Question Three

The principals’ responses to interview question 7 identified the specific actions principals take to contribute to their school’s rate of AP participation.

Table 11

Interview Question 7 – Can You Identify What You do Specifically to Contribute to Your Schools’ Rate of AP Participation?

Principal Response	P1	P2	P3	P4	P5	P6	P7
Conversations with teachers	X	X		X	X	X	X
Conversations with counselors		X	X				X
Conversations with students					X		X
Conversations with administrative team		X					X
Review and share school data				X	X		
Plan to have conversations with students	X		X				
Conversations with support staff							X
Plan to have conversations with teachers			X				

In response to this question, six of the seven principals reported their intentional conversations with teachers about student AP representation. P1 indicated that they are addressing representation in rigorous classes as “an equity thing” confirming that they have provided some initial training around the concept of equity to establish a foundational understanding with the staff. P2 shared that they hold multiple meetings with staff at their school throughout the scheduling process and closely monitor the student management system to check participation data as they come in. P4 stated, “I impress upon my department chairs that we need to push these kids. It is not so much about meeting quotas, but we have students here that can fill these classes” (P4, 169-71). P5 commented, “I have conversations with my teaching staff, letting them know exactly what my expectations are” (P5, 169-170). P6 also noted the conversations with department heads to see what was out there, and P7 said,

I know we have smart kids of all colors. For me, it is for us all to build up those kids and all be thinking that way. I do talk to the department chairs as well because they play a key role. They play key roles in reaching down through their rosters and pulling those

kids up there. I need to find those teachers who recognize smart kids. I think that makes a difference. (P7, 1182-188)

P2, P3, and P7 confirmed that they have many conversations with the guidance counselors at their school about this topic, and having conversations with students was also an important step for P5 and P7. P7 said, “We talk to a lot of the kids. We have someone here for them” (P7, 1188-190). P5 added,

I say, ‘I expect for you to take high-level. I expect for you to take the AP test.’ Having and developing that relationship and having that conversation in a group and with individual students is what I am doing. (P5, 1180-184)

Both P2 and P7 emphasized the importance of having regular conversations with their administrative teams about making sure all student groups are accessing a rigorous education. P2 commented, “Our admin team talks about this a lot. Since we received our numbers at that training last year, we have had these conversations” (P2, 1106-107). P7 said, “I talk with our API. I talk to our graduation coach. I talk to my AP who oversees AVID. They are key players” (P7, 1178-182).

P4 and P5 highlighted the importance of reviewing and sharing the participation data at their schools. P4 said, “I look at my numbers. I look at my numbers for who’s asked for stuff and then I start looking at names and I look for people who are missing” (P4, 165-67). P1 and P3 indicated they planned to begin having conversations with students, and P3 added that there was a plan to have even more conversations with teachers at that school.

P7 was the only principal that specifically mentioned the numerous support staff that assist at their school by reaching out to more and more students to consider AP courses in their schedules. P7 said,

I talk with our API. I talk with guidance. I talk with our graduation coach. I talk to my IB coordinator about it. I talk to my IB teachers. I talk to my AP that oversees AVID. That’s what I do. ‘Tell me who your smart kids are that I can get out there and put them in honors or AP next year’. (P7, 1178-187)

The principals’ responses to interview question 8, summarized in table 12, reflect the

next steps the principals plan to take to increase their school’s AP participation rates.

Table 12

Interview Question 8 –What Steps Will You Take to Increase Your School’s AP Participation?

Principal Response	P1	P2	P3	P4	P5	P6	P7
Continue/expand discussions with stakeholders	X	X	X	X	X	X	X
Use data to drive conversations				X			
Read & become more informed	X						
Continue the work we are doing		X					

All seven principals indicated that they planned to continue and expand their conversations with stakeholders about this important topic. P1 said, “I am trying to still create that awareness. I will work on building that foundation, making sure we are doing this at an earlier stage” (P1, 197-99), and P2 shared, “We plan to continue our discussions on this; it will not be a one and done equity conversation. We must continue to push forward with equity” (P2, 1117-119). P3 commented, “I need to have some of those conversations. I could start talking with the kids myself” (P3, 1110-114), while P4 stated, “I will make sure the guidance counselors are all on the same page with the same information” (P4, 192-93). P5 commented,

I think the next step is making sure we have these conversations with parents and various stakeholders to let them know that our push is to have more kids enrolled in AP and support other kids in ways that they need, too. (P5, 1186-189)

When asked what actions principals do specifically to contribute to their schools’ rate of AP participation, all seven of the principals mentioned that they have either had many conversations with various stakeholders, some conversations with stakeholders, or planned to have conversations with stakeholders to increase their schools’ minority representation in the AP Program. Additionally, many of the principals shared that they either reviewed and shared their school data or planned to use their data in future conversations related to this topic.

One prominent theme related to Research Question 3 includes the many conversations that were held or needed to be held with teachers, students, counselors, administration, and support staff regarding AP participation. Another theme that emerged was that of using data and other information to become better informed to address this topic as a school leader.

Data for Research Question Four

As evidenced in the school profile data found in Table 13, P2 (86%) and P7 (75%) have the highest proportion of representation of Black students in AP courses at their schools in this school division. P1 (47%) and P6 (34%) have the lowest proportional representation of Black students in their AP Programs, and the smallest Black populations in the school division (18% and 6%), while P3 (67%), P4 (53%), and P5 (47%) were in the middle of the division with regards to their Black representation rates.

Table 13

African-American AP Representation Rates

Principal	Students in AP	Black students in AP courses	Black students overall (%)	Black students that should be in AP courses based on population	Proportionate representation of Black students in AP (%) (100%= proportionate representation)	Division rank of AP representation
P1	334	28	18	60	28/60 (47%)	6
P2	584	96	19	111	96/111 (86%)	1
P3	189	63	49	93	63/93 (67%)	3
P4	206	48	43	89	48/89 (53%)	4
P5	303	59	42	127	59/127 (47%)	5
P6	526	11	6	32	11/32 (34%)	7
P7	238	100	56	133	100/133 (75%)	2

The differences and similarities discovered in the beliefs and actions of the principals

based on their varying levels of minority success and participation in upper-level courses were as follows: The data suggest that all principals interviewed believe there is value and merit to the AP Program. All principals, except P4, mentioned that they believe all students should have access to AP courses, and they see the need to make students aware of the opportunities that taking AP courses could have for students' future. Principals with lower ranges of representation expressed the desire to take steps to improve their school's representation rates, noting it was a greater challenge when the minority population was smaller.

Principals with highest rates of minority participation made several remarks throughout their interviews about intentionally involving a variety of stakeholders to recruit students into their AP Programs. P7 shared,

Having private, one-on-one conversations with kids that you see have the kind of potential. Sit down with them and talk them through what it is and what it looks like. You've investigated it and you see that they have something to offer that they may not even realize that they have. (P7, 169-74)

The data suggest that the efforts to encourage students who may not otherwise enroll in AP courses of the top performing schools were frequent, systematic, and intentional. P2 stated, "Part of it is promoting the course and letting the kids know what it is and what it's about, and we encourage you to challenge yourself and to take it" (P2, 143-45).

Data analysis revealed that the use of the words, "we," "our," and "us," and references to using a team of professionals at their school to promote AP classes, were much more evident in the principals' responses from the two schools with highest minority representation, P2 and P7. This evidence is quantified in table 14.

Table 14

Frequency of “We,” “Us,” and “Our,” and Reference to Using Team Approach in Interview Responses

Principal	P1	P2	P3	P4	P5	P6	P7
We	33	42	35	27	43	13	73
Our	7	17	2	4	11	6	8
Team approach to encourage AP	0	5	1	2	1	0	10
TOTALS	40	64	38	33	55	19	90

Notably, the two highest minority proportioned schools also housed specialized academies at their respective schools. Both principals acknowledged this, stating that they expanded the opportunities beyond the academy population. P2 shared, “I am not going to play down the academy we host here. There is a lot of positive peer pressure. Kids come in and see others doing it. I certainly think that really helps others actually do it too” (P2, 162-64). P2 added,

If you walk into our classes, there is not one all-white AP class. Kids see that they will not be the only Black kid in there, which for a teenager is a safety net. ‘I want to see somebody like me’ (P2, 168-71).

Data Summary

The data analysis included coding the principals’ responses, identifying themes that occurred, and determining the expressed differences in the beliefs and actions of the principals who have varying levels of minority representation in AP courses at their respective high schools. The emergent themes are discussed and linked to each of the research questions in Chapter Five. As such, Chapter Five begins with a review of the purpose of the study and the research questions, followed by an overview of the study’s findings, a discussion of the findings, and the implications of the findings. Practical implications are provided for practitioners to consider and suggestions are made for future studies.

Chapter 5

Summary and Conclusions

Purpose of the Study

This study aimed to identify the differences, if any, in the expressed beliefs and actions of school principals in schools with varying levels of minority student representation in AP courses. This study therefore collected and analyzed data to determine whether school leaders who demonstrated intentional actions to address AP participation in their schools had a higher representation of minority populations at their schools. The results of the study have the potential to impact high school leaders as they seek to improve outcomes for the students they serve.

Research Questions

The following is a reminder of the main questions of this research study:

1. *What are the principals' beliefs about the levels of minority representation and success in Advanced Placement courses?*
2. *What actions are principals taking to address the levels of Advanced Placement student representation and success?*
3. *What do principals of schools with high levels of participation in Advanced Placement courses do to contribute to the higher levels of participation?*
4. *What differences exist in the beliefs and actions of principals who have varying levels of minority success and participation in upper-level courses?*

Summary of Findings

Finding One. Principals believe all capable students should have access to AP courses. 86% of the principals interviewed shared this belief. P1 said, “I believe everybody should have access to it. And if they don’t, it is our job to make sure that they are at least aware of the opportunity” (P1, 114-15), and P2 said, “I would like for all students to take AP. We want students to challenge themselves and to get that rigor” (P2, 118-22).

This finding supports the research cited in this study. The significance of improving access to quality instruction for students of various backgrounds is essential in “addressing the growing gaps between the haves and the have-nots” (Conner et al., 2011, p. 106). School leaders are being held accountable for how much students learn and how well teachers teach (Leithwood

& Riehl, 2003). Providing access to rigorous courses is a step toward reducing the participation gaps that exist in our schools.

Finding Two. Teachers and counselors impact students' decisions to enroll in AP courses. Six of the seven principals shared this belief when interviewed. P2 stated that “counselors will encourage and not discourage them from taking AP” (P2, 16-9). Teachers were also found to be essential in this process, as P7 shared, “They play key roles in reaching down through their rosters and pulling those kids up. I need teachers who recognize smart kids” (P7, 1183-186). P7 also indicated, “If they’re successful in honors, we start talking to them about AP” (P7, 15-6).

This finding confirms other research that linked teachers’ behaviors and practices to the underrepresentation of minority students in advanced courses (Nguyen et al., 2010; Killingsworth, 2011). Other research has proven teachers and staff to be an influence in closing the AP participation gap for traditionally underrepresented students and in providing access to AP courses as a whole (Mason, 2010).

Finding Three. The principals believed that sharing data reflecting their school’s representation rates with their faculty helped justify the need to improve student participation in these courses. Informing teachers and staff about school data and encouraging them to reach out to underrepresented groups of students was another practice noted by three of the principals interviewed. P4 stated, “Share your data and your results” (p4, 127), while P3 explained, “They were surprised when I gave them a spreadsheet with our data. They found the data mind boggling. It proved that we need to have more conversations” (P3, 166-69).

As indicated in the research, for equitable representation to exist, the ratio of any subgroup of students in advanced courses should approximate its percentage of the school population. Black, Hispanic, and Native American high school students are underrepresented in AP courses (College Board, 2014; Hayes, 2007). Effective leadership is needed to address tracking that could occur to achieve more equity in schools (Alford, 1992).

Finding Four. The principals found it important to communicate to students the opportunities obtained by participating in AP courses. Of the seven principals interviewed, five shared the belief that they needed to make students in their school aware (or more aware) of the AP opportunities. P1 indicated, “It is our job to make sure that they are at least aware of the opportunity” (P1, 114-15), and P3 added, “We need to be talking about placement for kids for every child that comes through the door” (p3, 118-20).

This finding confirmed existing research, which stated that an obvious benefit to taking AP classes is the impact these courses have on one's admission to college, and the ability to test out of college courses (Mason, 2010; Santoli, 2002). If students are aware of the benefits of programs, they might be more likely to consider the opportunity.

Finding Five. The principals with higher rates of minority representation in AP courses had a clear and monitored expectation of their staff to encourage students with potential to participate in more rigorous courses. P7 stated that staff at his school “investigate and see that students have something to offer when they may not even realize that they have.... We do a lot of checking in with the kids. Our staff will put out a list and we go get them” (P7, 174-75, 1102-103). P2 stated that “members of our guidance department meet with kids. They certainly encourage and promote the courses to try to get them in it. Our teachers also do a great job of that” (P2, 153-56).

Darity et al. (2001) indicated that effort must be made to raise the mindfulness of teachers and staff, to inspire students to consider more rigorous coursework, and to engage more minority students to consider advanced courses. According to Hallinger and Murphy (2013), leadership impact on learning is achieved indirectly by affecting people, work structures, and processes and school culture. Woolfolk-Hoy (2012) found that, when a school sets high standards for performance, this “academic emphasis” benefits the students in many ways.

Finding Six. The principals with higher minority representation frequently remind a variety of stakeholders and staff to encourage students to consider participating in AP courses. The two principals with highest rates of minority participation, P2 and P7, made several remarks throughout their interviews about intentionally involving a variety of stakeholders to recruit students into their AP programs. Teachers, counselors, coaches, assistant principals, program coordinators, and other key players were tasked with reaching out to encourage students to consider more rigorous programs. P2 and P7 indicated that they provided reminders and encouraged these conversations several times throughout the school year.

As Rowlette (2013) claimed, until scholars shift their focus to address underrepresentation, minority students will continue to be underserved in our schools. Nevertheless, administrative direction provides teachers with the ability to succeed and encourages students to thrive academically (Velasco et al., 2012). Hattie (2015) suggested that, when school leaders have high-impact intentions, more visible learning and change take place.

Finding Seven. The principals with higher minority representation in their AP Programs used more “we,” “us,” and “our” statements, and references to a team approach, when asked about their work. In interview settings, the two principals with the highest representation rates (P2 and P7) had much higher frequency of the use of “we,” “us,” and “our” in responses to questions about school practices and beliefs. Additionally, in response to the same interview questions, P2 and P7 referenced a team approach to reaching out to students much more frequently compared to the other principals interviewed.

This evidence suggests that using a team approach, utilizing and recognizing the strengths and skills of a variety of key players on staff, positively impacts student opportunities as demonstrated in the data from these two schools. Using a team approach, school leaders can be more effective in addressing high priority matters, such as these inequities (Hill, 2014), and building a shared vision with important stakeholders can result in remarkable improvements in a school (Tui, 2016).

Finding Eight. The two highest representation rates in AP courses occurred at schools where specialized academies exist. P2 and P7 acknowledged that, although the students in the academies benefit, opportunities go beyond the academy and infiltrate into the culture and climate throughout the entire school.

In summary, this study found that principals believe all capable students should have access to AP courses. Principals also felt strongly that teachers and counselors impact students’ decisions to enroll in AP courses. Furthermore, sharing data reflecting their school’s representation rates with their faculty helped justify the need to improve student participation in these courses. The principals also found it important to communicate to students the opportunities obtained by participating in AP courses.

The principals with higher ranks of minority representation in AP courses had a clear and monitored expectation of their staff to encourage students with potential to participate in more rigorous courses. These higher performing principals frequently remind a variety of stakeholders and staff to encourage students to consider participating in AP courses. Principals with higher minority representation in their AP Programs were also found to use more “we,” “us,” and “our” statements, and more frequently referenced a team approach when asked about their work. Finally, the two highest representation rates in AP courses occurred at schools where specialized academies exist in this particular study.

Implications of the Findings

Implication One. Principals seeking increased representation in AP courses should consider seeking methods to provide all capable students access to rigorous courses. This implication is associated with Finding One, where 86% of the principals believed that all capable students should have access to AP courses. With administrative professional standards indicating that educational leaders are expected to maintain educational settings that demonstrate equity and cultural responsiveness, this step should not be considered optional. If participation and achievement gaps exist within schools, efforts should be made to diminish and eventually eliminate them. The data suggests some students will not know they have the potential until someone who believes in their abilities tells them so.

Implication Two. Principals should enlist the help of teachers and counselors who can encourage students to make decisions to enroll in more rigorous courses. This implication is directly associated with Finding Two, where principals found that teachers and counselors impact students' decisions to enroll in AP courses. The influence of caring staff members is notable and worth considering when looking for ways to improve student participation rates in advanced courses. This study attests that when teachers and counselors respond to their principal's inquiries and encouragement, student participation rates in AP courses increase.

Implication Three. Principals looking to increase representation rates at their schools should consider sharing specific data reflecting their school's representation rates with their faculty and set goals to diminish any participation and achievement gaps that exist. This implication is directly associated with Finding Three, where the principals believed that sharing data reflecting their school's representation rates with their faculty helped justify the need to improve student participation in these courses. Great schools are data-driven institutions. When school leaders and staff use the data to inform decision-making and improve the outcomes for their students, great things can occur.

Implication Four. Principals seeking increased representation in AP courses should consider communicating regularly to students the benefits and opportunities of participating in AP and other rigorous courses. Students do not automatically know about the advantages of certain opportunities and programs. Some students, especially those with backgrounds where no one in their family experienced college or higher learning, simply do not

realize the benefits of the rigorous programs available to them. Principals and staff who take the time to share the benefits of AP programs find that more students take on the opportunity. This implication is directly associated with Finding Four, where the principals found it important to communicate to students the opportunities obtained by participating in AP courses.

Implication Five. Principals seeking increased minority representation in AP courses should consider providing frequent, systematic, and intentional efforts throughout the school year using a variety of staff members to encourage students who may not otherwise enroll in AP courses. A familiar leadership mantra is “What gets monitored, gets done.” This implication takes that mantra one step further and suggests that by purposefully checking in periodically and having multiple conversations over an extended period, even greater outcomes can occur. Improvements in this realm do not happen by accident. They occur when leaders work tenaciously and deliberately to make a difference. This implication is associated with Finding Five and Finding Six, where the principals with higher rates of minority representation in AP courses had a clear and monitored expectation of their staff to encourage students with potential to participate in more rigorous courses and frequently reminded a variety of stakeholders and staff to encourage students to consider participating in AP courses.

Implication Six. Principals looking to lead a school where there is more proportional representation in programs should consider using more “we” and “us” statements and a “team” approach in their decision-making. This implication is directly associated with Finding Seven, where the principals with higher minority representation in their AP Programs used more “we,” “us,” and “our” statements, and references to a team approach, when asked about their work. When principals focus less on themselves as individuals and more on the efforts of their team, this study found that more equitable actions occurred within their schools. This implication is thus worth considering if a school leader wants to take their school to the next level.

Implication Seven. School divisions should consider adding specialized academies to provide opportunities and environments where stronger student representation rates can occur. This implications is associated with Finding Eight, where the two highest representation rates in AP courses occurred at schools where specialized academies exist. A high school academy is a center within an existing high school offering specialized courses that successfully integrate career and academic preparation opportunities. Academies have been found to break

down some of the unintentional barriers to rigorous coursework and focus more on the skills and talents of the individual students. Having an opportunity for successful students from a variety of backgrounds to excel provides an opportunity for others in the setting to see that it is possible.

Conclusions

This study found that the actions and beliefs of principals can impact students' opportunities and participation in rigorous academic programs. Using representation data, principals can justify the need to provide rigorous opportunities for students of all races and cultures. A systematic inquiry approach can encourage staff to help provide needed opportunities for their students. This study found that when principals work with intention and use a team approach, more opportunities for minority students might result.

Students in certain ethnic and racial groups are underrepresented in rigorous program offerings, which often prevents them from reaching their full potential. School leaders must remember that, when students are not given access to rigorous courses, they will never have the opportunity to succeed in them. Therefore, principals must work to increase the opportunities for their students, granting them a chance to demonstrate their potential. It can be done, and it is being done.

Suggestions for Future Studies

1. Scholars could consider studying the relationship between middle school honors course participation rates and AP participation at the high schools in a division or region.
2. Researchers could widen the scope of the study by interviewing leaders from more than one school division.
3. One could consider expanding the interview base by collecting data from other stakeholders, including teachers, counselors, assistant principals, other key support staff, and students.
4. Another study could explore the concept of social justice and equity within a similar study of instructional leader beliefs and actions.
5. Researchers could consider studying leadership impact in other areas that present challenges within the school settings.

6. If a researcher chose to study student representation in other divisions, they could consider looking at schools with academies and study the leadership behaviors that exist.

Reflections

This study resulted in outcomes that I was hoping to discover, but wasn't certain would be found until it came to analyzing the data collected. As I started to see themes and trends emerge while administering the principal interviews, I was pleased to find a connection between the higher performing schools and the actions and beliefs of the principals. This information will be very helpful in my work where I am tasked to train school leaders from around the region ways to increase actions in developing more equity and cultural responsiveness in school environments. I am so thankful for all that I learned during this process.

If I were to do this study again, I would interview beyond the role of the principals and consider the perspectives of the assistant principals, teacher leaders, and other support staff. It takes a team approach to do this challenging work effectively, as was concluded by the principals with whom I spoke. I look forward to doing more research in the future. I truly found it fascinating.

In one of our very first classes with Dr. Price, I honestly shared aloud, "When I signed up for the cohort, I didn't really know what a dissertation was. I just knew I wanted and needed one to reach my goals." Having held many leadership roles in my career before being given this opportunity, I assured myself that I could do this. I must admit now, however, I was surprised by how much I really didn't know. It was all so new to me. It was humbling and made me want to achieve this goal even more. Being part of this cohort was a blessing in so many ways. We came into this group of sixteen professionals not knowing one another. With the wonderful activities and assignments, we quickly identified each other's strengths and areas where we were less confident. As a unit, we shared ideas, examples, and reflections that built connections and relationships. We built each other up and lifted each other through the challenges. We all became stronger and smarter throughout this process. I will be forever grateful for the manner in which this cohort was established and implemented.

In hindsight, I would have exposed myself to more dissertations and studies at an earlier stage in my work. Doing so would have given me a clearer picture of my target. I am thankful

for the guidance and support received by the Virginia Tech staff, our cohort, and my committee members. This support helped us all reach our goals.

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Appendix A
IRB Training Certification



Appendix B

Virginia Tech IRB Approval



Office of Research Compliance
Institutional Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website <http://www.irb.vt.edu>

MEMORANDUM

DATE: October 24, 2016
TO: Carol S Cash, Michelle Kaye Porter
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)
PROTOCOL TITLE: A Qualitative Analysis of School Leadership Behaviors and Levels of Representation of Minority Students in Advanced Placement Courses in One Southeastern Virginia School District
IRB NUMBER: 16-930

Effective October 24, 2016, the Virginia Tech Institutional Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at: <http://www.irb.vt.edu/pages/responsibilities.htm>

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: **Expedited, under 45 CFR 46.110 category(ies) 5,6,7**
Protocol Approval Date: **October 24, 2016**
Protocol Expiration Date: **October 23, 2017**
Continuing Review Due Date*: **October 9, 2017**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Invent the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution

Appendix C
School Division IRB Approval



November 4, 2016

Dear Mrs. Michelle K. Porter:

Your request to conduct research for your doctoral dissertation focused on *A Qualitative Analysis of School Leadership Behaviors and Levels of Representation of Minority Students in Advanced Placement Courses in One Southeastern Virginia School District* at Virginia Polytechnic Institute and State University is approved. The approval is granted with the understanding that the following conditions will apply:

- Participation of administrators, counselors, and teachers is strictly voluntary.
- Parent permission must be obtained for student participation (if applicable).
- Names of individuals, school names or the name of the school division cannot be used in the reporting of the results of your findings without prior permission from the Department of Staff Development.
- All copies, distribution, retrieval of materials and arrangement of interviews/collections will be your responsibility.
- Questions/procedures must be limited to those detailed in your prospectus.

You may use this letter as a cover letter when contacting administrators and teachers. Should you have further questions, please feel free to contact me at

Sincerely,

Director of Staff Development
(Research Approval)

The [redacted] School System is an equal educational opportunity school system. The School Board of the City of [redacted] also adheres to the principles of equal opportunity in employment and, therefore, prohibits discrimination in terms and conditions of employment on the basis of race, sex, national origin, color, religion, age, or disability.

Appendix D

Individual Consent Form

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Informed Consent for Participants
in Research Projects Involving Human Subjects

Title of Project: A Qualitative Analysis of School Leadership Behaviors and Levels of Representation of Minority Students in Advanced Placement Courses in One Southeastern Virginia School District

Investigator(s):	<u>Carol S. Cash</u> Name	ccash48@vt.edu <input type="text"/> E-mail / Phone number
	<u>Michelle K. Porter</u> Name	michkp66@vt.edu <input type="text"/> E-mail / Phone number

I. Purpose of this Research Project

The purpose of this study is to identify the differences, if any, in the expressed beliefs and actions of school principals in schools with varying levels of minority student representation in Advanced Placement courses. The results of the study have the potential to impact high school leaders as they seek to improve outcomes for the students they serve. A total of seven high school principals will be interviewed for this study. Results from this study will be published in a dissertation and may be used for publication.

II. Procedures

Should you agree to participate, you will be asked to participate in an audio-recorded interview that should last no more than 45 minutes. Participants in this study will be asked to respond to a series of interview questions in a face-to-face interview. The interviews will take place at each participant's location of choice. Once the interviews have been coded and summarized for the report, participants will be asked to verify their responses.

III. Risks

There is low potential for risk in the 1:1 interviews. One potential risk could be the realization of flaws in leadership practices during the discussion. There is no more than minimal risk involved.

IV. Benefits

The anticipated benefits to study participants and other educational leaders is to increase their understandings of how to improve minority student participation in rigorous Advanced Placement courses. No promise or guarantee of benefits has been made to encourage you to participate.

V. Extent of Anonymity and Confidentiality

Codes will be used to identify participant responses to protect anonymity and confidentiality. Codes will be stored in a locked file cabinet by the co-investigator in her home. Completed interview protocols will be stored in a separate, locked file cabinet in the co-investigator's office. Data will be stored in a locked file cabinet with access afforded only to the investigator |

and co-investigator. Codes will be locked at the co-investigator's home. Interview protocols will be stored in a locked file cabinet in the co-investigator's office. Audio-tapes will be destroyed upon member check.

Once the interviews have been transcribed and reviewed by the participant, all auditory recordings will be destroyed. All remaining forms of the interview responses will be destroyed upon successful defense of the dissertation. At no time will the researchers release identifiable results of the study to anyone other than individuals working on the project without your written consent. The Virginia Tech (VT) Institutional Review Board (IRB) may view the study's data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Compensation

There will be no compensation for participants in this study.

VII. Freedom to Withdraw

It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being asked of you without penalty.

Please note that there may be circumstances under which the investigator may determine that a subject should not continue as a subject.

Should you withdraw or otherwise discontinue participation, you will be compensated for the portion of the project completed in accordance with the Compensation section of this document.

VIII. Questions or Concerns

Should you have any questions about this study, you may contact one of the research investigators whose contact information is included at the beginning of this document.

Should you have any questions or concerns about the study's conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the VT IRB Chair, Dr. David M. Moore at moored@vt.edu or (540) 231-4991.

IX. Subject's Consent

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ Date _____
Subject signature

Subject printed name