

Examining Educational Initiatives to Increase Minority Student Enrollment in

Advanced Placement Program Courses

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ABSTRACT

A pertinent educational issue in our country today is the minority achievement gap. One specific program that has been developed and implemented over the last several years in an effort to provide strong academic curriculum and to raise student achievement, including minority student achievement, is the College Board's Advanced Placement (AP) Program. The AP Program courses are widely recognized as providing students with academically challenging curriculum, facilitating their acceptance to colleges and supporting their preparation for and performance in post-secondary education. The emphasis of this research relates to the specific concern that although the AP Program has been in existence for several decades and is an integral part of most high schools' curriculum for at least ten years, there is an under-representation of minority students in high school Advanced Placement (AP) Program courses. This qualitative research involved completing an in-depth case study of a designated secondary school in the Mid-Atlantic region that has been successful in recruiting and enrolling students, majority and minority, in the AP Program. Guiding questions for this case study related to identifying the individuals who influenced enrollment, as well as the policies, procedures, interventions, and strategies used to recruit students and increase their enrollment in AP courses. These research findings revealed various key factors that contributed to the success of increasing student enrollment in these academic courses and the factors are similar to those identified in the literature and other research studies. These factors include: (a) shared and distributed leadership demonstrated across the school; (b) collaborative vision and mission; (c) an AP Program with

high expectations and a relevant and rigorous curriculum; (d) strong academic advisement, data-driven decision making, and specific school policies and procedures related to the AP Program; (e) extended student learning opportunities and individualized support; and (f) varied professional development and training for faculty. This case study highlights a group of dedicated and committed leaders with collaborative vision who implemented an academic program with focused initiatives and interventions. Between 2003 and 2009, this school increased overall student enrollment in the AP Program by 15.2%, with the Black student enrollment increasing by 11.9% and the Hispanic student enrollment increasing by 10.5%. They accomplished their goal and commitment to increasing minority enrollment in the AP Program and providing enriched academic learning opportunities for all students.

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I began this doctoral journey at the time of my father Roger's death. He was an exceptional parent and a true advocate for me. In my heart, I will always carry his spirit and the wonderful memories that we shared. This dissertation is a tribute to him.

A most important final tribute is to my beloved husband, John. He is my best friend and true inspiration. I thank him for his continued love, patience, understanding and support throughout this journey.

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Chapter 1

Introduction

In 2004, the United States marked the fiftieth anniversary of the landmark Supreme Court case, *Brown vs. the Board of Education*. This monumental case law decision emphasized the need for a strong education system for our country's children and the importance of ensuring that all students, majority and minority, have equal access and opportunity to participate in strong academic programs and instructional experiences. Having spent almost thirty years as a secondary school teacher and administrator, I acknowledge and have experience working with the strong educational programs that are offered to our public school students. I also recognize the academic achievements of individual students and note the successful transition of many of them to post-secondary experiences. I am currently an administrator at a secondary school that offers a wide range of academic and elective courses to high school students. We provide a menu of various Honors, Pre-Advanced Placement and Advanced Placement (AP) courses to students in grades 7-12, and these classes offer a challenging and rigorous academic curriculum. An area of current concern and question continues to be the number of minority students who are not achieving on grade level and who do not transition to college or advanced educational experiences. An additional area of concern is the small number of minority students who are enrolled in and participate in the Honors and AP courses. These numbers are not representative of the total minority populations in our particular school or in schools across the district, state, or nation.

Our public school system today serves a broad range of students from a variety of personal, societal, and educational backgrounds. As noted by the National Center for Education Statistics (NCES), "Forty-two percent of public schools students were considered to be part of a

racial or ethnic minority grouping in 2003, an increase from 22 percent in 1972. Whites made up 58 percent of public school enrollment, Hispanics represented 19 percent, Black students made up 16 percent, with other minority groups making up 7 percent” (NCES, 2005, p. 33). This data represent a large and diverse student population and leads to the importance of educators identifying and addressing diverse student needs.

While family, health, physical, and psychological factors can play an important role and affect individual student academic performance and potential, our educational system is mandated and required to provide sound and engaging educational programs and services to all students. The passage of the No Child Left Behind Act of 2001, a reformed and revised law from the 1965 and 1994 Education of Secondary and Elementary Education Acts (ESEA) and Goals 2000, have emphasized the need for standards based assessment, increased accountability and local control in addressing the needs of all students. This legislation and discussion has raised the consciousness and awareness of educators and school communities and leads to the examination and analysis of student achievement data, including minority achievement data, to make recommendations, and implement programs and interventions to address areas of deficiencies.

With the recent legislative mandates and documented minority achievement data, educators are compelled to examine current practices, review existing programs, and consider alternative interventions and strategies to address the interests and needs of minority students. One avenue to increased minority achievement and performance is exposure to and participation in challenging academic curricula and programs. One strategy to achieve this goal is to increase student enrollment in Advanced Placement (AP) courses. While there is a large body of research on minority achievement, there is little research on identifying successful programs and

interventions that attract minority students to the academically challenging high school AP program courses.

A focus for this area of research includes examining how a particular school was successful in increasing minority enrollment in AP courses. Additional or subsequent topics include identifying which individuals influence high school students and their attitudes and behavior toward academic courses and how these individuals become influential. It is imperative to determine how educators influence academic preparation, course selection, and enrollment in academic courses. It is important to identify which specific initiatives and programs positively influence and increase minority enrollment in AP program courses. This research can lead to further study of the factors that influence and facilitate positive student performance in AP courses and on the related AP Exams.

My personal and professional journeys have led me to a desire to research exceptional educational programs and practices that promote and support minority achievement. I am especially interested in identifying the individuals, interventions, and strategies that can influence and increase minority enrollment and achievement in academically challenging classes, and most specifically AP courses.

Historical Background and Current Status of the Problem

Minority Achievement Gap

Most educational experts agree that the minority achievement gap in our nation's schools is a long-standing problem. An achievement gap can be defined as the disparity between the academic performances of different groups of students and it can be found when comparing economic, racial, and ethnic variables (NCES, 2006). The concentration or emphasis for this study relates to the achievement gap between minority students of African-American, Hispanic,

and Native American ethnicity compared to achievement of White and Asian-American students. Data from the National Assessment of Educational Progress (NAEP) show that during the 1970s and much of the 1980s, the achievement gap began to shrink for poor and minority students. This shrinkage was attributed to desegregation and federally funded antipoverty program initiatives. However, since 1988, the gap has remained steady and has increased among certain grade levels and groups of students. Current data show that in comparing White and minority student achievement scores, “By the end of fourth grade, African-American, and Latino are two years behind other students. By eighth grade, they have slipped three years behind. And when they reach twelfth grade, they are four years behind” (Haycock, Jerald, & Huang, 2001, p. 20). Graduation rates for the years 1971-2003 compared by ethnicity revealed that “93.7 percent White, 88.5 percent Black and 61.7 percent Hispanic students completing high school” (Education Trust, 2006, p. 160). In examining rates of students who graduate on-time in the designated four years the data reveals the following: “Asian-77%, White-76%, Latino-56%, African American-52%, and Native American 47%” (Education Trust, 2006, p. 11).

Racial and ethnic score gaps also exist on college admissions tests. “On the 2000 Standard Achievement Test (SATs), the Black-White gap was 123 points on the math test and 95 points on the verbal test. The Hispanic-White test gap was 89 points on the math test and 70 points on the verbal test” (Kober, 2001, p. 17). The data highlight the fact that achievement gaps emerge early for minority students and persist throughout their educational histories.

Another area of concern is that there are racial and ethnic differences in our students’ transitions to college. According to a National Center for Education Statistics report, “White high school completers, ages 18-24, were more likely to be enrolled in college at 66 percent than

their Black and Hispanic counterparts, at 57.5 and 58.6 percent respectively” (NCES, 2005, p. 154).

There are similar statistics regarding the achievement gaps in earning higher education degrees. While in the 1960s, “only five percent of Afro-Americans earned a bachelor’s degree, compared to one-third today who have graduated from high school, they are still far below those of Whites” (Haycock et al., 2001, p.21). Students who completed a bachelor’s degree were as follows: Whites 34.2 %, Blacks 17.5 % and Hispanics 10.0 % (NCES, 2005, p. 162). As highlighted in the report, these differing enrollment rates are indicators of future differences in potential life-time or personal financial earnings associated with postsecondary education.

There is a range of socioeconomic factors that cause the minority achievement issue and many of these factors are not under the control of educators. These can include low birth weight, poor nutrition and health care, low parent educational attainment, poor parenting practices, lack of exposure to educational and cultural experiences, lack of family structure and stability and high mobility rates. School factors that may contribute to the gap may include lack of rigorous curriculum or classes, inexperienced or poorly trained teachers, low expectations of staff, few resources or lack of adequate funding, negative peer pressure, lack of preschool and other readiness programs, and disciplinary and safety issues (Kober, 2001). The particular factor that is highlighted here and throughout this report is that providing strong academic curriculum, programs and services for students, including majority and minority students, is under the control or influence of educators and the school. However, there is a current concern over the lack of strong academic programs that are available for minority students. As noted by Adam Gamoran, professor at the University of Wisconsin, Madison, there are differences in “academic content and classroom experiences that confront students in the same grade level but different schools,

classes, and instructional groups” (2000, p. 94). His research on analyzing numerous studies show there is great variance in curriculum, grading standards, and grouping of students across various schools. There is also an identified concern that minority students are often placed in less-challenging classrooms with more inexperienced teachers. Gamoran noted through his research that “at the high school level, high poverty schools are less likely to offer advanced math and science courses than other schools. And even in schools that do offer such courses, poor and minority students enroll far less often” (p. 95).

Our minority student population has risen 22% from 1972 to 2004. In the next fifteen years, the minority student population is projected to rise in all states but Arkansas and Mississippi (Olson, 2000). With the continuing growth of minority students in our nation’s schools, there is a greater urgency to address the minority achievement gap.

Standards Based and Other School Reforms

With the passage of the federal law concerning elementary and secondary education, the No Child Left Behind Act of 2001, the public has come to focus on and examine our educational system. Extensive federal and state legislation has been passed by elected officials with their goal being educational reform that will result in improved schools and increased student achievement. The majority of initiatives that have been created and implemented relate to the main themes or areas of standards, assessment, and accountability.

Over the past decade, the federal government has required all states to establish high-quality standards which outline curriculum objectives and emphasize what students are required to know at each grade level and for specific courses. There is also the requirement of providing aligned assessments that measure student achievement and progress towards meeting the specified standards. The premise for these mandates is increased accountability from the schools

with a focus on improving student achievement and ensuring that all students, including identified subgroups of students are learning. Students in 20 states, accounting for more than half of all public school students in the U.S., are required to pass exit examinations in order to graduate from high school.

The focused emphasis on group and individual test scores, coupled with the related increase of student testing and graduation requirements, has resulted in educators more intensely analyzing and trying to address the issue of the minority achievement gap. Test results are currently reported by race, ethnicity, and income to measure progress and achievement across the various student subgroups. In a report from the Center on Education Policy, researcher Nancy Kolber states, “Standards-based reform has highlighted the fact that many students are performing below expectations, and that a disproportionate share of these students are African American and Hispanic” (2001, p.2). States and local public schools have until the school year 2013-14 to reach the national goal of all students being academically proficient.

With the standards-based school reform movement, there is focused attention on several school reform initiatives that have been implemented to address or overcome the minority-majority achievement gaps. One initiative that has documented progress in increasing minority achievement in schools is setting high goals and expectations for all students (Haycock, 2001; Kahle, Meece, & Scantlebury, 2000; Martinez & Klopott, 2005; Sadowski, 2001). A second related initiative involves educators offering challenging curricula and instruction to all students (College Board, 1999; Elmore, 2000; Ferguson, 2000; Gamoran & Hannigan, 2000; Green, 2001; U.S. Department of Education, 1998). Another initiative is the emphasis on all students receiving instruction and services from well-qualified teachers (Darling-Hammond, Berry, & Thoreson, 2001; Ferguson, 1997; Haycock, 1998; Kain & Singleton, 1996; Ladson-Billings,

1994; National Committee on Teaching & America's Future, 1996). A fourth initiative highlights the importance of continuous student achievement monitoring through the use of data and having accountability for all students and staff (Borman, Hewes, Overman, & Brown, 2003; James, Jurich, & Estes, 2001; Johnson, 2002; Reeves, 2000; Sandham, 2001; Valverde & Schmidt, 1998).

These initiatives emphasize the importance of educators having high expectations, providing all students access to high-quality curriculum and prepared teachers, and monitoring and documenting achievement results. The identified reform strategy of offering a rigorous, relevant, strong academic and challenging curriculum to all students is paramount and the main focus of this dissertation.

Significance and Rationale for the Study

Academic Preparation and Rigor of Curriculum

Various studies have shown that to increase student achievement and promote college enrollment, all students, including minority students, must have access to and participate in a rigorous academic curriculum during their high school years (Adelman, 1999, 2006; Haycock et al., 2001; Tafel & Eberhart, 1999). While social support, parental involvement and knowledge, and access to post-secondary resources and information are also crucial for students, the schools' sphere of influence and impact is strongest in the area of providing students with sound instructional programs. To learn and increase achievement, students need access to a high-quality and well-crafted curriculum. In analyzing longitudinal data from the High School and Beyond Study, the researchers found that "academic program participation has a strong, independent effect on achievement gains. All things being equal, academic programs promote academic achievement" (Barton, 2003, p. 8). In examining the various reform initiatives that have been

implemented in recent years, the interventions of eliminating academic tracking and enrolling students in college-preparatory courses have been at the forefront of the successful practices and interventions. Research on school reform indicates that “academic press,” a demanding, constrained curriculum for all students, along with a strong organizational push for individual students to take and master these courses, improves student achievement. While shared goals and values, positive student-teacher relationships, and mentoring can promote school engagement and achievement, the most positive academic outcomes are derived from students being offered demanding curriculum and interacting with teachers who have high educational expectations for them (Phillips, 1997). Researchers further expand on this concept when highlighting that minority students, along with majority students, also benefit from the rigorous curriculum. The evidence shows that a demanding curriculum has intellectual and practical benefits for students of all backgrounds, races, and ethnicities across secondary educational experiences (Bottoms & Creech, 1997; Gamoran, 1992a; Hallinan & Kubitscheck, 1999; Pelavin & Kane, 1990). The research also identifies Algebra as the key academic course for students to take and that mastery of it will then facilitate student enrollment in higher level math courses and post-secondary education. Researchers found that “when controlling for prior mathematics achievement and other relevant variables, the rigor of the courses taken was associated with student gains in mathematics achievement during high school” (Hoachlander, Alt, & Beltranena, 2001, p. 17). Students enrolled in academic mathematics courses learned or achieved the most, while those in general level courses learned the least and those in the transitional or mid-level courses fell in between. The study attributed the differences in skill growth and achievement primarily to the variations in rigor and intensity relating to course content and learning activities. Most promising in this research is that Algebra produces positive academic outcomes for low-

achieving as well as high achieving students (Cooney & Bottoms, 2002; Gamoran & Hannigan, 2000).

This concept is also highlighted in the College Board's report, *Equity 2000: A Systemic Education Form Model*, as researchers such as Pelavin and Kane and others have identified through their studies "that low income and minority students who complete Algebra and Geometry and have expectations to go to college actually enroll in college at the same rate as their non-minority peers, with those same academic experiences" (College Board, 2001, p. 2). It is a concern that in examining the ethnic make-up of the upper-level academic classes across our nation's public schools, they are often found to be "predominately White," and the lower-level classes, which often have less demanding and relevant curricula, are composed of predominantly non-White students (Oakes, 1994). In examining data from the National Center for Educational Statistics, High School Transcript Study, the "percentage of students with four years of English, three years each of social studies and math and two years of foreign language were Asians-58 percent, Whites-46 percent, Blacks 40 percent, Hispanics-32 percent, and American Indians-28 percent" (College Board, 2001, p.10). This data reveals a six percentage point difference between Whites and Blacks and a 14 percentage point difference between Hispanics and Whites. It is clear that minority students are not enrolled in or do not participate in a rigorous curriculum to the degree that white students are participating in these academic learning opportunities.

Robert Marzano, researcher for Mid-continent for Research and Learning (McREL), has examined thirty-five years of educational literature and research. After an extensive review of over 5,000 studies and a meta-analysis of the seventy various research studies that met specified criteria and involved 2,802 schools, 14, 000 teachers and 1.4 million school students, he identified various factors that contribute to or impact student achievement. From his research

analysis, Marzano has identified five characteristics of highly successful schools. These include a guaranteed and viable curriculum, challenging goals and effective feedback, parent and community involvement, a safe and orderly environment, and collegiality and professionalism (2000).

Identified under the main category of school-level factors and listed in order of importance, the number one requirement for student achievement is a guaranteed and viable curriculum that addresses content standards. Marzano further explains the importance of educators identifying the standards essential for all students to learn and the need for established goals to challenge students and suppress or eliminate the achievement gap. This extensive research highlights the importance of focusing on and providing rigorous and academic curriculum for all students.

Programs for Gifted and Talented Students

Gifted and talented programs have traditionally been viewed as an option for students to access rigorous curriculum. One concern regarding this curricular option is that students often must first be identified as gifted and talented prior to enrolling in and accessing the programs. The federal government's longstanding definition of giftedness states "Gifted and talented children are those identified by professional qualified persons who by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to society" (Marland, 1972, p. 28). The definition goes on to highlight that these children are capable of high performance and include those with demonstrated achievement and/or potential ability in any single or combination of six identified areas: (a) general intellectual ability; (b) specific academic ability; (c) creative or productive

thinking; (d) leadership ability; (e) visual or performing arts; and (f) psychomotor ability (Marland, 1972).

Historically, the identification and selection of student for gifted and talented programs primarily involved the use of IQ and achievement tests (Baldwin, 1984; Colangelo & Davis, 1997; Terman, 1926; VanTassel-Baska, Patton, & Prillaman, 1989). These assessments limited the number of minority or culturally diverse students enrolled in gifted and talented programs (Baldwin, 2004a; Frasier, 1997; Gallagher & Gallagher, 1994). Many of these students excelled in abilities and skill areas not conducive to identification using traditional testing instruments (Baldwin, 2004b; Ford & Harris, 1990; Patton, 1998). Thus, many of these minority individuals were not being identified and were not being served in gifted and talented programs.

The National Educational Longitudinal Study (NELS) of 1988 found that only 8.8 percent of all 8th grade public school students participated in gifted and talented programs (Ross, 1993). There was also a concern about the ethnicity representation of the student enrollment in these programs. While 13% of the total eighth grade population was African American, only 5.4 percent of the gifted population was African American. Similarly, while over 10% of the total population was Hispanic, less than 5% of the gifted population was Hispanic. Conversely, while White students represented over 71% of the total population, they represented over 82% of the gifted population. Also, while Asian students represented only 3.5% of eighth graders, they represented over 7% of gifted students (Ross, 1993). This study emphasizes the underrepresentation of minority students enrolled in gifted and talented programs. Additional research also documented that African American, Hispanic, and Native American learners were being underrepresented nationally in gifted education programs and services while White and Asian

Pacific students are overrepresented (Ferguson, Kozleski, & Smith, 2001; Ford, 1996, 1998; Patton, 1998; Worrell, Szarko, & Gabelko, 2001).

One attempt to address this issue was the creation and implementation of the Jacob K. Javits Gifted and Talented Students Education Act (1988). One of the priorities of the legislation was to identify gifted and talented students who may not be identified through traditional methods. These students could include the economically disadvantaged, individuals with disabilities, and/or individuals with limited English proficiency. This national act has also supported focused initiatives by the states and local education agencies to develop and implement programs and projects to improve the gifted and talented programs offered in schools.

During this time also the U.S. Department of Education also released the report, *National Excellence: A Case for Developing America's Talent*, emphasizing the need to recognize and develop abilities and talents in students. These students “exhibit high performance capacity in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor” (Ross, 1993, p. 3). The emphasis was on assessing more individual student strengths and thus providing more expanded and appropriate services for a larger and more diversified population of gifted and talented individuals.

An additional initiative to increase the number of students identified for gifted and talented programs was to expand the concept of giftedness. Gardner (1993) conjectured that there are seven intelligences that individuals may possess at various levels. These intelligences include: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal and

intrapersonal. The recognition of these various intelligences and abilities led to support for multiple criteria consideration in gifted and talented identification and selection procedures.

Renzulli and Reis (1997) and Baldwin (1997) also worked to broaden the process of identifying and selecting students for the gifted and talented programs. These efforts helped to demonstrate a broader definition of giftedness and the recognition that it can be expressed in various ways. A number of alternative assessments and methods are being used across the country for identification, selection, and placement procedures. The measurements include authentic and portfolio assessments, curriculum-based measurements and performance based evaluation (Baldwin, 2003; Castellano, 1998; Lohman, 2005). Recruitment efforts have also focused on increasing school staff, parent and student referrals of diverse students, and expanding the sources of evidence that capture the strengths and varied abilities of diverse groups (Ford & Harris, 1990; Moore, Ford, & Milner, 2005).

As noted by Passow and Frasier, “designing, adapting, modifying and extending instruments, strategies and procedures that take into account the influence of ethnicity, culture, and socioeconomic status on behavior improve greatly upon traditional identification approaches” (1996, p. 201). These practices support the inclusion of students as opposed to the discrimination or segregation of students.

Specific programs for the gifted and talented have traditionally as well as recently been viewed as a continuum of services. These services range from being provided in regular classrooms, with the participation of all students, to arrangements and services that are exclusively tailored to the needs of the identified gifted and talented students.

A variety of research studies conducted on populations of gifted individuals provide evidence in support of specific educational curriculum needs for these students. One major

theme relating to these students is their need for rapid access to increasingly challenging curricula (Erickson, 2002; Silverman, 1995; Tomlinson, Kaplan, Renzulli, Purcell, Leppien, & Burns, 2002; VanTassel-Baska, 1995). It is noted that gifted students benefit from acceleration relating to moving through the school or curriculum more quickly than the average students. The more rapid or faster presentation of content is implemented to more closely match the speed at which gifted students learn. Acceleration means moving through the traditional curriculum at faster rates than usual to match the level and complexity of the curriculum with the readiness, abilities, and motivation of the student. “Acceleration includes single-subject acceleration, whole-grade skipping, early-entrance to school and Advanced Placement (AP) courses” (Colangelo, Assouline & Gross, 2004, p. 5). Kulik and Kulik (1984) completed a meta-analysis of 26 studies on the effects of accelerating gifted students and found that student achievement was significantly higher in accelerated classes. Rogers (1991), in an analysis of thirteen research summaries on acceleration practices, concluded that non-graded classrooms, curriculum compaction, and subject acceleration practices produce significant academic gains for students. “Students who are gifted and talented should be given experiences involving a variety of appropriate acceleration-based options, which may be offered to gifted students as a group or on an individual basis” (p.28). A 2003 national report supported by the John Templeton Foundation concluded that 50 years of research demonstrated that acceleration is positively regarded by students as they feel academically challenged as well as socially accepted (Colangelo et al., 2004).

A second theme relates to the grouping of gifted and talented students. The results of several research studies show that grouping according to ability or interest, in-class or across classes, is beneficial in meeting the needs of gifted students (Gamoran, 1990; Kulik & Kulik,

1982; Rogers, 1991). Parke (1989) identified several main grouping patterns used singly or in combination with gifted students in the classrooms. These include interest groups, cluster groups, multi-aged classes, and telescoping. These programs and services can be offered in identified classrooms, resource rooms, designated center and magnet schools, and specified schools that focus on advanced learning opportunities in particular curricular areas.

Another major theme relates to gifted students' capacity for complex reasoning and their ability to synthesize and transform information in varied and creative ways. There is emphasis on depth, complexity, and abstractness of the curriculum. Students are engaged in instructional activities when they are allowed to be creative as well as utilize and further develop their critical, analytical, and higher level thinking and problem solving skills (Amidon, 1991; Benbow, 1991; Christie, 1995; Feldhusen, 1995; Frasier, Garcia, & Passow, 1995; Renzulli & Reis, 1997).

A fourth theme related to curriculum for gifted students is the emphasis on providing them a choice of a variety of challenging learning opportunities. These enrichment activities allow individuals to explore different topics or areas of interest. Varied learning activities also allow these students to express themselves in multiple modalities and demonstrate their abilities and skills in numerous ways. There is some limited research to demonstrate that matching challenging learning experiences to secondary students' interest and abilities will result in positive student results and achievement (Bloom, 1985; Feldhusen & Kroll, 1991; Ford & Grantham, 2003; Gentry & Springer, 2002; Kerr & Sodano, 2003). There is also additional research to support the method of offering self-directed independent study to gifted learners (Betts & Neihart, 1986; Renzulli & Reis, 1997; Treffinger, 1986). This strategy involves teachers providing students the freedom to select and study in-depth topics of interest while also providing them with skills for conducting systematic, independent study (Davis & Rimm, 1989;

Reis & Renzulli, 1985; Renzulli, 1977). These advanced learning opportunities also include individual arrangements made for students at colleges, summer sessions, internships, and mentorship programs.

Despite these documented national initiatives on gifted and talented student definitions, identification and selection procedures, varied programs, and services, there continues to be a gap in student representation in gifted and talented programs. African American, Hispanic, and Native American learners continue to be underrepresented nationally in gifted education programs and services while White and Asian Pacific students are overrepresented (Bernal, 2002; Gordon & Bridgall, 2005; National Research Council, 2002).

A current goal of educators is to provide equitable opportunities and learning experiences for all students, including gifted students. All children should be viewed as having potential and abilities. “Only by ensuring that the maximum number of learners consistently experience the highest quality curriculum, as well as appropriate coaching, mentoring, and support, will these individual students, and society as a whole, benefit from their possibilities” (Tomlinson et al., 2002, p. 2). The identification, placement, and services for all students, including gifted students, must lead individuals to maximize their potential and engage in learning. Looking for ways to improve identification procedures and program services requires examination of deeply held beliefs and longstanding practices. As noted by Callahan, this requires “a willingness to restructure thinking and behavior through not just one small alteration in process, but a fundamental restructuring of modes of thinking, beliefs, philosophy, and behaving” (2005, p.6). This emphasizes the need to explore instructional reform for all students. Gifted education is tied to increasing varied learning opportunities for all individuals and thus achievement for all students.

This thinking has also led to the concept of maximizing the potential of all students and in turn providing enriched and academically challenging curriculum to the entire student population. The field of education needs more well-designed curricula and materials that are research-based with proven effectiveness for all learners, including gifted students. The education system must provide young individuals with rigorous, high-quality, and varied educational experiences that increase their academic skills and prepare them for successful transition to post-secondary experiences.

Advanced Placement Program and Courses

One of the strongest recent initiatives implemented to increase academic standards and provide a rigorous academic curriculum for secondary students has been the offering of Advanced Placement (AP) Program courses in our nation's high schools. AP courses are considered college-level classes and have a standardized curriculum for each subject area that is created and distributed by The College Examination Education Board. By providing these programs to high school students, they are given the opportunity to participate in strong instructional programs and can earn college credit since the courses curricula are aligned with college entry requirements. Most schools grant college credit to students who have completed the AP courses and who earn passing scores on the course-related AP Exams.

The College Board created the AP Program in 1954. Many secondary schools have also developed and implemented "Honors" and "Pre-AP" courses which prepare students to then transition to AP courses. These courses provide students with in-depth and enriched curricula to increase student content knowledge as well as to facilitate their development of critical thinking, learning strategies, and study skills. Another key feature of the program is encouraging high school and middle school personnel to formulate and coordinate curriculum alignment through

the use of “vertical teams,” which are created by bringing together content teachers in grades 7-12 and thus facilitating communication among them. These teachers collaborate to develop the scope and sequence of the curriculum and identify objectives for all academic and content courses. These efforts have been seen as initiatives to increase the number of students prepared for and enrolled in rigorous academic classes while at the same time enforcing the concepts of high expectations and achievement levels for middle and high school students.

The College Board’s 2010 *Advanced Placement Report to the Nation* highlights that the AP Program has grown significantly over the past five years. Students from 17,861 secondary schools participated in the AP Program last year. High school graduates who took AP Exams rose from 405,475 or 15.9% of the nation’s graduates in 2000 to 798,629 or 26.5% of the graduates in 2009 (College Board, 2010, p.14). The total number of graduates who earned a 3 or higher (on a scale of 1 to 5) on a course-related exam rose from 10.2% in 2000 to 15.9% in 2009. In the state of Maryland, nearly 24.8% of the 2009 graduation class earned an AP exam score of 3 or higher, Florida 22.9%, Virginia 21.3%, and California had 20.8% of their graduates with like results (p. 5). This data demonstrates that there have been significant increases in the number of students who are participating and achieving in AP courses. Part of the increase in the AP Program has been that as high schools have considered reform initiatives, the use of this program has been seen as a vehicle to increasing the rigor of curricula while also better preparing students for post-secondary education that includes college and university experiences.

While the College Board claims success in maintaining quality and student learning with large growth in the population of students participating in the AP Program, they cite concerns regarding all schools having access to AP Programs. In the 2002 report, *The College Board National High School Survey*, it was noted that “with 17,113 participating schools, only 472

schools offered at least 10 AP courses, 920 schools offered 5 courses and 6,038 schools offered no AP courses” (Maucieri, Gernand, & Patelis, 2002, p. 19). These low numbers reported by high schools represent the concern that most students in America do not have access to the rigorous curriculum and strong academic opportunities offered through these AP courses.

The College Board also cites concerns that African American and Native American students remain significantly underrepresented in the AP Program nationwide and Latino students remain underrepresented in numerous states. “No state with large numbers of African American or Native American students has yet succeeded at providing AP opportunities that allow for equitable representation of these students” (2010, p.10). Overall, African American program representation was 8.2% although African Americans make up 14.5% of the national student population and Native American representation was .6% while representing 1.2% of the nation’s student population (p. 11). The report does highlight that states such as Florida, Maryland, California, and Texas have made gains in increasing Latino student enrollment to more equitable and representative levels through state-led and implemented initiatives.

The new federal legislation has also created and implemented initiatives such as the AP Incentive and the AP Fee Reduction Programs. Schools with poverty levels at 40% or higher have been awarded federal funds to create new AP Programs in their schools as well as pay for the AP Exams for low-income students. These initiatives have created greater opportunities for underrepresented students to enroll and participate in AP courses with the hope that student exposure and involvement in rigorous academic courses may lead to a further reduction of the minority achievement gap. The AP Incentive Programs offer financial incentives and monetary awards to students, teachers, and school administrators for strong AP exam performances. The

programs also provide specialized curriculum training and support to teachers as well as funding and resources to implement tutoring and AP preparation sessions for students.

Secondary schools across the country are now attempting to monitor their student enrollments in AP courses. Jay Mathews, education reporter for The Washington Post and author of the book, *Class Struggle: What is Wrong and Right about America's Best Public High Schools*, (1998) has created the Mathews Challenge Index to help with this task. This index was developed to measure and compare the AP Program student enrollment in every high school. The score on the index is computed by identifying the number of AP exams given for the designated school year and dividing it by the number of graduating seniors. This tool is being used by individual schools to analyze their student enrollments, majority and minority, as well as to compare themselves to other schools in their district, state, and at the national level.

While there have been increases in the enrollment of all ethnic groups of students in AP Programs, there are proportionally fewer African-American, Hispanic, and American Indian students that have access to or take AP courses as compared to their White and Asian American student counterparts (Oakes, Muir, & Joseph, 2000). This issue was also noted in the College Board's report, *What Are the Characteristics of AP Teachers? An Examination of Survey Research*. When 32, 109 AP teachers were surveyed via a College Board questionnaire between November, 1999 and February, 2001, findings indicated that "ethnic minority, ESL, and economically disadvantaged students were underrepresented in AP classes. Despite these students being underrepresented, schools' staffs did not identify the reasons for the underrepresentation. Additionally, most schools responded that they did not have specific initiatives or programs geared toward increasing their minority student participation in the AP Program"

(Milewski & Gillie, 2002, p. 1). Only 12.1% of survey respondents indicated that their school had any such initiatives. The few initiatives cited included AP teachers recruiting students (9.1%); teachers of prerequisite academic courses recruiting students for the AP courses (8.1%), guidance counselors recruiting students (7.7%), meeting held with parents (3.8%), and special school mailings or communications (2.5%). Other initiatives (2.2%) included magnet programs, the schools paying for 50% of costs for taking the AP Exams and vertical teaming efforts.

The majority of educators believe that AP courses offer students a standardized academic curriculum, close monitoring of progress and achievement of objectives, small class sizes, and individual teacher attention. Students are also given the opportunity to be exposed to rigorous course work, further develop their academic, critical thinking, time management, learning strategies, and study skills, and earn college credit while still attending high school. Despite support and endorsement for the AP Program, there remain concerns that all students do not have access or opportunity to participate in these academic courses.

Educational Leadership for Effective Schools and Increased Student Achievement

Ron Edmonds was one of the forefathers of the school effectiveness movement and champions of the concept that schools can and do influence student performance and achievement. Through his research, Edmonds identified five school-related variables that correlate with student achievement. These include strong administrative leadership, high expectations for student achievement, an orderly learning atmosphere, an emphasis on basic skills, and frequent monitoring of student progress (Edmonds, 1979).

Other researchers who have highlighted leadership and its effects on achievement include Hallinger and Heck (1996), who reviewed empirical literature from 1980-1995 and identified the positive relationship between the principal's role and school effect. These authors noted that in

a review of 40 educational studies, there was an identified relationship between principal leadership and its influence on student achievement. They highlighted that principals exercise a statistically significant, though indirect effect, on school effectiveness and student achievement. Leadership explains about one quarter of the total variation (10 to 20%) explained by all school-level variables, after controlling for student intake factors (Creemers & Reezigt, 1996). Only classroom factors, at 33%, explain a slightly larger proportion of variation in student achievement (Hill, 1998). These researchers emphasized that school administrators directly influence areas that include school mission, teacher expectation, school culture, and instructional program organization. They claim that their research highlights that focus on these particular areas can positively influence student learning and achievement. The researchers also reiterated that principals make a difference by influencing internal school processes that are directly linked to student learning. These internal processes connect learning to school policies, norms, academic expectations, school mission, and student opportunities to ensure instructional organization. The research also reinforces the concepts that school leaders can and do have an influence on school curriculum, policies and procedures, staff, and students.

Cotton (2003) provided an extensive descriptive narrative review of 81 synthesized educational studies. The author noted that an emphasis on the areas of curriculum and instruction, teacher-student interactions, assessment, leadership, and school improvement initiatives facilitate increased student achievement. Cotton articulated that when educational leaders provided students with access to strong curricula, opportunities to learn, extended time, positive school climate and high expectations, then positive student outcomes and increased achievement were recognized and documented.

Leithwood, Louis, Anderson, and Wahlstrom (2004) also completed a major literature review commissioned by the Wallace Foundation that included a five-year study of 180 schools. The researchers emphasized that effective school leaders achieve success by setting direction, establishing high expectations, and using data to monitor student progress and performance. Leithwood et al. noted that leaders develop their people by providing faculty with training and support and making the organization work by enhancing conditions and providing incentives that facilitate teaching and learning. The researchers claimed that these identified leadership practices support and promote student achievement. Similar to Cotton, Leithwood et al. claim that “Leadership is second only to classroom instruction among school-related factors that contribute to what students learn at school” (p.7). Another claim is that “leadership effects are usually largest where and when they are needed most” (p. 7). The authors noted that without a powerful principal or other strong school leaders, troubled schools are unlikely to be turned around to be successful. With strong leaders, troubled schools have potential or increase their likelihood of being successful. They emphasized that while many factors contribute to having successful schools, it is leadership that is the catalyst for school success and student performance. The positive aspects of these extensive studies reinforce the theory that leaders can and do influence student achievement, the number one priority of our educational endeavors.

In further examining and determining influences on student academic achievement and academic planning, Mid-continent Research for Education and Learning (McREL) staff examined the effects of leadership on student achievement (2005). An analysis of 70 secondary studies found a positive correlation between leadership and achievement (i.e., effective school leadership can boost student achievement). In all, the researchers computed:

69 correlations representing the relationship between general leadership behavior and student academic achievement, with the average correlation being .25. This correlation indicates that an increase in principal leadership behavior from the 50th percentile to the 84th percentile is associated with a gain in the overall achievement of the school from the 50th to 60th percentile. Additionally, an increase in leadership behavior from the 50th percentile to the 99th percentile is associated with an increase in student achievement from the 50th percentile to the 72nd percentile. (Marzano, Waters, & McNulty, 2005, pp. 30-31)

The study went on to reveal 21 key leadership responsibilities and 66 associated practices that are positively correlated with student achievement. Researchers concluded that effective leaders understood which school changes and initiatives were most likely to effectively improve student achievement. This “balanced leadership framework” highlights the concept that leaders need to know which skills and strategies to utilize as well as be able to identify when, how, and why to use them. It emphasizes that effective principals must “balance implementation of successful structures and practices with changing others that need revision or modification. These leaders know how to create learning environments that support people, connect them with one another, and provide the knowledge, skills and resources they need to succeed” (Marzano et al., p.2).

While these responsibilities are all interrelated, two of them relate directly to curriculum, instruction, and assessment. Researchers cited the importance of school leaders being knowledgeable about current practices relating to curriculum, instruction, and assessment and being directly involved in design and implementation in these areas. The researchers also noted that the two variables of “focus” and “order of change” were most influential factors in positively or negatively impacting student achievement. The “focus” relates to school leaders

identifying the appropriate direction or vision for their instructional programs and school improvement efforts. Meeting the requirements of the No Child Left Behind Act requires significant change in how school staffs disaggregate data by student subgroups and how they identify practices and strategies to ensure that all subgroups are learning and demonstrating achievement. The “order of change” relates to first- and second-order changes. First-order change relates to current or existing educational models, knowledge, skills, and practices. It is important for educators to have a strong working knowledge of curriculum and an understanding of implementing varied instructional programs and strategies. Second-order changes require new knowledge, skills, and practices. Effective leadership is required to establish a strong academic program for all individuals and to establish procedures to analyze data, make the necessary adjustments to meet instructional needs, and positively affect the achievement of all students.

It is essential that school administrators, teachers, and counselors are instructional leaders in their schools and that they work together to offer and implement a required and rigorous curriculum. Instructional leadership highlights teaching and learning by focusing on defining and communicating school mission, managing the instructional program, and promoting a positive school learning climate (Andrews & Soder, 1987; Leithwood, 2002). Leaders are involved in coordinating curricula, supervising and evaluating the delivery of instruction, and monitoring and evaluating student progress. They are also dedicated to protecting instructional time, promoting profession development and training, maintaining high visibility, and providing incentives for students and teachers. “Leadership is the guidance and direction of instructional improvement” (Elmore, 2000, p. 13). Instructional leaders are focused on strengthening curriculum, teaching and learning, professional development, data-driven decision making, and accountability. Visionary instructional leaders demonstrate commitment to high expectations and

the belief that all children can learn at high levels. As highlighted by Leithwood in statements relating to providing instructional leadership, “a considerable amount of evidence suggests that the best curriculum for socially, economically or culturally disadvantaged children will often be the rich curriculum typically experienced by relatively advantaged students” (2002, p. 62).

Educational leadership research again supports the concept that leaders must promote strong academic curriculum and instruction that will facilitate student achievement and positive student outcomes for all students.

Transformational leadership also focuses on mission building and instructional practices while developing and expanding the leadership capacity of other individuals. Leithwood emphasizes that “all transformation approaches to leadership share in common the fundamental aim of fostering capacity development and higher levels of personal commitment to organizational goals on the part of leadership colleagues” (2002, p. 56). This leadership emphasizes building school vision, developing specific goals and priorities, holding high performance expectations, providing intellectual stimulation, offering individual support, modeling desirable professional practice and values, creating structures to foster participation and collaboration in decision making, and creating productive community relationships. Educational leaders must invite and encourage all school constituents to be involved in promoting strong academic programs and services for our students, majority and minority.

Elmore (2000) established the foundation for the new leadership structure that relates to distributed or shared leadership among all school constituents. He emphasizes that distributed leadership is “primarily about enhancing the skills and knowledge of people in the organization, creating a common culture of expectations around the use of those skills and knowledge, holding the various pieces of the organization together in a productive relationship with each other, and

holding individuals accountable for their contribution to the collective result” (p. 15). He emphasizes continuous learning and that leaders create environments where learning is valued for individuals and the collective group or organization. He also highlights that leadership and learning require modeling of the values and behavior of the group. This concept demonstrates reciprocity of accountability and capacity. All individuals are responsible for modeling the learning behavior expected of others and are accountable for developing new knowledge and skills required for demands of excellence and improvement. Spillane, Halverson, and Diamond (2001) emphasized that school leadership should be defined by a broad set of leaders within a school, not just by the principal. This distributive leadership expands expertise and responsibilities across various staff members, strengthening the initiatives. Distributive leadership highlights that large scale educational improvement requires focused action among individuals with different areas of strength and expertise and mutual respect for an appreciation of their knowledge and skills contributing to mutual goals and objectives. This concept supports inclusive efforts to involve all school constituents in demonstrated leadership initiatives that support offering rigorous curricula and thus strong educational experiences for all students.

The focus on research in educational leadership has allowed the examination of qualities of effective leaders and their influence on student achievement and schools. The research emphasizes the importance of educators being strong instructional leaders who promote a positive learning climate by conveying their expectations for quality and high performance. These leaders provide direction to and supervision of the instructional program. They help others see the challenge of the gap between what the school aspires to and what is being accomplished. They solicit the support of all school constituents to promote equity by establishing access and open door policies for students to enroll and participate in challenging academic classes.

Leaders' efforts to consistently articulate high expectations for all students, implement rigorous curricula, access resources, and support individuals in their academic endeavors have led to students' increased achievement. It is important to continue to identify those leaders who through their specific behaviors, actions and skills, positively influence student performance and achievement.

Statement of Purpose

The purpose of this qualitative research was to conduct and analyze an in-depth case study of a secondary school that has been successful in recruiting and enrolling students, majority and minority, in AP Program courses. This school is part of the Cooper County Public Schools (CCPS; name has been changed to protect confidentiality), a large suburban school system located in a mid-Atlantic state of the United States.

For this particular case study, data was collected through observations, interviews, and document reviews completed at the school site. The focus was on identifying individuals, programs, and practices that have been utilized and implemented to increase student enrollment in the AP courses. A potential outcome of this study is that the information retrieved from this study can be used to help educators identify successful interventions and initiatives that influence and facilitate increased student enrollment in AP courses. Another potential outcome is that the knowledge gained from this study can be shared and utilized by educators at other school sites who are focusing on increasing enrollment in these AP courses.

Research Questions

The overarching question for this study addressed the identification of initiatives utilized by school personnel to increase student enrollment in AP Program courses:

1. How have you increased the minority student enrollment in the in the Advanced Placement Program (AP) courses?

The following questions relating to individuals, policies, procedures, programs, services and strategies were also addressed:

2. What are the specific school policies and procedures for student enrollment in the AP courses?
3. What specific school programs and strategies were created and utilized to promote and increase student enrollment in the AP courses?
4. Who were the key individuals and how did they influence the positive enrollment changes?

Limitations and Assumptions

A number of limitations were considered during this qualitative research. This case study focused on only one school and thus generalizing to other schools or research is limited. This study was also dependent on the availability and retrieval of documents from the selected school site. Another limitation is that this researcher is an administrator in the identified school district, although not at the particular school in the case study. While it is an advantage to have knowledge and understanding of the school system, it has a disadvantage in that there is a possibility of bias that might influence data collection and analysis. Recognizing that the interviewees might assume the interviewer's institutional knowledge base, this researcher preceded each interview with a statement of awareness to the interviewees to indicate that they needed to answer the questions completely and in full detail.

To further combat bias and prejudicial interpretations, this researcher utilized member checks and requested that the research participants review the transcripts to confirm the accuracy of the information.

Definitions of Terms

For the purpose of this study the following definitions are used:

Advanced Placement (AP) Program: The Advanced Placement (AP) Program is a curriculum in the United States that is sponsored by the College Board. This program offers 35 rigorous AP courses that are generally recognized to be the equivalent to undergraduate courses in college. (<http://apcentral.collegeboard.com/apc/Controller.jpf>)

African American or Black Students: The terms *African American and Black* are used interchangeably throughout this study. These terms serve as identifiers for people of African ancestry in the United States. The term *Black* is the term most commonly found in school reports relating to the ethnicity of these students. (U.S. Department of Commerce, 2001a)

High School or Secondary School Principal: This is the educational leader of a public school in which the configuration of grades concludes with grade 12, the graduating class. In Cooper County Public Schools, the configuration was either grades 9-12 (high school) or grades 7-12 (secondary school). (CCPS Profile Sheet, 2010)

Hispanic or Latino Students: *Hispanic* and *Latino* students are used interchangeably throughout this study. These terms serve as identifiers for individuals who have origins in any of the original peoples of Mexico, Puerto Rico, Cuba, or Central or South America, or of other Spanish cultures. The term *Hispanic* is the term most commonly found in school reports relating to the ethnicity of these students. (U.S. Department of Commerce, 2001b)

Minority Students: The term *minority student* is used throughout this study to refer to racially, ethnically, linguistically, or culturally diverse students. Specifically, this includes Asian, Black, Hispanic, Middle Eastern, Native American Indian, and other culturally diverse students found in the schools where data will be collected. These students are typically underserved in gifted programs for advanced learners. (U.S. Department of Commerce, 2001a)

Urban School: The term *urban school* used throughout this study refers to schools located in metropolitan areas that are characterized by high ethnic and linguistic diversity enrollment and by high low-income enrollment. The number of students eligible for free and reduced-price school lunch is used as a proxy measure of low-income. (U.S. Department of Commerce, 2001a)

Organization of the Study

This dissertation is divided into five chapters in order to reflect the information, knowledge, procedures, and process of this research project. Chapter 1 includes an introduction; the historical background and current status of the minority achievement gap; the inclusion of recent standards based and other school reforms relating to documenting achievement for minority populations in accordance with The No Child Left Behind Act; a review of rigorous academic programs available to students, such as gifted and talented program options; a brief history and summary of the Advanced Placement (AP) Program; a review of leadership as it relates to providing rigorous academic curriculum and instruction to meet the needs of students; purpose of the study; the guiding research questions; limitations and assumptions of the study; definition of terms; and the overall organization of the study. Chapter 2 presents a review of the literature pertaining to this area of study. It highlights the few identified and documented successful programs that secondary educators are utilizing to attract minority students to challenging academic courses. It also provides a summary of the limited research on initiatives

to increase minority student enrollment and performance in AP courses and on the related AP exams. Chapter 3 describes the research methodology, data collection, and analysis used in this qualitative case study. This in-depth case study involves the selection of a designated school in the Mid-Atlantic region that has been successful in recruiting and enrolling students, majority and minority, in AP Program courses. Chapter 4 of this dissertation includes a presentation of the data obtained through observations, interviews, and the document analysis. Chapter 5 presents a summary of the study findings, implications, recommendations for further research and exploration and conclusions.

Chapter 2

Examining Theoretical and Commentary Literature

Importance of High Academic Expectations and Rigorous, Relevant Curriculum

In the U.S. Department of Education's report, *Key High School Reform Strategies: An Overview of Research Findings*, researchers analyzed 300 school reform studies conducted in the previous five years. The common themes or elements identified in effective and successful schools included: commitment to high academic expectations; small learning environments; structuring learning around career/student interest; professional development focused on instruction; career and higher education counseling; rigorous, flexible and relevant instruction; appropriate assessment; partnerships with higher education; and key alliances with parents and communities. Once again, the importance of providing a strong academic curriculum for students is emphasized (Visher, Teitelbaum, & Emanuel, 1999).

William Daggett, President of the International Center for Leadership in Education, has for years highlighted the importance of rigor, relevance, and relationships in providing instruction to our nation's students. In focusing on the rigor aspect of the curriculum Daggett states, "Rigor requires students to make a substantial personal investment in their own learning. Students involved in rigorous learning are deeply engaged in thought, critical analysis, debate, research, synthesis, problem solving, and reflection. In other words, they are exercising their cognitive abilities to the maximum" (2005, p. 5).

In 2000, Quick and Quick completed an analysis of five types of high achieving schools. Included in their report, *High Poverty-High Success: Schools That Defy the Odds*, was an analysis of the *Beating the Odds Study*, *Benchmark School Study*, *Hope for Urban Education Study*, *90-90-90 Schools*, and *No Excuses Schools* reports. Central to student and school success

in these studies were five identified elements that included: (a) a commitment to a rigorous and relevant curriculum for all students; (b) implementing testing programs that evaluate students' conceptual knowledge and their ability to apply knowledge; (c), a focused and sustained staff development training program; (d) commitment to addressing behavior; and (e) willingness to make changes to benefit students. Again, the number one characteristic highlighted in the research is that a rigorous and relevant curriculum is necessary for all students (The Education Trust, 2005).

In a study by Jesse, Davis, and Pokorny (2004), nine Texas middle schools were examined for evidence of the characteristics of successful and effective schools. Data analysis of on-site school visits and interviews with the administrators, various teachers, and student focus groups at each site indicated results that were consistent with previous research in that each school had “strong school-wide leadership that connected with the community, teacher expertise and expectations, and frequent home-school communications” (p. 32). Students reported that their teachers held high expectations and standards for work and behavior and their favorite teachers were the ones that pushed them to learn. Teachers and other staff established and maintained caring and respectful relationships with students and displayed genuine concern for their welfare. Parents demonstrated knowledge of school policies and expressed appreciation for the frequent communication and being kept informed. The most striking factor reinforced in all of these schools was the strong unity of purpose and cohesive sense of school identity in which core values of high expectations, rigorous academic curriculum, and positive, supportive relationships were emphasized by all students, teachers, administrators, and parents. “Achievement was one of the unifying values for all of the schools in the study. It was central to school mission statements, faculty meetings, staff development sessions, and school newsletters

sent home to parents” (p. 36). The relationships among having high student expectations, providing rigorous curricula, and thus demonstrated student achievement are documented throughout the recent literature and research.

Barriers to Enrolling Students in Academic Courses

In recent years, states and school districts have begun to examine course enrollment practices for students. Educators are attempting to analyze their policies and procedures to determine if they are being restrictive or inclusive in their efforts to enroll and group students in academic programs. Many schools continue to enforce rigid admissions and enrollment policies that many educators refer to as “gate-keeping”. In examining educational research on high school course placement, it is noted that large or disproportionate numbers of minority students were found to be in the general education courses with primarily White students being in the academic courses (Braddock, 1990; Darling-Hammond, 1994; Oakes, 1985). Oakes and Guiton (1995) further emphasized this point in their study of three school systems, where African American and Latino students with the same test scores were not placed in higher-level academic courses.

Course selection or grouping of students can begin as early as elementary school and the choice of middle school courses can set the foundation or level for selection of high school academic courses. School personnel who are involved in academic advisement and can influence course placement include teachers, counselors, and administrators who may or may not encourage students to enroll in upper level courses. School personnel often cite concern over students’ abilities or skill levels as having a negative impact on their eligibility for or performance in these academic courses (Gamoran, 1992b; Useem, 1992). Affluent parents may insist that students be placed in advanced courses and may challenge procedures for course and

program selection more ready than less-affluent parents who more often accept the level assignments made by school staff (George, 2002; Useem, 1992).

In examining enrollment policies of schools, rigid criteria and entrance requirements are often set to determine who can participate in the academic courses. There has also been concern that many schools use only a single criterion, such as a PSAT score or class rank, for selecting and enrolling students in AP courses. There is often no consideration given to other factors or means of assessment and evaluation. In many cases, there is not any analysis of other areas of student skills or strengths considered when determining placement in academic courses. Educators have noted that many schools have not utilized the wide range of selection criteria that could include varied data such as test scores, alternative screening and assessment tools, transcripts, teacher recommendations, individual interview, and self-selection procedures. There is also not always adequate academic advising for students. Often information regarding expectations and requirements for these academic courses is not shared. In addition, the academic course sequences that best prepare students for college and post-secondary experiences are often not addressed or discussed with students or families (Darling-Hammond, 1994; Oakes & Lipton, 1992).

There also continue to be concerns regarding school staff's attitudes and practices relating to raising minority enrollment in AP courses. A study sponsored by the College Board (Burton, Whitman, Yepes-Baray, Cline, & Kim, 2002) examined 200 schools across the nation with the most underrepresented and overrepresented minority student enrollments. Administrators and teachers in each of these schools participated by completing questionnaires on minority student enrollment in AP Calculus and AP English Literature and Composition. The participants were asked to answer survey questions relating to economic and educational

backgrounds of students, families, and staff as well as address items on school, district, and state policies and practices for AP courses. This study revealed that while school personnel encouraged students to enroll in AP courses and there was appropriate majority student representation in them, not all of these schools and teachers made special efforts to recruit minority students for AP. Only half of the principals reported making an effort to let minority students know about the AP program or to recruit minority students to take AP courses. “Teachers, about 20 percent of AP Calculus-AB teachers and 30 percent of the Literature teachers, report making an effort to recruit students in the targeted minority groups” (p. 19). In addition, “focus group results showed that teachers did not consider recruiting to be their job and questionnaire results agreed that teachers do little recruiting of minority students” (p. 20). The groups also did not have strong understanding of parent knowledge or information about the programs and did not have additional suggestions as to how to increase minority enrollment in these courses. The results speak to the school staffs’ lack of focus or effort to increase minority enrollment in these academic courses.

This report explored variables and identified successful instructional strategies that teachers use in teaching minority students in AP courses. As noted by the authors of the report:

The study was much less successful in identifying success in enrolling minority students, perhaps because it was looking in the wrong place. We were not able to find a group of teachers who were enthusiastic recruiters of minority students. Perhaps success in enrolling minority students is a collaboration of school district policy, principals, and counselors efforts as well as parent and community support. Finding out how to bring minority students in the AP classroom is a crucial issue that needs to be understood. (Burton et al., 2002, p. 52)

This study emphasizes the problem that a large number of students are not encouraged or invited to participate in the classes. It is also noted that in many schools, teachers, counselors and administrators do not engage in the process of seeking and recruiting students to enroll and participate in these academic courses.

There are also teachers who worry that increasing access for minority and other students could diminish the quality of AP courses. Camara, Dorans, Morgan, & Myford (2000), report that the quality of AP courses depends on the course content, the teachers, and the students, as well as the exam. “Increasing access will not diminish quality. Instead increasing access exposes students to college level course material, encourages teachers to expand their knowledge domains, serves as a lever for lifting curriculum rigor and provides students with the opportunities to experience the challenge associate with advanced placement in college” (p. 2).

In a study conducted by Allen, Bonous-Hammarth, and Suh (2003), 1,500 Fall 2001 Gates Millennium Scholarship winners were surveyed about the relationships between high school preparation and college attendance. The survey included questions about background information, degree aspirations, beliefs and values, family support for college, high school academic preparation, and undergraduate activities. Fifty-six of these individuals also participated in a focus group interview activity. Questions covered included topics related to sources of college information, access to resources, and facilitators and barriers for college preparation. “This research demonstrates that urban, low-income students of color encounter unique challenges gaining access to rigorous academic courses, adequate educational resources, quality instruction, early college counseling, and other college prerequisites” (p.2). The results revealed that while Asian Pacific Islander Americans tended to hold the highest educational aspirations of all racial/ethnic groups and had taken the most Advanced Placement courses, they

were also most likely to have experienced being the racial minority in their classes, reporting lower self-esteem or sense of control over their lives, and having homework difficulties. The Native American/Alaska group was the least likely to have taken math, science or AP courses in high school. Furthermore, they reported the lowest mean SAT and ACT scores (p.6). The Native American /Alaska Native students reported the most barriers to educational success with African American and Latino behind them. They highlighted that formal academic tracking prevented certain groups of students from accessing academic courses. They noted that interactions with counselors and teachers were influenced by negative racial/ethnic stereotypes. They also voiced concerns about how negative racial/ethnic stereotypes caused school personnel and students from other cultural background to unfairly question their academic abilities. In addition, some of the minority students received mixed messages from family and peers who expressed pride in their academic achievements but expressed fears or worry that these students would be separated from their family, friends, and community (p.10). This study reinforces the need to continue to examine school procedures pertaining to tracking or grouping students, policies on providing access to academic courses, and selective distribution of educational materials and resources to students and families.

Initiatives to Increase Skills and Provide Academic Support to Minority Students

In 1997, the College Board created the National Task Force on Minority High Achievement to address the educational issue of consistent under-representation of African American, Latino and Native American students among high achieving students in the educational system. The Task Force has worked over the past ten years to encourage educators from all educational levels as well as school community leaders, to collaborate, create and implement programs and services that support minority students. It has facilitated initiatives

such as the creation of school-district consortiums that allow educators to exchange ideas and information about promising and effective programs, strategies, and practices. It has supported after-school, summer, and other supplementary programs as well as strengthened advising and peer networking programs for minority students. The Task Force has also facilitated the creation of foundations and business partnerships that access and provide funding and resources for schools and students (College Board, 1999). An important point this organization makes is that increasing the amount of money spent on schooling can make a difference for disadvantaged and minority students, but changing how money is spent is often required also. “Making schools smaller in terms of enrollment, providing low student-teacher ratios in the primary grades, spending staff development money to help teachers learn to use a research-proven school reform or curriculum/instruction strategies, providing students with better educated teachers, and offering students an academically challenging curriculum are examples of how increasing resources or using them differently can raise student achievement” (p. 19).

A major effort of the National Association of Secondary School Principals is the Breakthrough High Schools project that was initiated in 2002, with funding from the Bill and Melinda Gates Foundation. The goal of this project was to identify successful high schools across the country that were serving high minority, high poverty student populations and were successful for multiple years in raising student achievement, increasing student attendance, graduating 90% of their graduates and successfully transitioning them to postsecondary education. During 2004-05, a total of 21 Breakthrough High Schools were selected as practical models for other schools. In reviewing these school profiles, there were identified commonalities among the schools that included creating personalized environments; strong collaboration among students, staff and families; effective school leadership; and a rigorous curriculum featured and

provided to all students. These schools provided numerous programs and resources to students to help them strengthen and improve their reading and math skills. They offered all students a variety of challenging courses while providing them with tutoring and mentoring programs (Tirozzi, 2005). The emphasis on high expectations and rigorous coursework was the bar for all of the students. The availability of varied programs, services, and resources for every student was the norm.

Minority Student Achievement Network (MSAN) is a national organization comprised of 25 school districts with varied populations and is dedicated to high academic achievement for minority students and to eliminate the minority achievement gap. This organization is focused on collaborative communication, research, and professional development. MSAN hosts various sessions throughout the year that include superintendent, teacher, and student meetings. The Network has also participated in a recent initiative where it sponsored conferences for high-achieving minority students. Representatives from MSAN meet with university and other school staffs and peers from across the country to discuss and explore why some African American and Latino students achieve while others underachieve compared to their White and Asian American peers. In reviewing conference discussions, MSAN staff states that student participants cite the importance of supportive relationships with adults as the most important factor in their success. This same theme was noted in a 2001 survey of 40,000 students in 15 of the MSAN districts. “Having positive, encouraging, and demanding relationships with adults in schools is essential for minority students” (Alson, 2003, p.78).

The Minority Achievement Committee or MAC Scholars Program was initiated in Shaker Heights, Ohio to address the issue of providing mentoring services and support to minority students. To counter a peer culture that sometimes would belittle academic success and

accuse high achieving black students of “acting white,” this program was instituted ten years ago to provide encouragement, role models, and on-going academic and social support to minority students (Viadero & Johnston, 2000). Other programs and initiatives that support students in improving their skills and preparing for academic courses include summer pre-calculus programs to attract and prepare minority students for advanced math classes, ACT test prep courses for African American and Latino students, and the Questioning, Understanding, Educating Students Together (QUEST) program. The QUEST program identifies older minority students to serve as mentors in working with promising eighth graders. They help to support these younger students as they enter high school and encourage their enrollment in Honors and AP courses (Reynolds, 2006, p. 14).

The Shaker Heights Ohio Public School system has been examined to determine minority students’ perceptions about school. Results of surveys showed that while Black students spend as much time as White students doing homework, they completed it less often. The author attributes this behavior to the idea that, “Students may think it’s better to look like you’re not trying than to look stupid” (Sadowski, 2001, p.4). By implementing orientation programs for freshmen called Straight Talk, in which students learn skills for making the transition to high school successful, and utilizing successful minority students to serve as mentors to younger students, this district has reduced dropout rates for Black students from 10.4% in 1993-94 to 2.6% in 2004-05 (Sadowski, 2001, p. 5).

Thomas Fowler-Finn is superintendent of Fort Wayne Community Schools in Fort Wayne, Indiana and president of Network for Equity in Student Achievement (NESA). This group consists of 15 large, urban school systems that share data, resources and initiatives. Fowler-Finn cites several strategies for investigating the perceptions and motivation of students.

One strategy he highlights is to utilize student and staff surveys to investigate individual perceptions about school climate, discipline procedures, educational aspirations, effort and motivation (Rothman, Winter 2001/2002).

Many of these programs and strategies have shown promise in improving student performance, raising academic achievement, and involving families, mentors, and tutors in supporting students in their educational experiences. The only issue with these initiatives is that while there is anecdotal data to suggest they are effective in raising minority achievement and enrollment in academic courses, there is little concentrated program research to determine their efficacy.

Identified Interventions to Increase Minority Enrollment in Academic Courses

High school reform strategies that address increased achievement, success for underrepresented students, and college preparedness are linked to various initiatives that emphasize the academic rigor of the curriculum and those that focus on the curriculum alignment between high school and post-secondary educational opportunities. One of the national programs that have been credited with providing increased access to rigorous courses for minority youth is the EQUITY 2000 program. This program was developed by the College Board in 1990 and established goals of increasing the enrollment of minority and low income students in advanced math courses and working with school staffs to improve the quality of instruction in math and science classes. The program has promoted the belief that schools use the standards developed by the National Council of Teachers of Mathematics to guide their curriculum and instruction. It has also included efforts to provide school personnel and parents with professional development training sessions on monitoring and analyzing achievement data and academic planning for all students. One key feature of the program includes Saturday

Academies and classes that are convened at local universities where designated college and high school staffs work with students on skill building activities. This program also includes parents participating by learning how to support students and work with them on academic exercises. Another feature of the program is the Summer Scholars Program, which is a three-to five-week summer program held at the local university with college and high school staffs team-teaching classes that provide enrichment and support for math and science academic coursework. This program also accesses college students who serve as mentors and role models to the high school students. Other enrichment components include business partnerships, Test Prep activities, access to career and college resource centers, and college/university fairs. This program began in 1990 at one school district in Forth Worth, Texas and has grown to 33 sites in 22 districts (College Board, 2001, pp. 6- 7). Recent data from a six-year summative evaluation illustrate that EQUITY 2000 has had impact on the pilot sites and their students. By the end of the pilot period, “more students were enrolled in and successfully completed Algebra or higher mathematics than were enrolled prior to the pilot” (p. 10). Further analysis of these claims revealed that ninth grade enrollment in Algebra I or higher increased 37 percent points, from 50% to 87% of the students. African American enrollment increased from 45% to 86% and Hispanic enrollment increased from 40% to 87%. The Asian student enrollment also increased from 63% to 95% and the White enrollment increased from 59% to 85%. The tenth grade enrollment in Geometry increased in the following areas: African American enrollment increased from 35% to 89%, Hispanic increased from 21% to 49%, Asian increased from 59% to 77% and White increased from 49% to 72% (Rodriguez, Khatri, & Han, 2001). This program showed promise in all students increasing their enrollment in higher academic math courses.

Another national program initiative is the Advancement via Individual Determination (AVID) program. This Texas-based program was created in 1999 to prepare underachieving students for enrolling in higher-level courses and presently has programs in 1,000 middle and high schools nationwide. The program serves all students but it focuses on low-income or minority students who are the first in their families to attend college. School staff reviews grades, test scores, and transcripts of eighth and ninth students to determine individuals who are underachieving but have the potential to be successful in academic courses. Through the creation of academic and social assistance networks, students are able to participate in academic college preparatory classes that will facilitate their successful transition to college. Identified adults who serve as mentors and tutors provide on-going academic and social-emotional support to students while they are enrolled in their academically challenging courses. Setting high academic expectations and providing resources to students are key aspects of the program. There is great emphasis on establishing close relationships between students, teachers, and families that facilitate strong academic and social support (Martinez & Klopott, 2005, pp. 17-18). A study of the AVID program found that the students who were enrolled in this program for two years, improved their passing rates on the Texas Assessment of Academic Skills (TAAS) by 15% in math and 7% in reading. It was noted that 100% of seniors who participated in the program graduated and that 77% were attending college the fall after graduation (Watt, Yanez, & Cossio, 2004).

While there is little extensive research on the post-secondary achievement and performance of students involved in these programs, it is noted that the initiatives serve as facilitators for increasing minority student academic course enrollments and coordinating staff, student, and parent efforts on advocacy and focus for sound individual student academic

planning. These programs also reinforce the beliefs that all students can learn and achieve at high levels if provided effective support in an environment of high expectations shared by all education constituents. The elimination of tracking students combined with providing them access to rigorous academic courses is essential.

Expanding Advanced Placement Program Course Opportunities for Students

The College Board's publication, *Opening Classroom Doors: Strategies for Expanding Access to AP*, highlights initiatives across the country in urban, suburban, and rural schools, that open doors and offer academic opportunities to students while maintaining high academic standards in the AP Program. When examining these programs, three themes emerge: (a) there are administrative efforts to access and implement creative scheduling and staffing; (b) there are instructional efforts that include teacher professional development and curriculum alignment to create and promote academic excellence in middle schools; and (c) there are also counseling initiatives to recruit and encourage young scholars while informing them and their families of the expectations and requirements of advanced courses (College Board, 2002, p.3).

One initiative to increase minority student enrollment in AP classes has been the College Board's expansion of the courses offered through the AP Program. When the program began over fifty years ago, there were only 11 courses offered. Today, there are 37 courses and related exams offered across a wide range of subject areas. This expansion has sparked interest and thus increased student enrollment in the program (College Board, 2007, p.1).

Another resource that the College Board has provided is extensive summer and weekend training programs for teachers. By providing professional development training to staff in the areas of intense curriculum instruction and identification of varied instructional strategies to utilize with diverse populations, this organization has facilitated support to all students, including

minority individuals. The College Board has also enlarged and expanded its Web site, AP Central (<http://apcentral.collegeboard.com/apc/Controller.jspf>), which allows teachers from across the nation to share and communicate about curriculum and instructional concepts, and strategies.

One local initiative to increase minority student enrollment in AP courses was that of Jaime Escalante's math program in California. Mr. Escalante utilized relentless recruiting strategies with students and parents to increase minority enrollment in his AP Calculus classes. He emphasized high expectations, hard work, commitment, a group spirit, and strong parent support to increase enrollment in his academic courses. He also implemented inter-disciplinary lessons, performance-based assessments, and promoted active participation by students and parents in his classes (Mathews, 1988).

Another documented program to increase minority enrollment in AP courses began in 1995, when Central High School in Omaha, Nebraska created their Minority Scholars Program. This program was similar to the one established in Shaker Heights, Ohio. The school's administrative staff created a steering committee made up of minority students who came together to discuss issues relating to the minority achievement gap and the low enrollment of minority students in AP courses. The discussions uncovered various reasons for the low minority enrollment rates that included students feeling pressure from peers and family members who attached a stigma to their academic success. Students felt they were viewed as "sell-outs" who were willing to give up their cultural identity to fit into a majority White population. These students also expressed their sense of isolation and alienation in academic classes because the majority of students in the classes lived in other neighborhoods and had participated in the different community activities. They did not feel comfortable sharing day-to-day or classroom experiences with the other students. The students also expressed concerns that they had not been

encouraged by anyone to take these courses and they did not have strong support systems at school or home to assist them (Saunders, 2004). The committee members identified the barriers to the AP Program courses and in turn created programs and accessed services to address their issues. The staff, students, and school community members worked to develop and implement units on college planning, resume writing, leadership, test taking, and time management skills. They also created a speakers bureau and implemented career development units and activities. In addition, they created peer and adult mentoring programs for students participating in the academic courses. The successful minority students also served as role models for other students, especially the incoming freshmen. These mentoring sessions were held during lunch periods and Saturday morning sessions so that students could continue attending their demanding academic schedules without interruption. School personnel, parents and community members worked together to review course curriculum and this resulted in making changes to include more minority authors as positive role models for students. They also worked to establish and recognize minority students with college scholarships and paid internship experiences. These initiatives enabled the school to “raise minority participation rates in AP courses from .4 percent to 31 percent in the majority of AP courses” (p. 41).

In 1999, Wakefield High School in Arlington, Virginia, with a student population of 46% Hispanic, 27% Black, 11% Asian, and 16% White, implemented an initiative called The Cohort. This program identified staff, parents, and community members to serve as sponsors to minority male students in grades 9-12. This group worked to increase the number of minority males participating in AP courses. Through a review of grades and staff recommendations, students were selected after the first grading period of their ninth grade year. By holding weekly lunch meetings, outdoor educational experiences, college trips, and recognition programs, they utilized

a team approach to establish significant relationships and to foster students' personal and academic growth. Students were also encouraged to use available lunch labs, before and after-school study sessions with teachers and other students, and to enroll in summer enrichment programs offered at nearby universities. "In 2000, Wakefield had 7 Black and Hispanic senior males enrolled in 14 AP classes. In 2004, there were 28 enrolled in 43 of those courses. All 20 of the Cohort program graduation seniors enrolled in college, with 18 at four-year schools" (Beitler, Bushong, & Reid, 2004, p. 19).

The Urban Systemic Initiative (USI) was created to provide minority and low-income students with increased access to rigorous science and math curriculum. This organization was founded in 1991 by the National Science Foundation and was implemented in 28 cities with high poverty rates. USI has worked to establish policies that support minority students enrolling in higher-level math and science courses that have sometimes been termed "gate-keeping" classes. Because of the efforts in these school districts, the disparity between African American and White students and Latino and White students has decreased for enrollments in upper-level academic courses. In addition, over the course of the first five years of the program, minority students participating in AP courses and taking the related Exams exceeded the national test-taking rate by 3.8 test-takers per 1,000. These schools also showed increases in the number of minority students taking the SAT or ACT and they exceeded the national test-taking average (Kim & Crasco, 2006). These initiative founders note the need for further research on minority students taking and passing AP Exams.

At a 2000 national forum sponsored by the U.S. Department of Education, several Texas administrators were asked to speak because the state had achieved some of the most recent significant increases in minority student enrollment in AP courses. These administrators

stressed the need to use students currently or formerly enrolled in AP courses as recruiters for new students. As noted by many of the forum presenters, former students returned from their colleges to discuss their experiences and emphasized the importance of AP courses. They also reinforced that it was the AP classes that had prepared them to be successful in post-secondary education. Additional strategies utilized include purchasing calculators for all math students, offering summer institutes to give students expanded learning opportunities, and creating satellite AP courses with other schools and districts if they didn't have sufficient enrollment to create full classes in their own schools. Administrators highlighted additional initiatives that included offering upper level math classes such as pre-calculus during summer sessions, double-blocking classes, and having ninth grade teams or a "school within a school" format that allows a group of students to follow the same core teachers throughout their school day. An additional strategy was to partner with a local university and offer courses taught by both college and high school staff (College Board, 2005).

With federal and state funding provided, several states have implemented extensive initiatives that have yielded impressive results to increase minority student AP course enrollments. Florida is an example of significantly increasing their minority student enrollment in AP courses. The state subsidizes AP exam fees, gives faculty bonuses and additional AP funding to every high school each time one of its students scores a 3 or better on the AP Exam. Florida was also one of the first states to create a virtual school, offering free online AP courses to students who couldn't access the courses in their own schools. "Between 1999 and 2005, the number of public-school students in Florida who took AP Exams jumped by 95 percent, that included increases of 132 percent for African Americans and 137 percent for Hispanics" (Mollison, 2006, p. 36).

Another promising program is the Advanced Placement Incentives program that was sponsored by the O'Donnell Foundation in Dallas, Texas. This initiative was created to address the concern about low college attendance rates and the poor college preparation of minority students. This program provides training and support for teachers as well as financial incentives that cover registration and tuition fees for attending the College Board AP training sessions held in the summer. The program offers teachers, students and the school identified performance-based financial incentives. Students are provided tutoring and AP preparation sessions. They are also partially reimbursed for the cost of the exam and if they score a 3 or better on it, they are fully reimbursed for the cost of the exam. In addition, the AP program staff is provided extensive curriculum training. They are supported by lead teachers in each of the schools who collaborate with colleagues and provide resources and expertise to assist and support them in the delivery of their instructional programs. "The year before the program began in nine high schools, 48 students took AP exams and received a 3 or better score. In the fifth year of operation, 1,099 students took the AP exams and 521 received a score of 3 or better. Minority enrollment has also grown in Dallas, from 64 African-American and Hispanic students taking AP exams the year before the program began, to 734 in the program's second year (Luce & Thompson, 2005). The O'Donnell Foundation has gone on to fund AP Art and Music Incentive Programs in 28 Dallas area schools. As a result of these initiatives, "Between 1995 and 2003, AP Arts and Music Exam participation rates increased almost four times and passing scores on Art and Music AP Exams multiplied nearly three and a half times. Students in these schools take AP Art and Music Exams at almost four times the national average and over four times the Texas average per 1,000 juniors and seniors. They also pass AP Exams at nearly six times the national average and almost five times the state average per 1,000" (p.152). With the success of this program, the O'Donnell

Foundation created the nonprofit organization, Advanced Placement (AP) Strategies, Inc. This group is staffed by experienced AP teachers and collaborates with school district staffs to set up AP and pre-AP Incentive Programs and then helps manage and monitor them. Private donors make five-year financial commitments to fund the programs. As of 2004, AP Strategies was coordinating programs in 26 Texas school districts. “In one year-between 2002 and 2003, the students in incentive schools across Texas served by AP Strategies increased the number of passing scores in math, science, English, and social studies exams by 25 percent” (p. 151). Through a national initiative, other states are following suit. In the 1998 initial year of the AP Test Fee Program, \$3 million was awarded to thirty-two states that applied for the monies. President Bush requested \$52 million for the program in 2005 (U.S. Department of Education, 2005).

Minority enrollment in AP and Honors classes in school systems such as Gaston and Guilford County Schools in North Carolina have increased through the use of multiple criteria to identify and promote enrollment in these courses. Items such as teacher checklists, individual portfolios and student signed “letters of intent and commitment” have been added to the usual aptitude test data and grades as the criteria for enrollment. The Charlotte-Mecklenburg School System has opened enrollment to all middle school students, identified peer mentors in each class for support, and provided incentives to schools for offering additional Pacesetter or “Pre-AP” courses to better prepare students for the higher level courses. Counselors are paid during the summer to review PSAT results, contact students who show potential for success, and enroll them in challenging academic courses. Since 1996, the number of AP enrollments by Black students has more than doubled, rising from 431 in 1995-1996 to 974 in 1999-2000. The number of AP Exams taken by Black students also increased accordingly from 130 to 406 during the

same time period (Galley, 2004). These North Carolina initiatives have encouraged other districts to expand their AP program initiatives.

Providing Transitional Support to Students in Post-Secondary Educational Opportunities

School districts in almost every state offer the dual enrollment or dual credit options for high school students that allow them to earn college-level credits for courses taken through universities. In a 2001 study on dual-enrollment, Clark surveyed state officials and noted that “nearly half of all juniors and seniors in U.S. high schools participate in at least one form of credit-based transition programs. In Virginia alone, there were 6,700 high schools students in dual enrollment programs in 1997, as compared to only 2,000 in 1991” (p.9). These options allow high school students to enroll in college courses either on the college campus or at the high school. According to the U.S. Department of Education, 80% of the post-secondary institutions with dual enrollment programs offer courses on the campus, while 55% offer courses at high school locations. Of those courses taught on high school campuses, 42% are taught by both college and high school instructors, 33% of the courses are taught by only high school instructors and 26% are taught by only college instructors (NCES, 2005). These options enable elementary, secondary school, and higher education staffs to collaborate, coordinate, and align curriculum and educational experiences for all students.

While these initiatives address and support the curriculum alignment between high school and post-secondary educational opportunities, they also support the goals of building an educational foundation for success in college. They are providing realistic information to and experiences for students about the expectations and skills required for success in post-secondary education. By offering these college experiences to students earlier in their educational career, they may have more realistic expectations, understand why these factors are important, and take

actions to better apply and prepare themselves for future college endeavors. Clark's (2001) study showed that four-year college students who participate in a high school dual enrollment program have, on average, a higher college GPA and a higher four year graduation rates than student who did not participate (p.4). Increasing college access opportunities and experiences for students is believed to increase students' expectations, motivation, achievement, and performance in college. These program experiences have also offered opportunities to reduce the cost of higher education tuition as well as the number of remedial course enrollments in the university systems (Martinez, 2002).

Another programming option for students is the Middle College High School program. This dual-enrollment option incorporates high common expectations, a college preparatory curriculum that offers accelerated learning opportunities, strong academic and social support to students, and alignment of high school and college curricula. There is some limited evaluation data suggesting that these types of schools can improve student engagement, academic achievement, graduation, and college-going rates (Martinez & Klopott, 2005, p. 31).

High School Puente, a program that is being implemented in 30 California high schools, was created to increase Hispanic college enrollment by using high school mentors and peer partners to support middle school students' transition to high school. Parent participation is also important and families are required to sign pledges of their support for the students. This program has been successful in increasing minority student enrollment in academic classes and students transitioning to college education experiences. "Puente participants are twice as likely to attend California universities as non-Puente students" (Gordon, 2004, p. 2).

There is concern about the little compiled research data on these programs and subsequent student outcomes.

The literature suggests that transition programs potentially hold promise, yet does not convincingly document that this promise is realized. It offers evidence for continued support of such transition programs, but also draws attention to the need first for more comprehensive and reliable information on program and student characteristics. It also calls for sound research that both evaluates program outcomes and explores the mechanisms and program features that contribute to any positive influence they may have on students' transition into and through postsecondary education. (Martinez & Klopott, 2005, p.34)

Another concern is that data from program evaluations show that dual enrollment programs predominantly service White, middle-class students, with the exception of a few programs that specifically target minority or low-income students (Martinez & Klopott, 2005, p. 29). There is also no data provided to compare program student performance with students who are not enrolled in these programs.

Analysis and Synthesis of Research Studies

Research Studies on Rigorous Curriculum and Student Achievement

In a 1999 study, *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*, Adelman examined all of the factors that influenced students' college performance and their graduation and degree completion rates. Adelman utilized data from the National Center for Education Statistics that included the *National Longitudinal Study of the High School Class of 1972*, the *High School and Beyond/Sophomore Cohort Report*, and the *Beginning Postsecondary Students, 1989-1990, Data Analysis System*. These reports included information on 15,000 high school sophomores, from the class of 1982 through high school and 10 years after their high school graduation. Student and parent data were accumulated along with

student SAT/ACT scores, high school and college transcripts. Achievement scores in reading math, science, and social studies and standardized test scores were analyzed. College expectations and attendance decision making information was also collected. Through this study Adelman developed the term “academic resources” or ACRES. This term represents a detailed measure or an accumulation of students’ test scores, class rank, academic GPA, and a scale reflecting the quality and intensity of their high school curriculum. The curriculum quality and intensity is determined by the number of units earned in core academic subjects, AP, and the highest level of math courses taken by the students during their high school careers. While Adelman found socio-economic (SES) and ACRES modestly correlated at 37%, he also reported evidence that “academic resources” can overcome the effects of SES. The long-term degree completion rate for those in the highest quintile of ACRES was 72.5%, 17% higher than for those in the highest quintile of SES. It is true that the higher one’s initial SES quintile, the stronger one’s platform for launching an effort to earn a bachelor’s degree, but acquiring academic resources pays off at an even higher rate of interest (Adelman, 1999 p. 23). Moreover, students in the bottom two ACRES quintiles, earned degrees at low rates, no matter what their SES standing (p. 24). This report again underscores the point that it is the strong curriculum and academic foundation that will help all students, including minority students, successfully transition to college and universities. Adelman went on to suggest that the two curriculum-related initiatives that higher education institutions could contribute to preparing high school students for postsecondary education would be to (a) promote the expansion of dual enrollment policies and (b) to provide direct provision. He contends that dual enrollment allows students who don’t have access to higher-level courses in their high schools, to take these courses in nearby universities or colleges and to earn both high school and college credit for the work. The

direct provision option features university faculty members teaching the needed academic courses in the high schools so students have ready access to the option.

A related and recent study published by the U.S. Department of Education *The Toolbox Revisited: Paths to Degree Completion from High School through College* (2006) examines characteristics of students who graduate with a college degree. Again utilizing data from the National Center for Education Statistics, this most recent study followed 1992 high school graduates through eight years of their post-secondary experiences. The results of the most recent study also concludes that “the academic intensity of the student’s high school curriculum still counts more than anything else in completing a bachelor’s degree” (Adelman, 2006, p. 19). The study also highlights the number and type of specific course credits that successful students had completed in high school prior to enrolling in college. The highest end of the academic intensity scale found students had 3.75 or more units of English, 3.75 or more units of math that includes calculus, pre-calculus, or trigonometry, 2.5 or more units of science that include biology, chemistry, and physics, 2.0 or more units of social studies, 2.0 or more units of foreign languages, 1.0 or more units of computer science and one or more AP courses. Ninety-five percent of the 1992 high school students who had this level of academic curriculum earned bachelor’s degrees by 2000 (p. 145). As summarized in the study, “No matter how one divides the universe of students, a high school curriculum of high academic intensity and quality is the factor that contributes to a student’s likelihood of completing a college degree” (Adelman, 2006, p.134). The strong academic course factor outranked grade point, SAT, and class rank as contributing factors. In addition, strong academic courses were able to counter the effects of socioeconomic status. It was noted that the exposure to and challenge of the equivalent college-

level work, with an emphasis on critical thinking and increased content knowledge, prepares the student for the college curriculum.

A comparison of the two studies (i.e., *Answers in the Tool Box*, 1999; *The Toolbox Revisited*, 2006) also reveals that while a higher proportion of high school seniors, including minority students, continue their education, there is still a gap in access and enrollment. The report shows that there is a variance in the number and intensity level of academic courses that high schools offer across the country. The data reveals that Latino students do not have as much access to high schools offering trigonometry, pre-calculus or calculus compared with their White or Asian student counterparts. Overall, students from the lowest socioeconomic status quartile attend high schools that offer fewer math courses above the Algebra 2 course level than do students from the upper SES quartiles (Adelman, 2006, p. 32).

The data also reveals that although there is increased minority student enrollment in postsecondary education over the last 25 years, there is still a gap in bachelor's degree completion between Whites and Asians and their Latino and African-American counterparts. There is an identified gap of 15% between whites and Asians and their African-American counterparts and a 22% gap between Whites and Asians and the Latino population (Adelman, 2006, p. 12). Five factors were identified as affecting these percentage gaps: (a) minimum number of first year credits earned, (b) the problem of penalty withdrawals and no-credit repeats, (c) use of summer terms, (d) no delay of entry, and (e) the high school academic curriculum component. As the report author highlights, the most critical of the five factors is the strong high school academic curriculum. If African-American students were moved into the top 40% of the high school academic curriculum intensity index, the projected completion gap was lowered from 15% to 6%. Both of these studies emphasize the importance of and need for all students,

majority and minority, to have access to and participation in rigorous and academic curricula during their high school tenure.

In a 2005 national study, Bridgeman and Wendler examined the ethnic and academic background data for 284,549 seniors who had taken the 2001 SAT and also completed an accompanying questionnaire. The researchers collected and analyzed data that included information regarding high school courses taken, grades, specific performance in AP courses, and leadership participation roles. They determined that regardless of ethnic group membership, “high-scoring students across all ethnic groups tended to take the same types of courses and participated in school activities at about the same levels” (p. 2). The data from this study does not reveal whether being successful in demanding courses leads to high SAT scores or whether having the reading and math skills scores measured by the SAT, are what determine how well students do in advanced courses. It also does not identify whether or not other outside factors lead to positive academic and assessment performances. What the study results do underscore is the importance of developing the strong reading and math skills required for success on the SAT and encouraging student selection of and participation in rigorous and demanding academic courses. Regardless of ethnicity, an important factor for student academic success is enrollment in rigorous high school curricula. Another relevant finding in this study was that many of the successful minority scholars did not come from homes where either parent attended college. This study reinforces the fact that “a college educated parent is not a necessary condition for high SAT scores, as over a quarter of high-scoring African American and Hispanic students indicate that neither parent has a college degree” (p. 13). This speaks to the concept that students, despite background or home difficulties, can still succeed if school-related factors such as rigorous curricula and high expectations are available to them in educational settings.

Influences of School Staff and Practices on Student Achievement

McLain and Thompson (2001) conducted a state-wide survey of over 208 Washington high schools of various sizes, geography, location, and demographics. Eight specific high school case studies were completed in order to identify school practices and interventions that were implemented to increase the rigor of the curriculum and expectations for students. The survey results and interviews with administrators, teachers, parents, and students at the school sites revealed that the majority of schools reported increasing academic standards by aligning curriculum and instruction with state assessments and by increasing graduation requirements. In addition, “89 percent of the schools have students complete post-secondary plans that include portfolios, projects, and career theme educational pathway activities” (p. 39). Another main point featured in the report highlights the number of learning options available to eleventh and twelfth graders. The high schools reported that “94 percent of the schools offer running start or dual enrollment opportunities, 63 percent offer Tech Prep programs, 59 percent offer work-based experiences and 52 percent offer Advanced Placement courses” (p. 49). The results reinforced the concept that Washington’s public high schools were improving student performance on state standardized tests through increased rigor, relevance, and student learning options. However, more information and data are needed to examine specific individual student participation and performance in learning options and the direct impact they have on their achievement.

Frome and Dunham (2002) report on two comprehensive school reform initiatives, *Making Middle Grades Work* and *Making Schools Work*. The first initiative involves a collaboration of middle grade schools in rural and urban areas. The second features clusters of rural high schools and their feeder middle schools working together to raise student achievement and to offer a rigorous program of studies that will improve and support postsecondary

educational and career opportunities for students. These schools have worked with teachers, principals, and parents to provide intensive and effective guidance and academic advisement services to all students. Survey data for the reform initiatives were collected by distributing surveys and reading assessments to 4,843 eighth grade students in 61 middle schools across 14 states. Sixty-eight percent of the students were White, 25% were Black, and the remaining 7% were Latino/Hispanic, American Indian, or Native Hawaiian/Pacific Islander. Control variables included parent education, ethnicity, gender, reading ability, and parental guidance (i.e., the extent to which students talked with their parents about school program planning and selection of classes). Independent variables included the extent to which students talked with teachers about school program planning, the amount of teacher encouragement students received and the academic planning provided to students by their guidance counselors. The outcome variables were the frequency of students putting forth effort and their completion of class assignments. While higher reading ability, being female, and more frequent parental guidance were positive predictors of student effort, the most relevant finding was across ethnic groups. “Both guidance and encouragement from teachers were positive predictors of student effort” (Frome & Dunham, 2002, p. 8). These findings demonstrate the importance of positive student-teacher relationships and the critical role teachers can play in increasing middle school student motivation to learn, influencing academic course selection, and facilitating student achievement. The study results did not indicate that guidance counselor advisement had a significant effect upon middle school student motivation, effort or academic programming.

The rural schools also distributed surveys to 991 high school students in seven states. Seventy-six percent of the participants were White, 18% were African-American, 5% were American Indian or Alaska Native, and 1% was Latino/Hispanic. Control variables included

gender, ethnicity, parental education, parental guidance (i.e., students talking with their parents about academic planning), level of math classes at given grade levels, and graduation requirements. Independent variables included the amount of encouragement students received from teachers and counselors to take upper-level math and science courses, and extent to which students talked with counselors about academic planning. While the survey results did not reveal a relationship between the amount of guidance that students received from teachers and the number of academic courses they took, there was a positive relationship between students and guidance counselors. “The amount of encouragement students received from counselors to take more challenging math courses and the amount of guidance students received from guidance counselors about planning their high school programs had a significant impact on the number of college-preparatory mathematics and science courses that students took” (Frome & Dunham, 2002, pp.18-19). The emphasis here is that both counselor encouragement and strong academic planning procedures are essential to high school students enrolling in academic courses.

The results of these studies are important in determining that further research is needed to examine the content of interactions between students and staff regarding academic planning, both at the middle and high school levels. It is difficult to determine if more formal meetings with counselors or the topics covered during the discussions produce more effective results for increased academic course enrollment. This is an important area for future study as to who and how students are influenced in areas of academic planning and course enrollment decisions.

Minority Student Under-representation in Advanced Placement Program Courses

Exploring and examining procedures and processes for enrolling minority students in advanced academic courses first came to the educational forefront with the National Institute of Education Report, *Research on Selection Methods and Programming for Advanced Black*

Students at the Secondary Level of Education (Sanders, Baraka, & Sherman, 1981). An early examination of high school course enrollments in the Shaker Heights, Ohio school district identified a disproportionate number of Black students who were enrolled in remedial courses and an imbalance of White students who were enrolled in honors and advanced placement courses. The researchers also determined that it would be beneficial to collect data from nineteen other school systems with similar large Black student populations and also to examine districts where racial balances or adequate population representations were noted for advanced course enrollments.

The data collected and analyzed from the Shaker Heights district revealed that there were proportionate enrollments of minority students in early middle school academic classes but that changed to disproportionate under-enrollment, beginning in the high school grade levels.

Researchers conducted interviews with school district personnel that included school board members, central and school administrators, teachers, parents, citizens, and students. Data also revealed that there were questions about whether or not teachers had the skills or expertise to identify all students with aptitude for being successful in academic courses and there were also concerns expressed about adequate transitional programs for students across all grade levels. It was also emphasized that there were no specific programs or interventions identified to promote or support minority students in academic courses.

In interviewing 51 Shaker Heights High School students, “the following reasons were given for enrolling in academic courses: challenging (30%), college preparation (45%), required (12%), continuation of sequence (12%), and counselor recommendation (4%)” (p. 26). When asked who most influenced their decisions to take a course, the responses included: “myself (25%), counselor (29%), teacher (10%), parent (5%), friends (6%), and siblings (4%)” (p. 26).

There was no evidence that attributed the racial imbalance to one or a few causes as each of the factors on the student interview questionnaire was a potential influence. Another noteworthy observation was that sometimes minority youth chose not to take advantage of opportunities offered to them. Reasons for this or identified factors cited included “conscious and unconscious discrimination by peers, teachers, and counselors, as well as lack of information about how to make the schools system work for the student” (p. 33).

In examining the other 36 school systems, study participants identified the following procedures for placing students in academic courses, “33 said that teacher recommendations were important, 29 mentioned counselor recommendations, 22 used self-selection, 7 used parental pressure and peer group pressure was mentioned by 5 percent” (Sanders et al., 1981, p. 21). Causes for low minority enrollment in AP courses included “32 listing lack of student motivation, 32 noting peer pressure, 27 identifying economic status, 25 citing family background, 13 listing student perception of the student, 12 recording teacher perception of the student, 7 noting intelligence, 1 including environment and 1 highlighting pre-elementary formative years” (p. 22). Schools with high minority student advanced course enrollments cited the importance of strong public relations programs where AP Program course information was published in newspapers, school publications, and course catalogues. Career fairs held at each school level were also listed as interventions. It was also emphasized that there was a strong level of commitment and involvement from counselors with students and families. Staff development training for teachers was provided throughout the school year and summer workshops for counselors and teachers were held frequently. There were recruiting efforts to attract minority teachers for academic courses. There was also an awareness of the need for

early recognition to attract potential students in the middle schools. Minority college students were recruited to speak or tutor high school students.

This research emphasized that programming and interventions that hold promise for minority student enrollment in academic courses include teacher and counselor training to facilitate instructional and advisement techniques and establishment and utilization of support groups. It also noted the importance of highlighting services and resources that are available and accessible to students and their families, holding orientation meetings for parents and students targeted for advanced courses, and hand scheduling students into empathetic and supportive teachers' courses. Finally, it emphasized the need for review, revision, and implementation of guidance policies and procedures that are open and flexible for minority students.

The North Carolina Department of Public Instruction staff in their 2002 report, *Increasing Opportunity to Learn via Access to Rigorous Curriculum and Program*, analyzed data on the under-representation of minority students in AP, Honors, and gifted programs throughout the state. To examine this issue, department personnel conducted six high school site visits where they held interviews and obtained surveys from students, parents, teachers, counselors, and principals in 224 middle schools and 231 high schools. It was found that 90% of the middle school reported offering Honors courses and 85% of the high schools reported offered AP courses. The study concluded that there was a significant gap between White and minority student representation in the academic classes. In examining student achievement scores and program enrollment, it was noted that "achievement and learning difference gaps lead to lower subsequent identification for gifted programs in early and middle grades, which in turn contributed to lower enrollments in high school AP and Honors courses" (Darity, Castellino, Tyson, Cobb, & McMillen, 2001, p. 26). Minority students who were identified for academic

programs in earlier grades were more likely to be enrolled in the advanced high school courses (60% vs. 27%) than students who hadn't been in the rigorous coursework. Criteria used for identification and placement in Honors course included: teacher recommendation (90%); end-of-grade test scores (90%); cognitive and intelligent tests (86%); grades (81%); self-selection (66%); student achievement tests (55%); outside or independent evaluation (45%); and skill-specific aptitude tests (13%). Eighty-five percent of the high schools reported that they offered AP courses. Criteria used by high schools for identification and placement in AP courses included: self selection (84%), teacher recommendations (80%), grades (65%), and test scores (36%).

There was not an analysis in this study to compare the number of minority students enrolled with the number or type of criteria used to identify and select students for enrollment in these academic classes. In the schools with under-represented minority students in AP and Honors classes, it was noted that in only one of the schools visited did the concepts of "acting white" or "racial isolation" come up as issues of concern among minority students. Only 18% of the schools reported that they had special programs to prepare and support students who were new to Honors or AP courses. The identified resources included the use of the AVID program, advising and counseling programs, mentoring, and tutoring and study sessions. High achievement was valued by all students and the importance of making Algebra I available to middle school students was reinforced. Since math courses are sequenced, it is essential to provide opportunities for younger students to take Algebra I at the middle school level and thus allow access to upper level math classes in the high school. This study emphasizes the importance of early academic planning and the need to provide students with a strong academic

curriculum at upper elementary and middle school levels. Only by having an early and sound academic focus and foundation, will high school students be prepared for AP courses.

Zarate and Pachon (2006) examined the academic courses offered from 1997-2003 in 1,094 high schools across the state. The researchers analyzed variables that included student and family ethnicity and socio-economic status as well as school location against the variable of the number of AP courses offered at each school site. “The findings of this report indicate that access to AP courses remains an unlikely opportunity for Black and Latino students and many low-income/rural students, regardless of ethnicity” (p.1). On average, large schools with high concentration of minorities (75%-100%), offered nine AP courses, while large schools with low concentration of minorities (10% or less) offered 13 courses. This represented a difference of 28%. There was an even greater variance at medium-to-high sized schools with a difference of 40% between high and low minority concentration schools (p.10). The study also revealed that the economic status of the student body related to the number of AP courses the high schools offered, controlling for school size. Schools with high rates of Aid to Families with Dependent Children (AFDC) participation were more likely to offer fewer AP courses. School location also made a difference; the average number of AP courses offered in California schools was 6 but rural schools offered less than half (2.9) the courses offered in suburban and urban schools. It was also noted that schools making their own decisions to offer AP courses offered more of these academic classes than schools where the decision-making power was delegated to the district administration (p. 4). One interesting discovery was that contrary to conventional wisdom or popular belief, budgetary issues and costs associated with offering AP courses were not cited as obstacles to schools offering more AP courses. Another interesting point of the study was that during the five year time period examined, there was a 26% increase of new high schools in

California but only an increase of 15% of them were offering AP courses. Additionally, 245 high schools were not offering any AP courses (p.7).

These findings highlight the fact that AP courses are not accessible to all of our students and that there are differences in access to AP courses at schools with different ethnicity, socio-economic status or site locations. This inequity thus often prohibits or limits minority and rural students' accessibility to college preparation opportunities. The data also speak to the need for increased national and state-wide funding to support initiatives that will improve and increase student access to AP courses. Providing options that include sponsoring on-line AP courses and collaborating with nearby schools to offer joint and distance learning course options are promising initiatives that can increase minority and rural student enrollment in these academic courses. This study also highlights the need to provide training to teachers and other staff in offering courses and sharing staff and resources to meet the needs of all students in all school districts.

Increased Minority Student Enrollment in Advanced Placement Program Courses

Ovando and Alford (1997) conducted a qualitative case study at a large suburban high school with a diverse student population and a five year record of documented success in promoting greater minority student enrollment and success in advanced academic courses. To obtain data on school procedures and practices for course selection and class placements, researchers made on-site visits and conducted extensive interviews with 22 teachers, counselors, and administrators. They also observed faculty, vertical team, and parent meetings, as well as completed a document analysis of courses offered and course enrollments at the school. "The process of shared leadership by teachers and administrators is important for program success as primary leadership stems from multiple sources in the system. Commitment is also an essential

element in developing a culture of tracking reflective of greater student enrollment and success in advanced courses wherein decisions and actions are based on the mission, goals, and core values of the school” (p. 40). The researchers noted that the practices of providing incentives and rewards to students were effective in increasing enrollment. Inviting students who had been in advanced courses to speak to other students, forming study teams and offering Saturday review sessions, and a summer Academy program were also cited as important interventions. Creating middle-high school vertical teams, offering professional development training opportunities, and being part of a collaborative network with other schools were credited as successful strategies to increase minority student enrollment in AP courses. Educators communicated to families the academic expectations and information about programs and courses through the use of frequent phone calls, meetings, information programs, newsletters, and course catalogues. The key practices and processes utilized by this school included: (a) focused goal-setting, (b) support to students, staff, and families, and (c) consistent and effective communication among all constituents. These factors significantly influenced minority student enrollment and success in the advanced academic courses.

The Education Trust (2005) examined seven high schools in North Carolina and California to identify positive practices that schools utilized to increase minority enrollment and achievement. Four high schools were deemed *high-impact* schools and three were categorized as *average-impact* schools. The high-impact schools were noted to have high minority populations with unusually large academic growth among students who entered as significantly underachieving. These schools had greater-than expected achievement scores over three years, noted at least average or above performance on state assessments in reading and math, and had low or declining minority achievement gaps. Data collected and analyzed included student

enrollments, staff information, school calendars and schedules, master schedules, student handbooks, individual student transcripts, professional development plans, and three-week lesson plans with syllabi and sample assignments. Staff surveys were administered and site visit interviews were conducted with principals, assistant principals, department chairpersons, teachers, and counselors. Teachers and students also participated in focus group sessions. Information was collected on teacher experience and background; counseling programs; administrative and instructional practices; course information, texts and materials; and school and staff beliefs regarding student performance and academic support programs.

In examining the data, it was found that in high-impact schools there was clear focus on preparing students for post-secondary experiences and academics while in average-impact schools the focus was on preparation for high school graduation and enforcing rules. “In high-impact schools, teachers and administrators express consistent views about achievement-related school goals and teachers embrace external standards and assessments while in average-impact schools there is much less consistency in views and teachers simply tolerate standards and assessments” (p. 13). It was emphasized that high impact schools had consistently high expectations for all students, regardless of prior academic performance or achievement, and they were encouraged to take on academic challenges. Principals, teachers, and counselors viewed it as their responsibility to help students plan and succeed academically. In the more successful schools, principals were more involved in curriculum, course offerings, staff selection, and assignment decisions. Principals also encouraged teacher observations of colleagues and team-based curriculum development and mapping. Counselors in these schools were “considered members of the academic teams and were responsible for actively monitoring student performance, encouraging enrollment in academic courses, accessing resources, and arranging

help when needed. They were also involved in devising four-year academic plans for students twice as often as counselors in average-impact schools” (p. 23). In three of the four high-impact schools, an open enrollment policy was utilized for Honors and AP courses. Students could enter these academic courses without regard to teacher recommendations or grade point averages as long as they maintained a “C” average in the class. At average-impact schools, student had to have a strong academic record in each subject area and a teacher recommendation to enter an Honors or AP class. In average-impact schools, there were identified hurdles to gaining access to the most challenging courses. “Assessment data is used by high-impact schools for future planning, such as making curriculum improvements or making teacher assignments, while average-impact schools tend to use data primarily to measure past student performance”(p. 16). The more successful schools used data to determine focus of content and skills for all students as well as for the allocation of resources such as tutoring, study sessions, mentoring programs, and services. Another big curriculum emphasis was on reading. “Three in four students at high-impact schools reported reading books in their English classes, while only 62.2 percent of students in average-impact schools reported doing so. Nearly 71 percent of high-impact school English teachers reported that they assigned students to read every day, while 59 percent of English teachers at average-impact schools did so” (p. 18). High impact schools offered proactive initiatives for students such as providing them with freshmen academic advisors and academy programs to support their transition to high school. Other options, such as after school tutoring sessions, double-block periods for Algebra I, grade enhancements, Saturday and summer programs, as well as transportations services were provided to support students. Average-impact schools were more likely to provide remedial help after students had faltered. This study highlights the importance of implementing proactive strategies to encourage student enrollment

in academic courses and offering support services and resources to them when they are enrolled and participating in the rigorous courses.

Research Studies on the AP Program Courses and Exam Participation

In 1998, Morgan and Ramist examined data from 66,125 students, including 27,268 students who had at least one AP course and AP exam grade from across 21 colleges. The colleges supplied student information on gender, ethnicity, courses taken and grades, college entrance scores, and AP grades. The AP course and AP exam grades of students who received course credit and placed out of introductory courses were examined with course grades of other students who took the prerequisite introductory courses. Advanced placement in college courses ranged from the second level course to the fourth course in the foreign language areas. Data for similar course levels were aggregated across colleges to produce multi-college estimates of student performance. The results revealed that “AP students with grades of 3 or higher had higher grade averages and percentages than the students who took the first college course in the sequence” (p. 6). “As expected, students with AP grades of 3 generally averaged lower course grades than did the students with AP course grades of 4 or 5. However, in the majority of the courses, they received average course grades better than 3.0 and more often than not earned higher course grade averages than students who took the introductory courses” (p. 8). These results are even more impressive when one considers that the AP students were taking their first course in the department and were compared to students who have already experienced at least one college course in that related subject area. This data supports the theory that students who earn AP exam grades of 3, 4, and 5 can directly enroll in upper-level college courses and be successful. It also supports the belief that providing students with the AP course curriculum in

high school will help prepare them for and facilitate their performance in post-secondary educational experiences.

In a follow-up study, Morgan and Maneckshana (2000) collected data from students enrolled the same 21 colleges surveyed in the Morgan and Ramist (1998) study, analyzing the students' major and minor areas of discipline, their grade point averages, and graduation dates. The authors then compared this data with the number of AP exams these students took in high school. Based on the results of the study, the authors acknowledge that after taking most AP exams, the majority of students continued in their pursuit of knowledge in the related subject areas and completed their degree in the concentrated area of the AP course and related AP exam. In addition, "the majority of students who took AP Exams graduated in at least four years and the majority of students had a GPA above 3.0" (Morgan & Manackshana, 2000, p. 6). This study again reinforces the association between AP courses with related exams and post-secondary education experiences. Students, through their enrollment in AP courses, have a clear understanding of the expectations of college-level academic work and have rigorous academic preparation. These experiences prepare students and facilitate their transition to college.

A more recent study by Geiser and Santelices (2004) again emphasizes the importance of taking both the AP and Honors courses as well as taking the AP exam. This study analyzed data from a sample of 81,445 freshmen enrolled in the University of California college system between the years of 1998 and 2001. The researchers analyzed high school transcripts and grade point averages as well as college grade point averages and years of post-secondary school attendance. They found that the combined number of AP and Honors courses on a student's transcript did not predict college success. The greatest predictors of success were the students' SAT II and AP exam scores. In reviewing high school educational histories the authors

determined that, “the data revealed that students needed to take both the AP course and the AP exam to be a valid indicator of success in college” (p. 2). The results of this study emphasize that students must have access to AP program courses, as well as perform well in the courses and on the related AP exams. Emphasis here is on the three-prong components of AP Program enrollment, AP course, and related AP exam performance. All of these experiences help prepare students for their transition to and success in post-secondary academic opportunities.

Conclusions and Implications

A review of the literature and pertinent research studies demonstrate that the single most important predictor of students’ post-secondary school achievement is their enrollment in and completion of rigorous academic course work during their high school tenure. It is documented that educators who have high expectations for students and provide them with challenging and relevant curriculum have facilitated improvements in student performance and increases in student achievement. It is positive and encouraging that these particular factors are all school-related and to a great degree under the control or influence of school personnel. Educators are able to and can communicate high expectations to students and make the sound and appropriate decisions to feature rigorous course offerings for all students, majority and minority, in their schools. Throughout its 50 year tenure, the AP Program has been one successful intervention that allows school communities to feature a rigorous curriculum and enables students to access academic and motivating instructional courses. The Pre-AP and AP courses support individuals in further developing their learning strategies, academic and critical thinking skills. These academic courses and related exams assist high school students in building strong academic foundations, while allowing them to earn college credit and supporting them in successfully transitioning to post-secondary educational studies.

The AP Program has also shown great promise in the past few years in that many schools have added and expanded their selection of AP courses in the curriculum. This has enabled a larger number of students with varied interests and learning profiles to enroll and participate in these courses. Various schools across the country have also made efforts to implement programs and initiatives to increase their enrollments in these classes. The College Board has provided extensive information, publications, and resources to schools that participate in their programs. This organization has also offered extensive professional development training opportunities for school personnel that include various national, state and local conferences, workshops, and summer institutes activities. The AP Program has been a catalyst to strengthen the alignment of curriculum and learning experiences for students across middle school, high school, and higher education institutions. The College Board's initiatives have facilitated schools' efforts to improve and expand their overall curriculum and instructional programs as well as the professional skills of their personnel.

While the AP Program has met an academic standard, it has not yet met the equity standard. Unfortunately, a great concern is that there continues to be discrepancies in the majority and minority student enrollments in these courses. Minority students, as well as many students in rural areas, are not given access to or are not able to enroll in the courses due to restrictive admissions policies, lack of available course offerings, and insufficient information and academic planning being provided to students and families. This lack of access or availability also contributes to the continued "minority achievement gap" that exists in our nation's schools. Too many students are being denied opportunities that can strengthen their educational foundation, facilitate their success, and provide pivotal educational experiences for them. In addition, school personnel often believe that student minority enrollment recruitment

isn't part of their responsibility or they feel inadequate in possessing the skills or expertise to complete the responsibilities.

Another issue in this area is that there have not been extensive evaluations completed on programs or interventions that have been utilized to increase minority enrollments in Honors, Pre-AP, or AP courses. While there are some national, state and local initiatives that have been implemented to extend the AP Program to larger groups and numbers of students, there is limited documented research on the strengths, positive results or negative factors of these programs. There has been little data collected regarding student outcomes and achievement related to their enrollment or performance in these programs and interventions. Throughout many of these studies, there is little if any documentation on student growth, progress or achievement while participating in these programs and or accessing these services.

Educators must demonstrate their leadership and inclusive vision by involving all of their school constituents, including students, teachers, counselors, administrators and parents, in analyzing and evaluating the key components or variables that relate to this issue. It is imperative that they review and evaluate current policies and procedures for enrollment and admission into the AP Program and related courses. It is also essential that they identify and analyze their minority recruitment efforts. In addition, these individuals should review the current academic curriculum, instructional materials and strategies implemented as well as analyze the access to and use of support services and resources for students. They must also review policies for recruiting experienced instructional staff to teach AP courses as well as evaluate professional development training opportunities that are provided to school constituents. Educators should also evaluate elementary and middle school programs that support students in establishing their foundation and transitioning to Honors, Pre-AP, and AP courses in high school. It is important to

continue to strengthen the curriculum scope and sequence of instructional programs that support successful student transition across all levels of educational experiences. As the College Board noted in *2006 Advanced Placement Report to the Nation*, “Major initiatives are needed to ensure adequate preparation of students in middle school and ninth and tenth grades, so that students will then have a fair shot at success when provided with an AP opportunity. As the racial/ethnic demographics of America’s classrooms continue to shift, major initiatives must be enacted to build schools’ capacities to offer Pre-AP and AP courses to the steadily diversifying student population” (p. 10). Collecting and analyzing data on local, state and national programs and initiatives will provide valuable information to assist educators in future educational planning and programming for all students.

Educators must continue to make AP Program recruitment, enrollment, and participation more inclusive and expand opportunities across ethnic and socio-economic strata as well as across school geographic locations. It is important to expand these learning experiences for Black, Hispanic, and Native American individuals as well as for students in rural, urban, and small school settings that aren’t currently offering extensive programs. Only through these focused efforts will we continue to show promise in closing the achievement gap between minority AP and AP students as a whole.

Future Research

The real issue here was to identify documented initiatives, programs, and services that educators, students, and families can access and implement to successfully increase minority enrollment and participation in AP program courses, thus increasing student achievement and improving student outcomes.

There were several questions for this area of research. The main questions related to which specific interventions and strategies positively influence or increase the minority and majority student enrollment and participation in rigorous academic classes. The follow-up questions focused on why these initiatives were effective and how they were evaluated and documented to demonstrate increased student enrollment and participation in the courses.

Another question relates to who specifically influenced students' academic programming and course selections. There was a need for research on the "significant others" who may and do influence student academic advising. This in-turn related to the type of leadership styles and strategies that could be utilized by one or various individuals as they collaborate and work with school communities to increase student enrollment and participation in these academic courses.

The research for this dissertation was to conduct a qualitative case study of a particular school that has a significant minority student population and has been successful in increasing their minority and majority enrollments in AP courses. Based on extensive review of the literature, there were several main themes or school factors that related to increasing student enrollment in the AP Program. These main themes include: (a) having a focused vision and mission; (b) maintaining high expectations for students; (c) offering a rigorous and relevant curriculum; (d) providing strong leadership across the school; and (e) implementing identified interventions and programs to increase student enrollment in AP courses. These themes provided the framework for this researcher to begin the case study research.

By continuing to review the literature and creating and implementing the research study that examines and evaluates initiatives for increasing minority enrollment and participation in the AP Program, this researcher can hopefully contribute insight and information related to this pertinent topic.

Chapter 3

Methodology

Focus of Inquiry

The purpose of this study was to identify and examine the interventions and strategies utilized and implemented by a high school that has been successful in recruiting and enrolling minority students in Advanced Placement (AP) Program courses. This chapter reviews the identified research questions as well as provides a description of and rationale for utilizing the selected research methodology for this study; designates the procedures and provides an explanation of the sampling techniques that were utilized; and highlights the data collection and the outlined description and procedures of the data analysis.

Research Questions

The overarching question for this study addressed the identification of initiatives utilized by school personnel to increase student enrollment in AP Program courses:

1. How have you increased the minority student enrollment in the in the Advanced Placement Program (AP) courses?

The following questions relating to individuals, policies, procedures, programs, services and strategies were also addressed:

2. What are the specific school policies and procedures for student enrollment in the AP courses?
3. What specific school programs and strategies were created and utilized to promote and increase student enrollment in the AP courses?
4. Who were the key individuals and how did they influence the positive enrollment changes?

Assumptions and Rationale for Use of Qualitative Research

The purpose of this study was to examine a secondary school that has been successful in recruiting and enrolling minority students in AP courses and the research questions lead to an in-depth examination of this topic in a particular school. Thus, the identified methodology for this study was the use of the qualitative process. The qualitative approach with a single case study allows for an in-depth and detailed inquiry of this specified topic of interest. Strauss and Corbin (1990) emphasize that qualitative research involves exploration, discovery and inductive logic of an identified phenomenon. Qualitative inquiry focuses on process, description, understanding, and interpretation (Maykut & Morehouse, 1994; Merriam, 1988). The phenomenological approach places emphasis on understanding the meaning events have for persons being studied (Patton, 1990). The natural setting is the place of this inductive focus and the researcher uncovers or discovers what is to be known or learned about the particular phenomenon or area of interest. This type of research highlights real life by collecting data in specified situations and environments.

The strengths of qualitative research are demonstrated for research that is exploratory or descriptive and that stresses the importance of context, setting, and the participants' frame of reference (Marshall & Rossman, 1999). A qualitative study incorporates the use of direct observations, in-depth interviews, and a review of written documents and artifacts (Maykut & Morehouse, 1994; Miles & Huberman, 1994; Patton, 1990; Strauss & Corbin, 1990).

Qualitative research can be very effective in studying educational settings and through various methods of data collection, researchers investigate and examine how individuals interact with each other and how they construct a personalized meaning to their particular natural environment (Patton, 2002). Use of this methodology allowed this researcher to collect

descriptive information about a particular school's programs and the people who develop, participate in, and are affected by them. This type of research enabled this researcher to conduct an in-depth study of the educational phenomenon of increasing enrollment of minority students in AP Program courses.

Case Study Research Design

The single case study was the specific qualitative design for this particular research. A qualitative case study is an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit (Merriam, 1988). The strength of the case study is the ability to examine a case in-depth and within its real-life context (Yin, 1994). A case can be viewed as an object of study (Stake, 1995) as well as seen as a type of methodology (Merriam, 1988). The case study explores a "bounded system" over time through detailed, in-depth data collection involving multiple sources of rich, contextual information (Creswell, 1998). The case study provides a rich, thick description of the phenomenon being examined. Yin (1994) emphasizes that case study is a design particularly suited to situations where it is impossible to separate the phenomenon's variable from the context. It can however highlight the interaction of factors that are identified in the particular case. "Case study aims to uncover the interactions of significant factors characteristic of the phenomenon" (Merriam, 1988, p. 10). As noted by Stake (1995), case studies can provide insights into how things develop and get to be the way they are presently. In addition, what were previously unknown relationships and variables can emerge in case studies that in turn leads to a rethinking of the phenomenon being examined.

Merriam (1988) emphasizes that investigators use a case study design in order to gain an in-depth understanding of the situation and its meaning for those involved. The interest is in the

process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation. “Case study research is an ideal design for understanding and interpreting observations of educational phenomena” (p. 2). It can also reaffirm what is known, facilitate or expand understanding, or discover new connections and meaning of the phenomena.

Generalizations, concepts, and hypothesis can emerge from an extensive analysis of the data that is grounded in the context of the case studies. Such insights into aspects of educational practice can have a direct influence on policy, practice, and future research. By examining education issues, knowledge and understanding can influence and improve the educational process.

As noted by Yin (1994), the “how” and “why” questions are appropriate for and can be answered by a case study research design. Creswell (1994) emphasizes that it is the “what” and “how” questions that relate to and can be answered by case studies.

There are several strong reasons to select a qualitative inquiry for this specific research. One compelling reason was that this current and relevant topic of recruiting and enrolling minority students in AP courses needed to be explored. The case study research design allowed for a detailed view of the topic and provided for examination of individuals in their natural school setting where they have been successful in increasing the enrollment of minority students in AP courses. The “what” and “how” research questions helped frame the study to uncover how individuals, policies, procedures, interventions, programs, and services have been identified and utilized to increase minority representation in these academic courses. This case study research provided a holistic, intensive, and thorough description and interpretation of this contemporary educational phenomenon in a designated school.

Role of the Researcher

In qualitative research, there is an emphasis on “human as instrument” (Maykut & Morehouse, 1994; Patton, 2000). The researcher is the primary instrument of data collection and analysis (Bogdan & Biklen, 1992; Merriam, 1988). Yin (1994) emphasizes that the case study investigator must possess certain key skills in order to conduct sound and successful research. The researcher must be a good communicator who establishes rapport with participants, asks good questions, listens intently, interprets answers, and is sensitive to the individuals, physical setting, and context of the study. The researcher must have a firm grasp and knowledge of the issues being studied. This researcher must also be adaptive and flexible so that new situations and information can be seen or related to as opportunities and not threats or problems. The researcher should discuss what is important to the interviewees, within the broad bound of the interview topics and questions and pursue these new discoveries in the interview (Maykut & Morehouse, 1994).

Humans are able to be observant and responsive to environmental cues, interact with the situation, perceive situations holistically, collect information at multiple levels simultaneously, process data when they become available, provide immediate feedback, request verification of data and explore atypical or unexpected responses (Lincoln & Guba, 1985; Merriam, 1988). Through the use of these human talents and skills, the researcher in the case study is able to gain a more accurate and descriptive picture of the world of others.

As noted by Rossman and Rallis (1998), the qualitative researcher must systematically reflect on who they are in the inquiry while being sensitive to their personal biography and how it shapes the study. The researcher is both the collector and interpreter of the data. My own life history influenced my collection of, interaction with, and analysis of this research data. The

professional experiences I have had for eight years as a teacher and seventeen years as an administrator in very diverse secondary schools, has influenced my belief in the opportunities and benefits of Honors and AP Programs for all students, especially minority students. My varied and extensive experiences in working with students, staff, and families have strengthened my knowledge of curriculum, data collection, and analysis skills relating to AP Program initiatives and strategies for increasing minority student enrollment in AP courses. I have also had extensive experience in observing students and staff and thus have developed my observation and reporting skills. I have participated in interviewing various candidates for multiple positions in the school and that has allowed me to focus on my interviewing skills over the course of the last several years. In addition, I have many experiences in accessing and analyzing individual school and district data and documents. All of these professional experiences have enabled me to further develop the outlined skills that assisted and supported me in researching this topic of recruiting and enrolling minority students in AP courses in schools.

Research has its biases, but there are ways to deal with researcher or investigator bias in qualitative research. As noted by Guba and Lincoln (1981), “The best cure for biases is to be aware how they slant and shape what they hear, how they interface with our reproduction of the speaker’s reality, and how they transfigure truth into falsity” (p. 148). The researcher must also be nonjudgmental and respectful of the respondents. Denzin and Lincoln (2000) note that “while the interviewer is the expert in asking the questions, the respondent is the expert as far as answers are concerned” (p. 142).

Yin (1994) emphasizes that the case study investigator must be unbiased by preconceived notions or opinions and should be sensitive and responsive to different types of evidence or contradictory information. Investigators must have skills and expertise in pursuant of a particular

line of inquiry while at the same time collecting data. Throughout the study, this researcher continued to be aware of and to address the points previously mentioned.

Research Procedures

Setting

This study was conducted in a high school that is in a large suburban school system located in a mid-Atlantic state of the United States. In this district, the Cooper County Public Schools (CCPS), there are over 175,000 students enrolled in 139 elementary schools, 25 middle schools, 21 high schools, 4 secondary schools, and 45 alternative schools and centers. The student population is diverse in ethnic, language, and socio-economic areas. More than 22% of the student population receives free and reduced lunch and students speak over 100 different native languages. In this school district, 22% of the students participate in gifted and talented programs while 13.8% of the population receives special education services. Academic expectations are high with 94.5% of the graduates participating in post-secondary educational experiences (CCPS Profile Sheet, 2010).

The selected high school, Farrier High School, has 2,308 students in grades 9-12 as recorded by the 2009-2010 data. The ethnicity of these students is as follows: Asian or Pacific Islander 30.48%; Black-9.41%; Hispanic-11.85%; White-44.07%; and Other Designation-4.25%. The Limited English Proficient population is 11.99%. The Students with Disabilities population is 13.34%. The Free and Reduced Lunch membership is 20.53% and the Mobility Rate is posted at 10.03% (Farrier High School Profile Sheet, 2010). The school site has 7.0 Administrators, 9.0 Counselors, 150.0 Teachers and Specialists, 4.0 Safety and Security Staff, 11.0 Administrative Assistants for Office Support, and 12.0 Instructional Assistants and Attendants.

According to the Virginia Department of Education, this school is fully accredited. Current 2009-2010 Accreditation Pass Rates based on the 2008-2009 tests are as follows: English-97%; History-97%; Mathematics-92%; and Science-94%. Scholastic Aptitude 12th Grade Test Takers and Related Average Combined Scores for Critical Reading, Math, and Writing are as follows: Asian-1682; Black-1363; Hispanic-1450; White-1672; Other-1775; Economically Disadvantaged-1457; Limited English Proficient-1408; and Students with Disabilities-1294 (CCPS Individual School Report, 2010).

This school offers a variety of content and elective course offerings, including numerous Honors and AP courses.

The Advanced Placement Program

Rigorous advanced academic studies are offered at all high schools in this school district through either the AP Program or the International Baccalaureate (IB) Program. Preparation for these programs is supported through students' enrollment in Honors, Pre-AP, and Pre-IB courses. The school district established these academic programs in all of the high schools during the early 1990's. Providing all students with strong and rigorous academic programs has been a long term goal of the school system and increasing minority achievement as well as student enrollment in AP courses have been district strategic targets for the past six years. For the purposes of this study, the AP Program will be the area of concentration. Currently 18 schools in the selected district offer this academic program.

The AP Program offers an extensive curriculum and variety of academic courses. They include the following: AP English Language & Composition; AP English Literature & Composition; AP European History; AP United States History; AP United States Government & Politics, AP Psychology; AP Biology; AP Chemistry; AP Physics B and C; AP Environmental

Science; AP Calculus AB and BC; AP Statistics; AP Computer Science; AP Spanish, Latin, French, and German, AP Studio Art and Portfolio Preparation; AP Art History and AP Music Theory (College Board, 2010). The type of courses and number of sections at each site are dependent on student course enrollments for each school year.

In each of the high schools, the Principal is the designated administrator and leader of the instructional and operational areas of the school. This individual is responsible for hiring and evaluating all faculty members. She or he is also involved in collaborating with central and school administrative and instructional staffs to create and implement all instructional programs and services offered at each school site.

At each of the high school sites there is also a Director of Student Services. This individual works with administrators, counselors, and teachers to create and implement the academic advising program for the students in the school. The Director provides the framework and structure for offering curriculum orientation programs, implementing course selection and registration procedures, and identifying staffing needs. She or he also collaborates with other administrators and department chairs in developing and implementing the school-wide master schedule, and individual student and teacher schedules. These Directors are responsible for holding information meetings, providing training sessions, and distributing pertinent information to students, staff and families.

There is also a designated Advanced Placement (AP) Program Coordinator at each school. This individual is responsible for coordinating the AP Program and meeting regularly with the AP teachers. This individual also assists the staff in accessing and ordering instruction materials and collaborating with teachers on identifying and implementing appropriate

instructional strategies in their courses. Also, the AP Coordinator, in collaboration with administrative personnel, organizes and implements the AP exams at the school.

Selection Process

For this specific case study, purposive or purposeful sampling was used. According to Goetz and LeCompte, (1984), Miles and Huberman (1994), and Patton (1990), the researcher can identify the extreme, exemplary or ideal sample or case prior to or in the early stages of the research. Purposeful sampling seeks information-rich cases which can be studied in-depth. Qualitative researchers set out to build a sample and gain a deep understanding of some phenomenon experienced by a carefully selected group of people or by individuals in a particular environment (Maykut & Morehouse, 1994). Since this researcher sought to discover relevant and pertinent information about the identified topic, the individual school site selected for the case study was based on criteria relating to schools' successful recruitment and enrollment of majority and minority students in AP courses.

In reviewing the list of the identified eighteen high schools in the CCPS district that offer the AP Program as part of their high school curriculum, this researcher collected and analyzed data for each school site. The information accessed by this researcher included: the individual school profile sheet, total student enrollment, ethnicity of the student population, percentage of students receiving free and reduced lunch, percentage of student graduates, percentage of students enrolled in and the types of post-secondary school experiences, number and ethnicity of staff members, number and ethnicity of students enrolled in AP courses, and number and types of AP courses offered. From this collection, review and analysis of data, this researcher identified the one high school from the district that demonstrated the most growth over the last six years of recruiting and enrolling students, both majority and minority students, in AP courses.

During the 2002-2003 school year, this selected school, Farrier High School, administered 413 AP exams to students enrolled in AP courses. This represented 44.3% of the total membership eligible to take these courses. During the 2008-2009 school year, this school administered 858 AP exams to students. This represented 59.5% of the membership eligible to take these courses. Thus, over the course of the past six years, this school increased their AP Program membership by 445 students and their eligible student membership participation rate by 15.2%. The average eligible student membership increase for the county during this time period was only 7.6%. Please see Table 1 for enrollment by year.

Table 1

Farrier HS and Cooper County Public Schools Data Percentages of Student Enrollment in AP Courses

	School Year						
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009
FHS	44.3%	46.6%	54.7%	54.0%	57.6%	59.2%	59.5%
CCPS	50.2%	50.4%	52.5%	54.6%	56.1%	57.4%	57.8%

In a six year span, this particular school increased their AP course participation for each ethnicity group as follows: White: 49.8% to 65.7%; Asian: 45.8% to 62.0%; Hispanic: 23.1% to 33.6%; and Black: 23.5% to 35.4% (CCPS AP Program Report, 2002; Farrier High School Profile Sheet, 2010). These increases far exceeded the county’s average increased student

enrollment for the 18 schools or the increased enrollment at each of the individual sites for this time period. Please see Table 2 for specific gains.

Table 2

Farrier HS and Cooper County Public Schools Percentages of Student Enrollment in AP Courses by Ethnicity

	FHS	FHS	FHS	CCPS
Ethnicity	2003	2009	Gains	Gains
Asian	45.8%	62.0%	16.2	10.3
Black	23.5%	35.4%	11.9	3.4
Hispanic	23.1%	33.6%	10.5	2.1
White	49.8%	65.7%	15.9	7.8

One additional source of data that was analyzed for each school related to Matthew’s Challenge Index. The Challenge Index is calculated for a particular year by dividing the number of AP or IB tests that a school gave the previous year by the number seniors who graduated in June. Tests for all students, not just seniors, are counted in the test total for each school site. According to the Challenge Index, this selected school had an overall index rating of 1.1998 and was listed at 166 out of the top 500 schools in the nation for enrolling students in academic courses for 2002-2003 (Mathews, 2004). This particular school was also ranked 16 out of 24 secondary schools in the district for enrolling students in these academic courses (CCPS, 2004). For the 2008-2009 school year, this school had risen to an overall index rating of 3.597 and was listed at 141 for the top 500 schools enrolling students in the AP courses (Mathews, 2010). This school was ranked 5 out of 25 schools in the district (CCPS, 2010). The increased number of

majority and minority students enrolled in AP courses at this school site demonstrated the greatest growth over the six year time period when compared to the other schools in the district.

In hopes of gaining additional information on this topic and to further develop and refine the interview protocols, this researcher identified another school in the district where there was also demonstrated growth in identifying and enrolling students in AP courses over the last four years. This identified school, Sawyer High School, increased their AP course student enrollment from 655 students in 2003 to 979 students in 2009. In addition, according to the Challenge Index, this school had a rating of 2.281 and was listed as 110 for the top 500 schools in the nation for 2003 AP student enrollment. In 2010, the school had increased its ranking to 3.681 and was listed as 14 out of the top 500 schools nationally for student enrollment. Although this school's student population is not as diverse as that of the selected case study school site, this school shows documented growth as well as promise in providing insight and information regarding successful AP Program recruitment and enrollment efforts and initiatives.

This researcher conducted pilot interviews with the Principal, Director of Student Services, and AP Coordinator at Sawyer High School. Following the completed pilot interviews with these school personnel, the researcher reviewed the interview guides and made appropriate revisions as necessary. The revisions included word choice and order of the questions. The researcher then proceeded to conduct the in-depth case study at the selected school (i.e., Farrier High School).

Consent for Research and Confidentiality

This researcher obtained permission for this research case study from the Virginia Polytechnic and University Institutional Review Board for the Protection of Human Services, Office of Research Compliance. A research proposal was also be submitted to the Fairfax

County Public Schools Department of Educational Accountability (DEA). The proposal information sent to both sites included a brief overview and summary of the research being requested, background and introduction of the topic, participants, methodology, instruments, data collection and analysis and established time lines.

Once permission was obtained from both agencies, each identified research participant received a letter inviting him/her to participate in the study (see Appendix A). The researcher also provided the participants with the appropriate documents from the two agencies and sought each participant's signature agreeing to the conditions of the research. The researcher assured each individual of their confidentiality and noted the opportunity to change their minds at any time during the process. The designated school district, specific schools, and individuals in this study are identified with assigned pseudonyms.

The researcher also made telephone contacts with each of the identified participants to confirm their participation, set specific meeting dates and times, and secured additional individual professional and program information from them. Appendix B contains the Interview Questionnaire Guide.

Gaining Access to Research Participants

It is imperative that the researcher gain access to and establish positive relationships with the research participants. The terms "negotiating entry" (Marshall & Rossman, 1999) and "establishing rapport" (Bogdan & Biklen, 1992) are often used to highlight the importance of researchers creating and developing strong working relationships with the participants in the beginning of and throughout the research. Because this researcher was the instrument of the research, it was crucial that there were effective interactions so that the researcher could obtain the information and data needed for a successful research project. Gaining entry to the research

subjects began with gaining the permission of those who approved the research as outlined above.

The participants in the research study are seen as collaborators who work together with the researchers to mutually shape and determine what they come to understand about them and their situation (Maykut & Morehouse, 1994). It was important to treat respondents with courtesy and to provide them with a clear and outlined description of the study and the specific research goals and procedures. The selected participants were motivated to participate in this study due to their natural curiosity and interest in this topic. The telephone calls placed by this researcher to the principals at each site to determine initial interest in the study met with positive response from all individuals. It is this researcher's belief that these professionals were honored to provide insight and information as they knew they had knowledge and expertise to share and that their opinions are sought and valued in the educational community. This topic was and continues to be viewed as important to individual schools as well as to the district. Raising minority student achievement and enrollment in AP Program courses have been identified as two of this school system's 10 targets or goals and have been areas of emphasis for the past decade. An additional incentive for case study participation was this researcher's agreement and commitment to share study results, conclusions, and implications with all of the research participants.

As noted by Marshall and Rossman (1999), "qualitative researchers identify and present aspects of themselves that will be useful" (p. 81). The personal interest in this subject as well as the desire to obtain additional insight and information was helpful in gaining access to these research sites and participants.

Data Collection Procedures and Techniques

The data collection for the case study was extensive as it drew from multiple sources of information and techniques. The methods that formed the basis of this qualitative inquiry included direct observation, in-depth interviewing, and analyzing documents and materials in the culture. Qualitative data consists of “detailed descriptions of situations, events, people, interactions and observed behaviors; direct quotations from their experiences, attitudes, beliefs and thoughts, and excerpts or entire passages from documents, correspondence, records and case histories” (Patton, 1990, p. 22). All of this data provided the depth and detail of the case. Qualitative researchers are interested in understanding people’s experience in context and the natural setting is the place where researchers are most able to uncover or discover what is known about the phenomenon of interest (Maykut & Morehouse, 1994). Utilizing a variety of data collection instruments and techniques will allow the researcher to better understand the setting, participants, and phenomenon under study as well as to increase the credibility of the findings (Merriam, 1988).

The review of literature on minority student achievement and the AP Program provided a beginning direction for this research study. Key domains and themes were identified and framed the preliminary questions for inquiry related to the areas of: (a) administrator and school staff attitudes and beliefs regarding minority achievement and enrollment and participation in academic courses; (b) instructional leadership; (c) school policies and procedures for student course selection and enrollment; and (d) initiatives, programs and resources that had been implemented to increase minority student enrollment in AP Program courses. The other primary methods of collecting information for this study included the use of interviews, observations, and

review of documents. The collection and analysis of data continued and were refined as the process continued.

Interviews

The researcher conducted semi-structured interviews with respondents. The purpose of the interview is to access the perspective of the person or persons being interviewed (Patton, 1990). This type of interviewing allows the researcher to obtain specific information from each individual while still allowing for further exploration and discussion of the topic (Creswell, 1994; Stake, 1995). In phenomenological interviewing, the participants or interviewees describe or explain the meaning of a concept or phenomena that several subjects share. This structure allows informants to express their thoughts, observations, opinions, perspective and ideas on the topic while also sharing information about the specific actions, events, processes, and procedures about the phenomena. This interview also allows for “continuous assessment and evaluation of information by the inquirer, allowing them to redirect, probe, and summarize” (Guba & Lincoln, 1981, p. 187).

The review of the literature and the information retrieved and analyzed from the pilot or practice interviews also provided focus for further development and refinement of the interviewing guides or protocols that were used for this case study. As noted by Yin, “experienced investigators review previous research to develop sharper and more insightful questions about the topic” (1994, p. 9). The protocol includes the questions to be asked of respondents as well as the procedures to be followed. “The protocol is a major tactic in increasing the reliability or dependability of case study research and is intended to guide the investigator in carrying out the case study” (Yin, 1994, p. 63).

The researcher conducted in-depth interviews with multiple informants at the school site. Interviews were held with the Principal, Director of Student Services and the AP Program Coordinator. Please see Appendix C for interview questions. These interviews were held on June 3, June 4, and June 10, 2010. These interviews allowed the researcher to collect interview data from various sources. It also allowed for triangulation of the data and thus increased reliability (i.e., dependability) and validity (i.e., credibility) of the research (Merriam, 1988).

The researcher used two devices to record all interviews so as to ensure that all information was retrieved for transcribing and analysis. Notes were also taken during each interview so as to record other thoughts, reactions, or observations as well as to facilitate the pacing of the interviews. The interviewer also kept a journal and recorded information following each interview. This allowed the researcher to record reflections and observations as well as descriptive notes on the behavior of the informants. By taking post-interview notes, the researcher is also able to monitor the process of data collection as well as begin to analyze the information itself (Merriam, 1988). By maintaining a record of interviews, the researcher begins an “audit trail” of their work, which contributes to the trustworthiness of the research outcomes (Lincoln & Guba, 1985).

Observations

Observation requires researchers to be in the natural setting where the phenomenon under study takes place. The purpose of observation is for the researcher to be capable of understanding and reporting about the program, setting, and participants as an insider while also describing and communicating about the phenomena for outside readers (Patton, 1990). Through observation, the researcher describes and documents actions and interactions. The researcher looks at broad areas of interest and then discovers the recurring patterns of behavior, connections, and

relationships. “Case study research begins with data collection and builds themes, categories, and propositions from relationships among the data” (Goetz & LeCompte, 1984, p.4). Observation can lead to deeper understanding than interviewing alone as it provides knowledge of context in which the phenomenon or events occur and may enable the researcher to see things that participants are not aware of or that they are unwilling or unable to discuss or explain (Patton, 1990).

This researcher observed specified school events and activities related to the AP Program. These included a meeting held with the AP Coordinator and teachers of AP courses on October 26, 2010; an academic advising meeting for review of class orientation and selection procedures and review of course and graduation requirements held with Director of Student Services and the counselors on January 10, 2011; and a Curriculum/AP Program Information Meeting held with school staff, students and families on January 24, 2011. This researcher also designed an observational protocol as a method of recording notes in the field (Creswell, 1998; Maykut & Morehouse, 1994). The protocol included both descriptive and reflective notes from the onsite visits. The qualitative field notes contained what was seen and heard by the researcher, without interpretation. Observation data provided information relevant to the research questions and were used to verify other collected data. Please see Appendix D for the Meeting Observation Protocol.

Documents and Other Sources of Data

This researcher also collected pertinent and relevant documents for the study. It is an advantage to access documentary materials in case studies as they are usually viewed in qualitative research as stable, unobtrusive, and objective data sources (Merriam, 1988). These related documentary data can help ground the researcher in the context of the problem;

grounding in real-life issues is what the naturalistic inquiry is working toward understanding (Guba & Lincoln, 1981). This researcher accessed data relevant to the environment, culture, and context. Collecting varied types of documents helped the researcher uncover meaning, develop understanding, and discover insight relevant to the research problem.

A major strength of case study data collection is the opportunity to use many different sources of evidence (Yin, 1994). The findings and results of the research are strengthened or found to be more convincing and accurate when based on multiple sources of information. “With triangulation, the potential problems of construct validity or credibility can be addressed, because the multiple sources of evidence essentially prove multiple measures of the same phenomenon” (Yin, 1994 p. 92).

Documents collected for the research can include: minutes of meetings, logs, announcements, letters, formal policy statements, and program descriptions. These are all examples of artifacts that can be useful in developing an understanding and obtaining information about particular programs, groups or individuals studied and the designated setting or environment (Marshall & Rossman, 1999). Documents and items collected for this particular case study included the county’s Program of Studies (POS), county and school regulations and policies relating to the AP program; individual school profiles; website information that included individual school and student achievement and testing information; the School Improvement Plan, school policies, and procedures relating to academic advising and course selection; school curriculum handbooks, course catalogues and class selection guides; AP course brochures, the Principal’s weekly Keep-in-Touch electronic messages, school newsletters and articles shared with students, staff and families; faculty and department planning meeting agendas and notes; school memos and other communication documents. This researcher collected various types of

documents from numerous sources that facilitated meaning, understanding, and discovery relevant to the research problem.

Data Analysis Procedures and Strategies

The goal of qualitative research is to discover patterns which emerge after close observation, careful documentation, and focused analysis of the research topic (Maykut & Morehouse, 1994). Qualitative research involves inductive data analysis procedures that emerge early and are ongoing as the research develops and continues. The final product of a case study is shaped by the data that are collected and the analysis that accompanies the entire process (Merriam, 1988, p. 124). Information must be organized so that intensive analysis can occur. Interview transcripts, field notes, reports, and documents need to be organized. Yin (1994) refers to this organized material as the case study database while Patton (1990) refers to the material as the case record. Lincoln and Guba (1985) suggest unitizing the data. The data is divided into identified units of information that can then become defined categories. Specific categories can include situational factors such as who, what, when, and where. Categories can also represent emerging themes or concepts. Developing categories is largely an intuitive process, but it is also systematic and informed by the study's purpose, the investigating orientation and knowledge and the constructs made explicit by the participants of the study (Goetz & LeCompte, 1984, p. 191). Strategies such as counting, pattern and theme identification, clustering, identifying relationships between variables, building logical chains of evidence, and making concepts coherent can all be used as methods to organize and convey meaningful information to the reader. Miles and Huberman (1994) suggest other analytical techniques such as making a matrix of categories and placing the evidence within each category, creating data displays such as flowcharts and other devices to examine data, tabulating the frequency of different events, putting information in

chronological order, or using some other temporal scheme to facilitate the organization and analysis of data. From these intuitive approaches, insights and explanations are likely to emerge. Qualitative analysis takes skill and creativity. It requires placing the raw data into logical, meaningful categories to examine them holistically and to communicate interpretation to others (Patton, 1990). This researcher compiled data from the interviews, observations and documents accessed and reviewed and then utilized the outlined procedures to analyze the data. The main concepts identified in the literature review provided a framework and new concepts were then identified following the analysis of the data collected for this research study.

Stake (1995) highlights various forms of data analysis and interpretation in case study research. Categorical aggregation involves the researcher seeking a collection of instances from the data, examining the information and seeking to identify issue-relevant meaning from the data. In direct interpretation, the researcher seeks to establish patterns and looks for a correspondence between two or more categories. Lincoln and Guba (1985) note that in the final interpretive phase, the researcher reports the “lessons learned” from the case. A final strategy is naturalistic generalization which allows the researcher to analyze the data and then generalize that people can learn from the identified case or apply it to a population of cases (Creswell, 1994).

The constant comparative method (Glaser & Strauss, 1967) can include a process that will allow for coding data by category, comparing meanings across categories, refining categories, exploring relationships and patterns across categories, and integrating the data to develop an understanding for people and settings being studied. A computer program provides an organized storage file system so that the researcher can easily and efficiently locate materials and store it in one place (Creswell, 1994). This researcher reviewed several software programs

for possible use in this study. The decision was made to use the software package NVIV09. This product was deemed as a quality software program that would be suitable for case study research. This program enabled the researcher to store, review, analyze and label the interview data. This qualitative software program also allowed for:

- making notes in the field
- editing
- storage that can be queried
- coding or categorizing information
- searching for key words or phrases
- data linking-connecting categories of information
- data display capabilities
- adding reflections or memos about certain aspects of data
- content analysis

This software also included an extensive tutorial and all documents in Microsoft Word could be easily imported (QSR, 2010).

This researcher set up the Sources section in the software as follows:

- I. Interviews
 - A. Principal
 - B. Director of Student Services
 - C. Advanced Placement Coordinator
- II. Observations
 - A. Department of Student Services Meeting
 - B. Advanced Placement Coordinator and Teacher Meeting

- C. Curriculum/Advanced Placement Information Night Meeting
- III. Documents
 - A. School Improvement Plan
 - B. Principal Letters and Keep in Touch Messages
 - C. PTSA Newsletters
 - D. Course Selection Guide and AP Course Expectation Sheets
 - E. AP Course Brochures
 - F. Staff and Student Surveys for AP Summer Program
 - G. Agenda and Materials for Department of Student Services Meeting
 - H. Agenda for Advanced Placement Coordinator and Teacher Meeting
 - I. Agenda for Curriculum/AP Program Information Night

Once all of the data were imported into the software under “Sources,” categories or “Nodes” such as Vision and Mission, Leadership, Advanced Placement Program, and Initiatives to Increase Minority Student Participation in the Advanced Placement Program were created and data coding began. Nodes were eventually transformed into “Classifications” for the second level of coding. This provided a way to further refine the larger categories into smaller categories as the relationships, and data connections became evident. This led to further refinement and the data being organized around the four main domains.

Qualities of Assurance: Trustworthiness

While traditional concepts of validity and reliability do not apply to case study research, Lincoln & Guba (1985) provide the concept and framework for “trustworthiness” as a measure of the case study’s truth and quality. Trustworthiness refers to the extent to which the conclusions make sense and are an accurate representation of the research. Trustworthiness

relates to what the researcher has done in designing the study, carrying out and implementing the research, and analyzing and reporting the data to ensure or persuade the reader that the results are believable and convincing. The qualitative researcher selects criteria that include naturalistic terms and concepts such as “credibility”, “transferability” and “dependability” to judge and evaluate the overall trustworthiness of a qualitative study. In this case study research, there were several provisions taken for trustworthiness.

Credibility. The researcher’s ability to accurately and adequately describe and represent the realities of the topic, participants, environment and other variables being studied is referred to as credibility. The credibility of a qualitative research report relies heavily on the confidence that readers have on the researcher’s ability to be sensitive to data and to make appropriate decisions in the field (Eisner, 1991; Patton, 1990).

There were several strategies that were incorporated in the research study to ensure credibility. The researcher utilized multiple methods of collecting data while also accessing multiple sources of information. The use of the multiple methods and sources is a form of triangulation and strengthens the research study (Creswell, 1998; Merriam, 1988). It reflects an attempt to secure an in-depth understanding of the phenomenon in question. As noted by Denzin, 1970), “the rationale for this strategy is that the flaws of one method are often the strengths of another, and by combining methods, observers can achieve the best of each, while overcoming their unique deficiencies” (p. 308).

Triangulation refers to the researchers’ use of multiple and different sources and methods to provide corroborating evidence and then identify common themes or perspective (Lincoln & Guba, 1985; Miles & Huberman, 1994; Patton, 1990). The use of varied sources and multiple methods give the researcher the ability and continuous opportunities to verify the data from one

source to another. For example, for this case study, data collected from interviews with the Principals were verified with data from interviews with Student Services Directors and AP Coordinators. The data from interviews were corroborated with data from school observations and document review.

Another strategy to ensure credibility is to complete member checks (Creswell, 2003; Lincoln & Guba, 1985; Merriam, 1988). This process involves taking the recorded data and analysis back to the respondents and requesting that they verify the accuracy of the information and results. Research participants are invited to review the transcripts to confirm accuracy of information and to respond to preliminary patterns and themes that are developing out of the data analysis (Lincoln & Guba, 1985; Maykut & Morehouse, 1994). According to Stake (1995), research participants should play a major role directing as well as acting in a case study research. They should be asked to examine rough drafts of the researchers' work, and to provide alternative language, critical observations, or interpretation. The participants in this case study were asked transcripts for accuracy and to review final study outcomes and reports to determine if researcher had captured the reality of their experience and reported accurate results and conclusions.

Utilizing peer examination or requesting that colleagues review and evaluate the findings as they emerge is another quality strategy that can be used (Creswell, 1994; Lincoln & Guba, 1985). This researcher shared the research data with an administrative colleague who is also a doctoral student and very interested in this particular topic. Seeking this peer review in the data analysis process facilitated accuracy and understanding of emerging themes and conclusions.

Transferability. In qualitative research, it is the reader who determines whether or not the results of the study can be applied or transferred to their or another particular situation. The

reader must examine and reflect on this case and the related setting, participants, data collection and analysis procedures, and strategies. The reader then determines the extent to which the research can be applied to a new situation or context. This process can be achieved successfully through the researcher incorporating “rich thick descriptions” of the case study in the report (Merriam, 1998). A research report characterized by rich description and details should provide the reader with enough information to determine whether the findings of the study possibly apply to other people or settings (Maykut & Morehouse, 1994, p. 47). Extensive and detailed descriptions of the school setting, context, participants, programs, and services allow the reader to determine whether or not this case has merit for transferability to other situations or cases.

Dependability. There are various strategies that the researcher can use to ensure that the case study results are dependable. Good case studies utilize multiple sources of evidence. In collecting case study data, the main idea is to triangulate or establish converging lines of evidence to make the findings as robust as possible (Yin, 1994). As noted in this section previously, triangulation (i.e., the use of multiple methods of data collection and analysis) can and did strengthen the case study findings and conclusions.

The use of an audit trail can also facilitate the dependability of the study (Lincoln & Guba, 1985). The investigator must record how data is being collected, categories are identified, and decisions made throughout the inquiry. Identified peer reviewers can then examine the process and product of the research consistency. “Essentially researchers should present their methods in such detail so that other researchers can use the original report as an operating manual by which to replicate the study” (Goetz & LeCompte, 1984, p.216). The identified peer reviewer was able to follow the procedures, outcomes, and results of the study.

Another strategy was to create a case study database and protocol document. By developing and utilizing a formal, organized database, the information was easily retrievable and other researchers or investigators could access and review the research data. Thus, a case study database and protocol increases the reliability or dependability of the entire case study. Information in the database should include interview, observation and document analysis notes as well as other pertinent documents, tabular materials and narratives. Developing and utilizing a specified protocol allowed this researcher to have a designated model to follow while also providing documentation of the research procedures. It also allows a reader an organized guide to follow when reviewing the research.

Discussion and Conclusions

The decision to use qualitative methodologies was considered carefully and made after a thorough review of the literature and noting the established research questions relating to minority student enrollment and participation in AP Program courses. It is this researcher's belief that the single case study research design provides the readers with detailed and in-depth information of this phenomenon. With the main themes in the literature and research, this researcher utilized those factors to bridge or connect the themes and create main categories for analysis. The researcher utilized established, guided, and monitored methods and procedures to conduct this research. Through the use of these rigorous techniques, the researcher wanted to address the significant research questions and provide meaningful data and pertinent information pertaining to this important and relevant educational area of interest. The checks and balances inherent in all of these outlined data collection and analysis strategies have increased the rigor and trustworthiness of this case study.

Chapter 4

Findings

Farrier High School

Over the course of the last six years, Farrier High School has been successful in recruiting and enrolling minority students in Advanced Placement (AP) courses. This school has a population 2,308 students, with the following ethnicity: 44.07% White, 30.48% Asian, 9.41% Black, 11.85% Hispanic, and 4.25% identified as Other Designation. The Limited English Proficient (LEP) population is 11.99% and the Students with Disabilities population is 13.34%. The students who are eligible for Free and Reduced Lunch is 20.53% and the Mobility Rate is 10.03%. This school is fully accredited by the Virginia Department of Education. Current Accreditation Pass Rates based on the 2008-2009 tests are as follows: English-97%; History-97%, Mathematics-92%, and Science-94%. The school's Scholastic Aptitude Test (SAT) Critical Reading, Math, and Writing scores are 1641, the graduation rate is 95% and the college admissions rate is 93% (Farrier High School Profile, 2010).

The purpose of this case study was to examine how this high school successfully increased the minority student enrollment in AP courses. The research questions related to (a) examining school policies and procedures for student enrollment in these courses; (b) identifying specific interventions and strategies utilized and implemented to increase enrollment of minority students in the courses; and (c) determining who the key individuals were and how they influenced the positive enrollment changes.

This researcher visited Farrier High School on nine occasions from June, 2010 to February, 2011. The study includes data gathered from interviews and interactions with the Principal, the Director of Student Services, and the Advanced Placement Coordinator. The study

also includes observations of specific meetings with counselors, AP teachers, parents and students, and reviews of designated documents.

This school has 7.0 Administrators, 9.0 Counselors, 150.0 Teachers and Specialists, 4.0 Security Staff, 11.0 Administrative Assistants, and 12.0 Instructional Assistants and Attendants. The Principal of Farrier High School has been in his current position for four years and had previously served as an Assistant Principal in the school. The Director of Student Services has been in the position for seven years and the AP Coordinator has been in her position for five years. On the instructional staff, 28 of the teachers currently teach one or more AP courses. Twenty-four of these teachers hold master’s degrees and two of them have doctoral degrees. Twenty-five of these individuals have been at Farrier High School for six or more years; thus the majority of this staff has been present during the six years of established growth in the AP Program.

Instructional programs featured at this high school include general education, Honors and AP, English for Speakers of Other Languages, and special education. The school offers 10 Honors courses and 21 AP courses. All of these AP courses have been offered for the last six years, with the exception of AP Statistics, which was implemented three years ago. Please see Table 3 for a list of AP courses.

Table 3

AP Subjects Areas/AP Courses and Exams

AP Subject Areas	AP Courses and Exams
Art	Art History
	Studio Art: Drawing Portfolio
	Studio Art: 2-D Design Portfolio*

	Studio Art: 3-D Design Portfolio*
Biology	Biology*
Calculus	Calculus AB*
	Calculus BC*
Chemistry	Chemistry*
Computer Science	Computer Science A*
	Computer Science AB*
Economics	Macroeconomics*
	Microeconomics
English	English Language and Composition*
	English Literature and Composition*
	International English Language (APIEL™)
Environmental Science	Environmental Science*
French	French Language*
	French Literature
German	German Language
Geography	Human Geography
Government and Politics	Comparative Government and Politics
	United States Government and Politics*
History	European History
	United States History*
	World History*
Latin	Latin Literature
	Latin: Vergil*
Music	Music Theory*

Physics	Physics B*
	Physics C: Electricity and Magnetism
	Physics C: Mechanics
Psychology	Psychology*
Spanish	Spanish Language*
	Spanish Literature
Statistics	Statistics**

Note. *Offered at Farrier High School for the last six years. **Offered at Farrier High School for the last three years.

As this researcher examined the research question responses of the various study participants, several themes emerged. These themes include but are not limited to: (a) distributive leadership demonstrated across the school, (b) collaborative vision and mission, (c) rationale for the AP program, (d) aspects of the AP program, (e) school programs, interventions and strategies implemented to increase student enrollment in AP courses, (f) and professional development and training for faculty related to the AP program.

The remainder of Chapter 4 features the data collected in response to the research questions. The data are organized into one major domain of distributive leadership and five other sub-domains. Distributive leadership is the key theme and is also a related theme throughout the other domains. There are also various success factors included within each of the domains. Through these domains and identified success factors, the voices of the administrators, teachers, and counselors are heard and noted. In addition, data collected from observations and specified school documents are reported. The following are the identified domains and success factors:

1. Distributive Leadership
 - a. The Principal
 - b. The Director of Student Services
 - c. The Counselors
 - d. The Advanced Placement Program Coordinator
 - e. The AP Teachers
2. Collaborative Vision and Mission
 - a. The District Goals
 - b. The School Goals
 - c. Open Enrollment
3. Rationale for The Advanced Placement Program
 - a. High Expectations
 - b. Relevant and Rigorous Academic Curriculum
 - c. Preparing for and Transitioning to Post-secondary Education
4. Aspects of the AP Program
 - a. Communication
 - b. Academic Advisement
 - c. Data-Driven Decision Making
 - d. School Specific Policies and Procedures
5. School Programs, Initiatives and Strategies to Increase Minority Student Enrollment and Participation in the AP Program
 - a. Minority Outreach Programs
 - b. Strengthening Vertical Articulation Efforts

- c. Instructional Strategies
 - d. Extended Learning Opportunities
 - i. The AP Summer Program
 - ii. The Learning Seminar
 - e. Individualized Support
 - i. Learning Strategies
 - ii. The Writing Conference Lab
 - f. Relationships
 - i. Personal Staff Invitations
 - ii. Peer Invitations
 - iii. The Alumni Panel
 - iv. The AP Mentor Program
6. Professional Development and Training Opportunities for Faculty
- a. District Initiatives
 - i. The AP Summer Institute
 - ii. The AP Lead Cohort Program
 - b. School Initiatives
 - i. Extensive Training Sessions
 - ii. Professional Reading
 - c. College Board Resources
 - i. AP Central
 - ii. AP Readers

Distributive Leadership

Throughout Farrier High School, there is evidence of distributive leadership. The administrative, student services, and instructional staffs are dedicated to their mission of supporting student achievement and increased minority student enrollment in the AP Program. These individuals believe they have active roles in and shared responsibilities for student learning. School personnel take initiative to engage and develop relationships with students. They invite and encourage them to enroll in rigorous academic classes. These educators work collaboratively to develop and implement programs and initiatives that will increase minority student participation and performance in these academic courses. These individuals also willingly participate in varied training opportunities to develop their own professional skills.

There is a strong sense of ownership and commitment to the AP Program that is shared across administrators, counselors, and teachers in the school.

This is what makes our school such a strong academic school is it is always upward and there's a huge support along the way. It's not just one person who influences but it's everybody from the teacher all the way to the building principal. We are committed to this. (Teacher 1, AP Teacher Meeting, October 26, 2010)

“It is the counselors, the individual teachers, and the department chairs working together to target students who should enroll in AP courses” (Advanced Placement Coordinator, Interview, June 3, 2010). “This is a team effort. This is a combination of counselors, with the teachers, with the student and the parent to make this work” (Teacher 4, Curriculum/AP Program Information Night, January 24, 2011).

The staff also notes the importance of reflection and working to improve their efforts. “We are always looking at ways to get better. We compare our school data with other schools in

the district. What are we doing well on and what is the other school like us doing well on? We compare notes with other teachers in the district” (Teacher 1, AP Teacher Meeting, October, 26, 2010). “We are always talking and concentrating on helping and supporting each other. We work well together and believe that we are stronger because of our efforts as a group” (Teacher 6, AP Teacher Meeting, October 26, 2010).

Through unified and varied efforts, the administrators, counselors and teachers provide daily and focused leadership in support of the AP Program and its students and staff.

The Principal

The Principal of Farrier High School exhibits a focused commitment to offering and implementing a strong AP Program. He is dedicated to providing a rigorous and relevant curriculum to meet the needs of his diverse student population. He acknowledges that he has many roles and responsibilities in his position and believes that his most important responsibility is to hire excellent staff. “The most important job I do is hiring the best people. If you hire good teachers, including AP teachers, the word is out that this teacher is really good, with an emphasis on really good. Then the students will enroll in these classes” (Principal, Interview, June 4, 2010). The need for strong teachers is also felt by others in the school. “It is important to have strong, knowledgeable AP teachers in the classroom and it is our responsibility to place them there” (Director of Student Services, Interview, June 10, 2010). “Having talented and skilled teachers is one the AP Program’s greatest assets” (Teacher 4, AP Teacher Meeting, October 26, 2010).

The Principal emphasized that he sees his main role as that of a facilitator. He believes that his important work relates to collaborating with faculty. He feels he has a responsibility to support staff and to access and provide information and resources to his administrators and

teachers. “I see my role as a facilitator. I want my department chairs to be knowledgeable and creative. I want them to be strong instructional leaders. I am always asking them what they need to be successful and what great ideas do they have to take forward to the whole group” (Principal, Interview, June 4, 2010). “In all these years, I’ve never denied a teacher access to resources or materials for students” (Principal, Interview, June 4, 2010). This is also a perspective shared by the faculty.

We have a hugely supportive administrative staff. They’re all on the same page with us and they’re very supportive. When we need funds, information or any kind of support, they are there. Even when we’re stressed, they are all there for us and asking how they can help us manage our jobs and responsibilities...our duties as AP teachers and teaching regular students as well. (Teacher 2, AP Teacher Meeting, October 26, 2010)

“The Principal and the individual subject administrators are a big key to this because they’re the ones talking to our AP Teachers. If you have a question about AP or to want get information, they are always available and aware of what we do in the AP Program” (Teacher 5, AP Teacher Meeting, October 26, 2010).

The administrators are also involved in the recruiting of students for the AP Program. “There is interest and a lot of discussion among administrators about what kids are taking and their specific classes” (Teacher 2, Curriculum/AP Program Information Night, January 24, 2010). “We are always talking with students and encouraging them to take these rigorous courses” (Principal, Interview, June 4, 2010). “The administrative team is committed to these students and we want to be sure that they take these rigorous AP courses” (Director of Student Services, Interview, June 10, 2010).

The administrators also feel a responsibility to encourage students and support them while they are in these rigorous classes. “We discuss this as a topic at the administrative leadership team meeting. It is a priority to keep these students in these academic classes”, (Principal, Interview, June 4, 2010). “There has been some changing or influence through our Principal and Assistant Principals. They speak with each other and discuss how to adapt these courses and make it work for the students” (Advanced Placement Coordinator, Interview, June 3, 2010). “We thank all of the teachers for keeping kids in their classes and for encouraging them” (Director of Student Services, Interview, June 10, 2010).

The administrators emphasize the importance of having strong relationships with the students as they encourage them to achieve and perform. “One of the most important things is to develop good relationships. As simple as that sounds, it’s still hard to accomplish but building relationships with your community, your students, and your teachers building relationships with the students and encouraging them to do well is key to the success of the AP Program”(Principal, Interview, June 4, 2010).

I spend a lot of time on talking about relationships and how important they are and I give examples. Last year I showed a great movie about Victor, one of our Hispanic students and all of the challenges and things he went through. Seeing the video made many staff members realize the situation. (Principal, Interview, June 4, 2010)

The Principal and I frequently discuss the importance of connecting with students and developing relationships with them. It is important for administrators and our instructional staff to know our students and to convey the message that we care about them as individuals. We all work to develop the relationships. (Director of Student Services, Department of Student Services Meeting, January 10, 2011)

Through his words and actions, this principal emphasizes his care for and interest in his students and staff. He conveys the importance of relationships to his administrators and they also embrace it.

The Principal also notes the work with his administrative and instructional teams in analyzing data and making recommendations on modifying the program or adjusting staffing assignments. He notes that their teams review AP Exam data and course grades across all classes and teachers' sections. "Teachers and administrators review and analyze their individual and department data" (Director of Student Services, Interview, June 10, 2010). "We are always reviewing our data and that helps us determine course modifications and instructional decisions for the following year" (Principal, Interview, June 4, 2010). "One of the biggest influences I have is determining class size. For example, if the AP courses require a lot of writing, I like to reduce student enrollment in those classes so that teachers have time to assist individual students with their writing. The biggest way to influence AP performance is developing writing skills and the data supports that reducing class size has made a difference in student achievement scores"(Interview, Principal, June 4, 2010). "One of the hardest conversations we have as administrators is determining who should be teaching AP courses. We need effective teachers in AP classes and so we use the data to have and direct the conversations about identifying the right teachers for certain classes" (Principal, Interview, June 4, 2010). This allows the team to determine instructional effectiveness and to make decisions about teaching assignments for each AP course. "The data solidifies our thinking as to effective versus ineffective teachers" (Principal, Interview, June 4, 2010).

Through various perspectives, the Principal and his administrative and instructional teams believe they have had a definite impact on the AP Program. They embrace the vision of

large numbers of diverse students enrolled and succeeding in AP courses. They believe they will continue to influence as they challenge themselves as educators to achieve their common goals.

The Director of Student Services

The Director of Student Services believes that it is important for her to provide guidance and direction to the counselors as they offer academic advisement to their students. “It is our responsibility to offer strong academic advisement to our students. We work hard to be consistent and diligent in working with students and families” (Director of Student Services, Interview, June 10, 2010). She also notes the importance of encouraging and inviting students to enroll in rigorous courses. “The counselors and I speak individually with the students about having high expectations, challenging oneself and enrolling in AP courses” (Director of Student Services, Curriculum/AP Night Meeting, January 24, 2011). “We all consistently make an effort to encourage and challenge students to enroll in these academic courses” (Director of Student Services, Interview, June 10, 2010). The Director views her role as collaborating with administrators, counselors, and AP teachers to ensure that they are all identifying potential students and enrolling them in AP courses. “We work hard to identify students with the aptitude and strengths to be successful in AP classes. We provide student with access and opportunity as these are important and essential” (Director of Student Services, Interview, June 10, 2010). The faculty also believes this to be an important aspect of the Director’s responsibilities. “Our Director of Student Services works hard to ensure that student challenge themselves by enrolling in these rigorous courses” (Teacher 3, AP Teacher Meeting, October 26, 2010). “The Director is committed to making sure that our students stretch and enroll in AP courses. This is always on her mind and she considers it to very important” (Teacher 5, AP Teacher Meeting, October 26, 2010).

The Director of Student Services also emphasizes her efforts to coordinate with staff to access data and provide Standards of Learning (SOL) and AP Exam data to AP Teachers. She noted the importance of review and analyzing data to determine staff and program effectiveness. “We provide SOL testing and AP Exam data to Administrators, the AP Coordinator, and teachers for review and analysis as we evaluate staffing and program effectiveness. This data is used in development and evaluation of the School Improvement Plan” (Director of Student Services, Interview, June 10, 2010). The data provide a framework for us to discuss student and staff performance. We also evaluate programs and make appropriate modifications and adaptations based on the data from the previous year” (Director of Student Services, AP Teacher Meeting, October 26, 2010).

The Counselors

During the course selection process, as well as during long-term academic planning, the counselor is the main contact for the student as they discuss goals and determine academic direction. “It really is a group effort but it is the counselor that gives that main piece as the academic advisor” (Teacher 3, Curriculum/AP Program Information Night, January 24, 2011). “The counselors are on the front line with getting the students in classes” (Counselor 2, Department of Student Services Meeting, January 10, 2011). “I appreciate that you are sharing consistent information and are following the same policies and procedures. This helps us with keeping students and families informed and making good decisions. You are key to this process” (Director of Student Services, Department of Student Services Meeting, January 10, 2011). “We speak to students individually and promote interest in AP classes and taking them as soon as possible. We try to find their areas of interest and where they are strong and capitalize on their strengths” (Counselor 2, Department of Student Services Meeting, January 10, 2011).

In working with students, the counselors also emphasize individuals developing self advocacy and decision making skills as they continue to make course selection and career decisions. “We are continuing to work with students and administer a series of lessons focused on students’ academic, career and personal/social development to all students” (School Improvement Plan, 2010, p. 4). “We are also working with students on their further development of self advocacy skills and their active involvement in their learning. We are working with them to seek assistance from teachers and mentors when they have questions and to seek support in refining their critical reading and writing skills” (Counselor 4, Department of Student Services Meeting, January 10, 2011).

The Advanced Placement Program Coordinator

Farrier High School has an identified Advanced Placement (AP) Program Coordinator who is also an AP teacher and is given one designated period to provide consultative services and support to the AP Program staff. This individual attends monthly meetings with the CCPS Academic Program Specialist and AP Coordinators from other school sites. They review and discuss pertinent information and share ideas and strategies related to implementing the AP Program. The AP Coordinator then holds monthly meeting with the AP teachers where she distributes information from the central meetings and highlights research articles and training opportunities available to all AP teachers. “I give teachers the information that is shared at our county meetings. When they give me forms or ideas for the classroom, these are shared and discussed with the teachers” (Advanced Placement Coordinator, Interview, June 3, 2010). “The AP Coordinator shares pertinent AP Program information and research with her colleagues. She leads the group in discussions related to pertinent program, instructional, and student topics” (Director of Student Services, Interview, June 10, 2010).

The AP Coordinator also provides daily collaborative services and support to all AP teachers. She views her role as that of a consultant or mentor who offers support and resources to teachers. “I send frequent emails to provide information and support to teachers” (Advanced Placement Coordinator, Interview, June 3, 2010). “I think they need encouragement too because their job is not easy. It’s tough to teach a college course. I thank them all the time for keeping the kids in the classes...for encouraging them and providing help whenever the kids need it and they provide support to them” (Advanced Placement Coordinator, Interview, June 3, 2010). “She gives us encouragement and reinforcement. It is nice to have someone to talk to about our students and classes” (Teacher 3, AP Teacher Meeting, October 26, 2010).

The AP Coordinator also leads the AP teachers in frequent group and individual discussions regarding the program and student data.

I give them the student data for each of their courses. I also give them our school data and the county data so they can compare across all teachers in the county who teach their course. This enables them to compare themselves with other teachers who teach the same thing. (AP Coordinator, Interview, June 3, 2010)

“We like having a discussion with each other about our data. It is nice to share thoughts and observations among all AP teachers” (Teacher 6, AP Teacher Meeting, October 26, 2010).

The AP Coordinator is a real resource to the school and is an advocate for the AP Program and students. “Our AP Coordinator provides daily support to students and faculty” (Director of Student Services, Interview, June 10, 2010).

The AP Coordinator is a support to us as we can conference and brainstorm on students and classes. It is important to exchange ideas with her as she works with all AP teachers

and sees the big picture of our AP Program. I have found her insight and perspective helpful and useful. (Teacher 4, AP Teacher Meeting, October 26, 2010)

The AP Teachers

The AP teachers at Farrier High School emphasize their passion for and commitment to the AP Program and their specific courses. “We love our subject matter and are passionate about our AP classes (Teacher 3, Curriculum/AP Night Meeting, January 24, 2011). “Our AP teachers are deeply committed to the AP Program and each of their specific academic courses. We believe in this rigorous and interesting curriculum” (Teacher 4, AP Teacher Meeting, October 26, 2010). “These teachers have great passion for their content and that shows on a daily basis” (Director of Student Services, Interview, June 10, 2010). The staff has a sense of pride in their teachers’ knowledge of and expertise in their areas of study. They embrace and appreciate the AP teachers’ abilities and efforts to implement a strong academic program for the students. “Our teachers have taken extensive coursework and training in order to teach these classes. They have developed their knowledge of their subject matter” (Teacher 5, AP Teacher Meeting, October 26, 2010). “Our teachers have a great understanding and real expertise in their subject matter. They read extensively and take advantage of professional development training opportunities to continue to learn and expand their areas of expertise” (Principal, Interview, June 4, 2010). “These teachers are always working to learn more about their area of study and how they can provide meaningful learning experiences for students” (Director of Student Services, Interview, June 10, 2010). These educators are always encouraging, reinforcing, and supporting each other.

This group of teachers demonstrates their leadership through their commitment to encouraging and inviting students to enroll in their classes. They know they are an important factor in influencing students to enroll in their courses. “The most important person in this whole

process is the teacher of the student and if they really feel and believe that the student can be successful and they encourage them” (Principal, Interview, June 4, 2010). “Our job is to make sure that kids are challenging themselves. That’s critical. We must invite and encourage students to take these classes” (Teacher 1, Curriculum/AP Information Night, January 24, 2011).

“Teachers have a big influence when they are talking with students as they are going through the registration process. Teachers are key to selling these classes” (Teacher 3, Curriculum/AP Information Night, January 24, 2011).

Along with individual conversations and invitations, the teacher explored and identified other ways to engage students and to entice them into participating in the AP Program. The teachers visit classes and speak with groups of potential students for their AP courses. “The individual teachers influence course selection a lot. For example, I go to all the rising seniors and discuss their options. I give the pros and cons in doing each of the classes” (Advanced Placement Coordinator, Interview, June 3, 2010). “Teachers recruit for their own courses. The AP US History teachers go into the 10th grade classes and talk about AP History for the upcoming year”(Advanced Placement Coordinator, Interview, June 3, 2010). “It is huge when students get a visit from a teacher that they don’t even know and the teacher says your current English teacher has identified you for this and I would really want you to be part of my class” (Teacher 2, AP Teacher Meeting, October 26, 2010).

Another strategy has been for teachers to solicit their AP students to speak with other students.

I speak with students and they help sell the program. When you have a successful AP Program, and when the kids like the teachers, like the classes and they realize it is

something they can do, they give the information to the younger students that builds your program. (Advanced Placement Coordinator, Interview, June 3, 2010)

“We have our students talk with their peers and encourage them to take the classes. Students like to be encouraged and invited by other students” (Teacher 1, AP Teacher Meeting, October 26, 2010).

This group of teachers also demonstrates tremendous caring and dedication to their students. Throughout the school, these teachers are viewed as open, positive, and encouraging. “It gets back to the whole thing about high school relationships that makes things work. I think we have an exceptional group of AP teachers and they motivate the kids to learn. They encourage kids to enroll and they keep kids in and the kids are hugely successful” (Director of Student Services, June 10, 2010).

I think the kids in our school feel like the teachers, the AP teachers, are very nice and I think that is a huge barrier to remove to kids being successful in a class. They feel like the teachers care about them. When teachers go out of their way to approach kids and speak to them, then they become interested in the class and think they can do well. (Director of Student Services, Interview, June 10, 2010)

“The AP teachers really care about the students. We see this every day. These people spend time with the students and let them know that they really do care” (Counselor 4, Department of Student Services Meeting, January 24, 2011).

The teachers also feel a responsibility to provide information, support and encouragement to the individuals in their classes. “We spend a lot of time discussing expectations and requirements. We want to be sure that students understand the requirements of these courses and what they need to do to be successful” (Teacher 2, Curriculum/AP Night, January 24, 2011).

“We have very dedicated teachers who have made commitments to students being informed, supported and successful” (Teacher 3, AP Teacher Meeting, October 26, 2010). “We want our classes to be safe places where the students can learn and grow. In order to stretch, students must trust the teachers and feel supported” (Teacher 1, AP Teacher Meeting, October 26, 2010). “We are inviting many students to take a chance on themselves and the courses and so we must be there to support them” (Teacher 4, Curriculum/AP Program Information Night, January 24, 2011). “The message is that we will help you. You have to stay and you must work through it” (Teacher 6, AP Teacher Meeting, October 26, 2010).

I really feel like there needs to be the mechanisms in place that if the kid is in over his head that you don't leave him there to drown. They have to have the security that if they do struggle, that there are components in place to help them be successful. (Teacher 1, Curriculum/AP Program Information Night, January 24, 2011)

The overall view of this group is probably best described by an AP teacher.

I always tell my students the story of the ‘Sherpa’. Envision that we are all climbing Mt. Everest as we work through this course. I am your ‘Sherpa’. I am here to help you carry the load of necessities and support you. We will complete the journey and will make it to the top. When we make it to the top and you have completed this course, you will have a spectacular view and we will have had a tremendous experience. We will celebrate and I will help you take and reflect on the picture. (Teacher 5, Curriculum/AP Program Information Night, January 24, 2011)

It is clear that these AP teachers are passionate about their program and committed to students enrolling and being successful in their AP courses. These educators demonstrate daily

their efforts to establish relationships with students and they encourage, reinforce, support, and celebrate them in their AP classes.

Collaborative Vision and Mission

The District Goals

For the past six years, the Cooper County Public Schools (CCPS) Strategic Plans included an identified Advanced Academics Goal. The approved School Board measures detailed specific performance expectations for increasing the number of students enrolled in AP Program courses. During each of the six years, the District was successful in meeting the goal and expectation of increasing student enrollment in the AP courses. Within the 2003-2009 school year timeframe, the student enrollment in AP courses increased from 20,689 to 29,954 (CCPS District Plan and Profile Sheet, 2010).

CCPS conveys and communicates its desire to be accountable for the academic achievement of all students through all of its planning documents. “CCPS measures academic progress to ensure that all students, regardless of race, poverty, language or disability, will graduate with the knowledge and skills necessary for college and/or employment” (CCPS Vision Statement, 2010). “The CCPS inspires, enables, and empowers students to meet high academic standards, lead ethical lives, and demonstrate responsible citizenship” (CCPS Mission Statement, 2010).

The District’s vision and mission are also embraced and reinforced by Farrier High School’s staff. “I know that it is the district’s vision to make sure that everybody has the ability to access AP courses” (Director of Student Services, Interview, June 10, 2010).

We have a School Board goal of student achievement. We go to great lengths to entice our kids to be part of the AP Program. From the top down, it is the school system’s

opinion that we are looking to increase minority enrollment in advanced type classes.

(Teacher 1, AP Teacher Meeting, October 26, 2010)

“This school system has sent a clear message that it is essential in our long-range planning with students that we encourage and they take AP classes”(Counselor 1, Department of Student Services Meeting, January 10, 2011).

The School Goals

The last six Farrier High School’s School Improvement Plans highlighted the commitment to and focus on increasing student enrollment in AP program courses. The school’s student enrollment in AP courses increased from 413 to 858 from 2003-2009 (School Improvement Plan-AP Program Report and Farrier High School Profile Sheet, 2010). The AP Program is the first featured program highlighted in the School Improvement Plan (SIP) document. In this document it is emphasized that that “enrollment is open to all students committed to rigorous college level work” (School Improvement Plan, 2010, p. 4). “It starts with our school improvement team. We have a very active school planning committee and that is where the bulk of the planning starts. We’ve had minority student achievement as a school goal for a number of years now” (Principal, Interview, June 4, 2010).

To provide a vision, there has to be a focus. The focus is to have everybody involved.

There is a clear focus on what we’re trying to do and the focus for me is opportunity. I want all of our kids to have the opportunity at the next level. AP classes are a great way to prepare students and to help them to achieve. (Principal, Curriculum/AP Program Information Night, January 24, 2011)

As noted by one of the AP teachers, “I think first and foremost the fact that our school is a strong AP school is reflected in everything that we do in our school plan, our department goals,

our professional learning community meetings and the support that we have within the school is absolutely phenomenal” (Teacher 3, AP Teacher Meeting, October 26, 2010). “This is our philosophy as a school and I think that it’s entrenched right now” (Advanced Placement Coordinator, Interview, June 3, 2010). “This is a reflection of what matters to all of us, our responsibility to ensure that all students have the opportunity to access AP courses and can enjoy the experience of excelling” (Teacher 4, AP Teacher Meeting, October 26, 2010).

The staff is focused and unified in their belief that it is the mission and responsibility of both the district and Farrier High School to work together to promote student enrollment in AP courses.

Open Enrollment

The school’s staff frequently expressed focus on and the importance of having and encouraging open enrollment for students as a means to increase the number of minority students in these academic courses. “That’s the reason why we do so well here is because we set the goal right from the beginning that it is open enrollment, students are welcome and you need to work with the students that you have. It has become a school philosophy here” (Advanced Placement Coordinator, Interview, June 3, 2010). “We make it clear that it is a totally open program. Anybody with the motivation and the commitment is welcome to enroll in the class” (Director of Student Services, Interview, June 10, 2010).

The big thing that we stress is open enrollment. Many students coming from 8th grade see gifted and talented programs as closed to them. This is a huge hurdle or barrier for minority achievement and getting minorities to take the advanced academic classes. It’s open enrollment, open enrollment, open enrollment. That’s what you really have to stress. (Advanced Placement Coordinator, Interview, June 3, 2010)

I have watched with great pleasure an increase in the participation of Latino students in our program. Our population has grown more diverse and when they come here, they realize that we are committed to their academic success. To be strong academically, then they know that many opportunities are available for them. (Teacher 1, AP Meeting, October 26, 2010)

The message of the importance of having open enrollment for students is also conveyed throughout various school documents. The AP Program Brochure that was distributed at the January Curriculum/AP Program Night event highlights that “AP classes are open enrollment and we recommend that all students who expect to go to college, take at least one AP course” (AP Program Brochure, 2011, p. 1; Curriculum/AP Program Information Night, January 24, 2011). The open enrollment concept of students being welcome and encouraged to enroll in AP classes is also noted throughout the Farrier High School Course Offering Document. The AP Program is the first program highlighted in this document.

The advanced academic program provides educational opportunities designed and coordinated to meet the needs, abilities, and interests of our talented students. The four-year sequences of courses in each of the academic disciplines, which progresses from Honors to AP, provides a continuous and balanced academic program. (FHS Course Offering Document, 2010, p. 9)

Through verbal and written communication, the staff at Farrier High School conveys their commitment to embracing an open enrollment policy where students are invited and encouraged to participate in the AP courses.

Rationale for the Advanced Placement Program

High Expectations

The school staff frequently mentions that it believes in and emphasizes having high expectations for their students. “At Farrier High School there is a level of very high expectations. We know that these AP courses are college level and the expectation in that students will work hard to perform” (Counselor 2, Department of Student Services Meeting, January 10, 2011). “High expectations are key to the success of these programs. I am always sending the message to these kids that they are good enough to take these classes and do well. I tell them to pleasantly surprise any doubters” (Principal, Interview, June 4, 2011). “This is my personal belief. If you set a high standard of expectation for students, many students will rise up to that if you provide them with the support that they need, minority or otherwise” (Teacher 3, AP Teacher Meeting, October 26, 2010).

The staff is unified in frequently conveying the message that it is important for students to increase their academic challenges. “Challenge yourself and be the best that you can be” (Teacher 1, AP Teacher Meeting, October 26, 2010). “I work very hard to make sure that our students understand the importance of hard work, learning skills and study habits from the time they come to our school and that will lead them to successfully complete the AP courses” (Teacher 5, AP Teacher Meeting, October 26, 2010). “I do think that the students, regardless of what they get on their AP Exam, come out better because they learn to be academically disciplined” (Teacher 2, AP Teacher Meeting, October 26, 2010). Through various means, school personnel communicate their beliefs that high expectations are key for students to achieve and that they are one of the important tenants of the AP Program.

Relevant and Rigorous Academic Curriculum

The staff at Farrier High School embraces and conveys the belief that the AP Program offers a relevant and rigorous curriculum to the students. “In these courses, students learn to focus deeply on a subject and this leads to extended areas of interest” (Teacher 4, AP Teacher Meeting, October 26, 2010). “We talk to students and try to get them to see the value of these courses. There is exceptional content taught in these classes” (AP Teacher 4, Curriculum/AP Program Information Night, January 24, 2011). “These courses require that you digest large amounts of information and then be able to synthesize it into a concise essay that puts your thoughts out there” (Teacher 3, Curriculum/AP Program Information Night, January 24, 2011).

The school personnel highlights that through their experience with the AP curriculum, the students further develop their critical thinking and study skills.

I believe these courses teach the kids to think on a higher, more critical level. They read more and we all know the value in that. They work in teams more often and take test under stressful conditions. These learning experiences are preparing them for other academic experiences. (Director of Student Services, Interview, June 10, 2010)

Another interesting thing I see is what great study skills they acquire in AP classes and their development of critical thinking skills. They develop the ability to tackle long readings, to write papers and all these skills transfer within their disciplines. (Teacher 2, AP Teacher Meeting, October 26, 2010)

“These courses require more in-depth thought and application of information. Developing critical thinking skills leads to better verbal debate and strong writing skills”(Teacher 4, Curriculum/AP Program Information Night, January 24, 2011).

Preparing For and Transitioning to Post-Secondary Education

The staff frequently communicates and highlights that participation in the AP Program helps prepare students for a successful transition to post-secondary education. “I often quote Jay Mathews and his discussion of the Texas study that showed that the exposure to the AP courses was the determining factor in students being successful in college” (Principal, Interview, June 4, 2010). Noted by one teacher who often sees her former students, “When I run into former students they often tell me that the AP classes they took in high school were more demanding and more rigorous than what we have in college” (Teacher 2, AP Teacher Meeting, October 26, 2010). “These classes enable students to learn to read and cover large amounts of information, develop study skills and prepare for their college courses” (Teacher 6, Curriculum/AP Program Information Night, January 24, 2011).

There is also the message conveyed that the AP curriculum prepares students for their future life experiences. “The AP Program not only prepares them for college, it prepares them for life” (Teacher 1, Curriculum/AP Program Information Night, January 24, 2011). “This program prepares them for college and for life as once they feel the confidence to do well in an AP class, this transmits to all facets of their life” (Teacher 4, AP Teacher Meeting, October 26, 2010). Through their many words and expressions, this school staff demonstrates their core beliefs that the AP Program provides a rigorous curriculum to their high school students and it provides foundation for their future academic experiences.

Aspects of the Advanced Placement Program

Communication

With a focus on increasing minority student enrollment in AP Program courses, Farrier High School staff utilizes multiple and varied forms of communication to promote the program

and to encourage participation in it. The Principal has communicated his strong belief in the program and his desire for students to enroll in the academic courses through his frequent memos and letters to the faculty and his Keep-in-Touch email messages to the community. Keep-in-Touch is a communication tool in which the school can send information to the school community at large via telephone calls, email, and text messages. “I send out Keep-in-Touch every Friday. Through the Keep-in-Touch messages, I offer congratulations to students for enrolling in strong academic courses and I showcase them for their achievement in AP courses” (Principal, Interview, June 4, 2010). “I want to take this opportunity to congratulate the many students for stepping up to the plate and enrolling in our strong academic AP courses for next year. Thank you for challenging yourselves” (Principal Keep-in-Touch Message, May 5, 2010). “Our Principal is always communicating with our staff and school community that it is important to be enrolled in AP” (Teacher 5, AP Teacher Meeting, October 26, 2010).

There is also extensive AP Program information featured on the school’s website. The information includes detailed course descriptions for each of the AP courses offered at the school. There is also a direct link provided that connects to the District’s Advanced Academic Programs (Farrier High School Home Page, 2011). These technology features allow students, staff and families easy access to extensive AP Program information.

The AP Program is highlighted during the school’s Curriculum/AP Program Information Night that is held in January. During this event, parents and students view a presentation by the AP Coordinator who highlights the main features of the program. This is followed by AP teachers meeting individually or in small groups with the parents and students to review the specific requirements for each class and to answer questions. “Tonight you will have the opportunity to learn about the expectations for each class and then talk with individual teachers

about their classes”(Advanced Placement Coordinator, Curriculum/AP Program Information Night, January 24, 2011).

Parents and students come in and I give them information about our AP Program and how important it is for all the students to be involved. I’m always pleased that after the program I get a lot of questions from parents of the younger students who come. They come early because they want to learn about the AP Program. (Teacher 2, AP Teacher Meeting, October 26, 2010)

I do presentations for them in English and Spanish and they do understand how important it is for students to take AP classes. I’m really happy to see our enrollment has grown in those areas and that we have more African American and Latino students taking AP classes and a variety of them. (Teacher 3, AP Teacher Meeting, October 26, 2010)

During the session, the staff also distributes brochures for each specific course that feature course expectations and requirements. There are examples of class projects and assignments for people to view and students currently enrolled in class are present to share their experiences and answer any questions. “We have brochures for you so that you can learn more about each course. With our students here, they can answer any questions that you may have about this class” (Teacher 3, Curriculum/AP Program Information Night, January 24, 2011).

There is also an AP Expectation document that is distributed to all parents and students. This document outlines each AP course and the expectations, assignments, and requirements for each class. It also highlights the projected number of hours of required reading and studying per week for each course so that students and parents have an idea of how much time will need to be allotted and devoted to this particular class. “We have a very valuable document called AP

Expectations which we give to all the students at registration time. It outlines and is a summary of everything that we do in each AP class” (Teacher 1, AP Teacher Meeting, October 26, 2010).

The AP Expectations sheet highlights the kinds of assignments you have per quarter and the number of hours per week that you’re going to spend on that particular subject. It’s very valuable because it describes how clearly but very compactly what the students should expect. (Teacher 5, Curriculum/AP Program Information Night, January 24, 2011)

The staff emphasizes frequent communication with parents and students.

When you communicate information, you just can’t send home only a letter. You just can’t send home handbook. We actually communicate in several different ways. The more ways that you can communicate with parents the better off you’re going to be. You can’t just expect it to happen one way. (Advanced Placement Coordinator, Interview, June 3, 2010).

“We talk to parents and we are always encouraging parents” (Teacher 1, AP Teacher Meeting, October 26, 2010). “They write to me and they write to our Principal and they feel very well informed about what we do” (Teacher 2, AP Teacher Meeting, October 26, 2010). “A lot of this has to do with getting advertising, marketing, getting the information out there” (Director of Student Services, Department of Student Services Meeting, January 10, 2011).

Through various means of communication, the AP Program is featured and highlighted at Farrier High School. The staff feels a commitment to showcasing this program and making sure that students and families are aware of the course offerings, expectations and requirements.

Academic Advisement

Throughout the school, there is an emphasis on the importance of providing information to students and families to ensure that they make informed decisions for course selections and

complete long-range planning for high school and post-secondary education. The first step of the course orientation and registration process for the next academic school year involves the counselors giving a video presentation to all of the social studies classes. This video provides detailed information about each of the courses and allows for consistency across all classes since everyone views this presentation. Following the video presentation, the counselors discuss all course options, including specific information about Honors and Advanced Placement courses. “We spend a great deal of time speaking with students about short term academic goals and selecting classes. We also talk with them about their long range academic plans, with the emphasis on taking the rigorous courses” (Counselor 2, Department of Student Services Meeting, January 10, 2011). Students are also encouraged to speak with Honors and AP students about their courses. The Director of Student Services and the AP Coordinator also give a presentation to the faculty on specific course requirements and classes offered. “The AP Coordinator and I give a major presentation to the staff so that they are current about information, can advise students, and answer any questions they may have about course registration or classes” (Director of Student Services, Interview, June 10, 2010).

At Farrier High School, the counselors meet with students to discuss their current classes and to schedule their classes for the next academic year.

The counselor meets one-on-one with each student, reviews their academic records and transcripts, and looks at recommendations from teachers for the next level courses. The counselor makes sure that students are aware of the classes they’re going to take and make sure that they are committed to the work that goes on in them. (Director of Student Services, Interview, June 10, 2010)

“Each of us spends a great deal of time talking with students, answering questions and being sure they understand what these classes mean and how important they are for their future” (Counselor 1, Department of Student Services Meeting, January 10, 2011). “We also try to contact the parents so that they understand the commitment to the Advanced Placement classes” (Counselor 2, Department of Student Services Meeting, January 10, 2011).

During the course selection process, the teachers also visit other classes, share information about each course, answer questions and encourage the students to enroll in AP courses. “The AP World History teacher will go into World I Honors classes to talk to those kids about the class and will answer any questions they have about the classes” (Director of Student Services, Interview, June 10, 2010). “The AP English Language teacher does a great job of meeting and speaking with English 10 students. She answers questions and assures students that they can meet the challenge. There is comfort in learning about these courses” (Counselor 3, Department of Student Services Meeting, January 10, 2011). “The AP teachers speak with students and provide them with information about each of the academic classes. They answer specific student questions and provide additional information that is requested” (Teacher 6, AP Teacher Meeting, October 26, 2010).

Academic advisement at Farrier High School is a multi-step process with administrators, counselors, teachers, students, and families actively involved in the process. Providing extensive information and individual attention to students is essential for sound academic advisement.

Data-Driven Decision Making

To promote and encourage student enrollment in AP courses, the staff utilizes the AP Potential. This is a web-based tool that allows school personnel to analyze student performance on the PSAT exam and determine areas of aptitude and strength for individuals that can then lead

to encouraging their enrollment in related AP courses. The administrators, counselors and teachers utilize this tool to identify potential students for AP courses. They review the enrollment rosters and if there are students with identified aptitude who have not signed up for AP courses, the administrators and counselors visit these students, discuss their test scores, and identified areas of strength, and personally invite them to enroll and participate in these rigorous courses. “Our counseling department has a program called AP Potential and it identifies kids that have the potential to be very successful in AP classes”(Teacher 3, Curriculum/AP Program Information Night, January 24, 2011).

The counselors have a huge role in reviewing the AP Potential data and identifying students for AP courses. They get a copy of the PSAT scores by alphabetical breakdown. They meet with each student as part of the registration process for the next year and encourage students to take AP courses when their scores demonstrate they have potential to be successful in rigorous classes. (Director of Student Services, Department of Student Services Meeting, January 10, 2011)

“We all use AP Potential as a guide to be sure we have identified and invited promising students to take these AP courses”(Counselor 4, Department of Student Services Meeting, January 10, 2011).

We use AP Potential that gives you the information and the idea that the student will be successful in the AP class. Our department chair for social studies pulls up a list and gives it to us so we can speak individually with students and encourage them to take the classes. (Advanced Placement Coordinator, Interview, June 3, 2010)

The staff believes that this tool helps in the prevention of students being overlooked and enables them to identify promising students and encourage their enrollment in these academic

courses. The AP Potential is viewed as a positive resource tool that can help foster the increase of student participation in AP courses.

The administrators and teachers emphasize their practice of analyzing and using their achievement data to make future student and programming decisions. “For our Hispanic students in Spanish for Fluent Speakers, we examine their PALS assessments and then determine who we should encourage to take our AP Spanish course” (Teacher 4, AP Teacher Meeting, October 26, 2010). “We look at our AP Exam data each year and that helps us determine who should take additional AP courses” (Teacher 3, AP Teacher Meeting, October 26, 2010).

The administrative and instructional teams emphasized the importance of analyzing and evaluating programs and initiatives that have been implemented to address the issue of the under-enrollment of minority students in AP courses. “We use the AP Exam data to determine program modifications or changes” (Advanced Placement Coordinator, Interview, June 3, 2010). “We continue to evaluate our individual student and student by teacher data. That allows us to determine where we need to focus on and modify our efforts with regards to programs and services” (Director of Student Services, Interview, June 10, 2010). “Examining data by student and teacher allows us to analyze student and teacher performance. It provides us with a starting point of comparing ourselves with each other in terms of teaching the course and working with students” (Teacher 4, AP Teacher Meeting, October 26, 2010).

The administrators also discussed their efforts to use a more “in-depth approach” to analyzing data for the AP Program. They highlighted their work to examine the “three pronged approach” to the AP Program. The Principal and Director of Student Services noted their attention to and practices in examining the number and ethnicity of students enrolled in the AP courses, documenting how well the students performed and the grades earned in the classes, and

then investigating how they performed on the AP Exams. “We are digging deeper and trying to analyze student participation and performance” (Principal, Interview, June 4, 2010). “Our staff is continuing to examine our student achievement and program data to help us in future planning efforts. We are working to further develop our analysis skills so that we can make informed decisions about our students and programs” (Director of Student Services, Interview, June 10, 2010).

The administrative and instructional teams also noted that they have a June reflection and evaluation process in place within the School Improvement Plan. Staff analyzes and evaluates their student, staff, and program data for the year and then records their main data and reflections in the School Improvement Plan document. “The entire staff reviews and evaluates our initiatives and programs each year, determines the successes and areas for improvement, and then we begin the planning process during the summer months as we plan for the next year” (Principal, Interview, June 4, 2010). “At the end of the year, the AP teachers participate as a group and review our successes and weaknesses for the year. This exercise helps us determine areas of concentration and we discuss how we can improve our programs” (Teacher 3, AP Teacher Meeting, October 26, 2010). “The reflection exercise helps us improve our service to our AP students. It is important to determine how we can get better” (Teacher 5, AP Teacher Meeting, October 26, 2010). “It is helpful that every department participates in this reflection exercise so we can all focus on how to improve. This exercise helps our collaborative efforts across the school” (Director of Student Services, Interview, June 10, 2010).

The staff highlighted that through varied methods and with multiple tools, they continue to use data that enabled them to make informed student and program decisions. The data

highlight successes and achievement, as well as areas for focused improvement for students, staff and programs.

School Specific Policies and Procedures

For the last several years, Farrier High School has implemented the policy that students must follow their selected class schedules, even if they wish to drop or change a class. Students are required to remain in AP classes, at least until the end of the first quarter grading period. “We’ve always had the kids stay in the course for at least the first nine weeks. They’re just shocked when they first go in the course but if they hang in there and work with the teachers, they settle in and do fine” (Director of Student Services, Interview, June 10, 2010). There is a consistent message that students have committed to the AP courses that they are enrolled in and they must remain in the classes. “We have established the policy that students must be committed to the courses that they select” (Principal, Interview, June 4, 2010). “There is an understanding and agreement that students will remain in classes” (Counselor 3, Department of Student Services Meeting, January 10, 2011). “We let students know that it is key to their success to remain in the academic classes” (Teacher 2, AP Teacher Meeting, October 26, 2010).

The staff also emphasized that teachers and students should hold conferences if students need assistance or want to drop a class. “I always encourage students to meet with the teacher so that they can hear the student’s concerns and then address the issues” (Director of Student Services, Interview, June 10, 2010). “We encourage conferences with students, teachers, and parents so that we can all discuss and address issues. It is important for our students to self-advocate and to resolve problems” (Counselor 5, Department of Student Services Meeting, January 11, 2011). “There is an understanding that students need to work with teachers to answer questions and resolve conflicts” (Teacher 5, AP Teacher Meeting, October 26, 2010).

This school has also instituted a Schedule Change Committee. This committee was created to review and make decisions regarding schedule change requests from students. The committee members include the Director of Student Services and the Assistant Principals. They meet weekly and review the specific requests for schedule changes. Students are required to complete a class change form and list the reason why they are requesting to drop the AP course. They must sign the form and also obtain their parents signature. In addition, they must submit documentation from their AP teacher that they have seen the teacher for additional help and assistance. “The purpose for all of the procedures related to the Schedule Change Committee is to make sure that the students have given the AP class a fair chance and have taken advantage of the resources and support offered to them” (Director of Student Services, Interview, June 10, 2010). “The reason we have this committee is to be sure that we have reviewed and discussed concerns. This process helps the student and teacher to reflect on the situation and to determine next steps or coursed of action” (Teacher 6, AP Teacher Meeting, October 26, 2010). “The committee helps students and parents to communicate about the class and then to work with school staff to seek support and work through the situation” (Counselor 3, Department of Student Services Meeting, January 10, 2011). The school staff has noted that they have fewer students dropping courses and they have been able to maintain consistency across administrative decisions since instituting this committee three years ago.

The staff also emphasized their efforts to really work with students to support them and to keep them in these academic courses. “We discourage them from dropping classes unless somebody has an extremely valid reason. Some of our minority students have to work to support their families so I gladly rearranged some activities and some things and allow more time for them to complete their work” (Teacher 3, AP Teacher Meeting, October 26, 2010). “I think we

adjust and revise our policies and procedures in class to meet their needs. I think there is a lot of work going on in that area” (Teacher 2, AP Teacher Meeting, October 26, 2010). “We remind students that they can earn college credit in these classes and this saves them money. I think one of the most important things to do is make them see the big picture about why it is important to commit and not to drop the class” (Teacher 5, AP Teacher Meeting, October 26, 2010).

The policies and procedures that have been initiated and implemented in this school reinforce the message that students must honor their commitment to the AP Program and work to resolve any concerns or issues so they can be successful in the academic courses.

School Programs, Initiatives, and Strategies to Increase Minority Student Enrollment and Participation in the Advanced Placement Program

Minority Outreach Programs

The Principal at Farrier High School emphasized that there is no one right answer or method to address the topic of under-enrollment in AP classes. “There is no one way to address the minority achievement issue or under-enrollment in AP classes. There is no one program. There is a variety of different ways of addressing this issue” (Principal, Interview, June 4, 2010). One program created to address minority achievement and student enrollment in rigorous classes is the College Partnership Program (CPP). This program offers services and support to students who are the first generation in their family to plan to attend college. It has one teacher and one counselor who serve as advisors and meet with students once a month. The program activities have included: working with students on further developing their learning strategies and study skills, academic advisement, accessing study resources and support, completing college applications and scholarship forms, visiting various college campuses, and speaking with admissions staffs. “These individuals need encouragement and support as they work through the

academic advisement process” (Counselor 4, Department of Student Services Meeting, January 10, 2011). “This program allows minority students exposure to the steps and procedures involved in selecting and applying to colleges. It also offers students direct support in completing requirements for college admissions” (Counselor 5, Department of Student Services Meeting, January 10, 2011). “The CPP helps minority students to have access to support and resources as they work through the lengthy college selection and application procedures” (Director of Student Services, Interview, June 10, 2010).

In an effort to further reach under-represented populations at Farrier High School, the Student Services Department initiated two parent programs last year that include the Korean and Hispanic Parent Support Groups. A guidance counselor and the parent liaison serve as school staff representatives for these groups. These support groups have sponsored two evening programs each year for their families. They also meet once a month with students during after-school sessions. Topics that have been covered in these meetings include academic planning, the college choice and selection process, and increasing parent involvement in the educational process. “It is good to have a chance to meet and work with these families. We have tried to make school an inviting and informative place. We want to be seen as a resource for our families” (Counselor 1, Department of Student Services Meeting, January 10, 2011). “I am speaking to the Hispanic Parent Support Group next week and sharing strategies they can use with their students to encourage and support them in their academic classes” (Teacher 1, AP Teacher Meeting, October 24, 2010).

The staff continues in their quest to provide outreach to minority families and to secure their partnership in working with students and encouraging their participation in advanced academic programs.

Strengthening Vertical Articulation Efforts

The staff highlighted their work to further develop the AP Program by strengthening their vertical articulation efforts. Various AP teachers discussed their in-depth planning activities with the Honors teachers. These individuals discussed the importance of developing expectations, making connections, and refining the scope and sequence of the Honors and AP curriculum. “There is careful alignment of the Grades 9-12 curriculum” (Teacher 4, AP Teacher Meeting, October 26, 2010). “We have worked hard to have a definite sequence and smooth transition for students taking Honors and then AP courses (Teacher 2, AP Teacher Meeting, October 26, 2010).

The AP Program staff emphasized the importance of utilizing the Honors courses to create the students’ academic foundation so they will be successful when they participate in the AP courses. Teachers noted that in Honors classes, the teachers work directly with students to help them develop their time management, listening, note taking, and test taking skills. The students in turn utilize these developed skills to perform in their AP classes. “The Honors courses provide the foundation for the AP courses. They coordinate nicely but also they build on each other” (Teacher 3, AP Teacher Meeting, October 26, 2010). “This is a well-coordinated and sequenced program. Students receive a strong foundation in the Honors courses and the curriculum is expanded and is in-depth in the AP courses” (Teacher 2, Curriculum/AP Information Night, January 24, 2010).

The administrators and AP teachers noted the importance of their work with Honors teachers to identify students with advanced placement potential. “We must continue to open up doors for our students. We encourage our Honors teachers to work with us to invite students into our AP courses” (Teacher 4, AP Teacher Meeting, October 26, 2010). “We also really work with

our Honors teachers and try to get them to communicate that these Honors courses are also open enrollment and we need to encourage minority students to take these courses” (Director of Student Services, Interview, June 10, 2010). “Through their work with the students, the Honors teachers help us to capture and develop areas of curiosity and interest that will lead to students enrolling in AP courses” (Teacher 5, AP Teacher Meeting, October 26, 2010). “The Honors teachers work with us to increase student awareness and understanding of the expectations and requirements of various courses” (Teacher 4, Curriculum/AP Program Information Night, January 24, 2011).

The administrators and staff also discussed the importance of the Honors teachers developing and sustaining relationships with students. “The teachers of Honors classes in this building still reach out and monitor the progress and achievement of their students who are in AP courses” (Teacher2, Curriculum/AP Program Information Night, January 24, 2011). “The Honors teachers develop strong relationships with their students and encourage them to take the AP courses. They continue to meet with students and offer their support to them when they are in the AP courses” (Director of Student Services, Interview, June 10, 2010). “I am impressed with the long-term relationships that our teachers have with these students enrolled in AP classes. It is important for teachers to continue to encourage and support students long after they have left their classrooms” (Principal, Interview, June 4, 2010).

Instructional Strategies

The AP teachers emphasized their use of multiple methods in delivering instruction to a diverse group of students. As one teacher noted, years ago lecturing was the main form of conveying information to students. Teachers lectured in class and students recorded notes. The AP teachers explained that in recent years they have utilized more modalities and “hands on”

types of activities for students. “We use more manipulatives during class activities and these facilitate student engagement and involvement” (Teacher 3, AP Teacher Meeting, October 26, 2010). “I always give my students academic vocabulary cards to use with each other in class” (Teacher 1, AP Teacher Meeting, October 26, 2010). “We use discussion charts to record and review key concepts and ideas. Students record the information and lead the discussions for the group” (Teacher 3, Curriculum/AP Program Information Night, January 24, 2011).

I like more interactive activities where students are actively participating in the lessons. For example, I now have students do more presentations for the class and have them share their notes as good models for others. I also have students lead the group in discussions about the reading and writing assignments. The use of varied modalities has made the lessons more interesting and the students are more involved in their learning.

(Advanced Placement Coordinator, Interview, June 3, 2010)

The teachers noted that their use of technology also promotes the students’ active participation in class. “We use the SMART Board to provide visual references to students, as well as to model or demonstrate good note-taking skills” (Teacher 2, AP Teacher Meeting, October 26, 2010).

We use Senteos or technology response units to assess student learning on major concepts and points covered in the AP courses. It is important to frequently assess where students are as there is so much material covered in class during each session. (Teacher 4, Curriculum/AP Program Information Night, January 24, 2011)

The teachers described their efforts to further develop student active participation in the classes through the use of discussion partners and cooperative learning groups. “We pair students to work together and to promote discussion and the sharing of ideas” (Teacher 3, AP Teacher

Meeting, October 26, 2010). “The paired-share student dynamic works very well with these students” (Teacher 5, AP Teacher Meeting, October 26, 2010). “We use cooperative learning groups to discuss key information and to record important notes” (Teacher 4, Curriculum/AP Program Information Night, January 24, 2010). “The cooperative learning groups allow students to engage in conversation with each other and to exchange and evaluate information, as well as to discuss and debate major concepts and ideas” (Teacher 6, AP Teacher Meeting, October 26, 2010).

Extended Learning Opportunities

The AP Summer Program. This program was created seven years ago by the Farrier High School staff and was implemented for the purpose of increasing minority student enrollment in AP courses. The Director of Student Services, the AP Coordinator, and several AP teachers came together to write a grant to secure funding for a summer program for teachers to work with students who were enrolling in AP courses. The grant was submitted to and approved by the CCPS Advanced Academic Program Office. The grant funding provided teachers with compensation to work with the students during one designated week in the summer that included four evening sessions. The purpose of holding the evening sessions was to enhance student awareness and help them gain better understanding of the importance and merit of the AP Program, as well as the expectations and requirements for these rigorous academic courses. These sessions also provided time for teachers to work with students on expanding and further developing skills required for success in these classes. Specific skills covered during these sessions included: textbook usage, listening, note-taking, and testing taking strategies.

We wrote a grant and utilized the funds to encourage minority achievement. We sent a letter to encourage students to enroll. Then we held study skill sessions during the

summer where they would take the skill development classes for the courses they had signed up for. (Advanced Placement Coordinator, Interview, June 3, 2010)

“AP teachers work with students on developing their study skills and on completing content lessons so as to familiarize students with course expectations and requirements” (AP Frequently Asked Questions, Document, October 26, 2010, p. 2). The AP teachers take turns offering a lesson that would be in AP mode. During this time, you further develop time management, in-depth reading, note taking, test taking and critical thinking skills”(Teacher 2, AP Teacher Meeting, October 26, 2010).

The summer program was deemed successful in that it had 100, 121, 140, and 152 participants respectively for each of the last four summers. (AP Grant Evaluations, 2006-2010). The student surveys noted benefit from the sessions in that individual participants believed that they had developed skills required for the AP courses and familiarized themselves with course requirements and instructors. “The summer session helped me develop my note-taking skills.” “I learned more about the requirements for AP US History.” “I liked getting to know the AP Calculus teacher so I knew what to expect in class” (Student Survey Comments, AP Grant Evaluations, August, 2006).

The staff believed that one of the drawbacks of this program was that while there was excellent white student participation in the program, there was not the minority student participation that they had wanted or sought. “I sent out 82 letters to minority families and I only got eight replies back. We were not reaching all of the students” (Advanced Placement Coordinator, Interview, June 3, 2010). There was also a concern that the summer program only lasted for one week. “You’ve only got one week to learn the material and to get it” (Principal, Interview, June 4, 2010).

These concerns led the staff to further refine their annual grant proposal. They determined that while they wanted to continue to offer the AP Summer Program, they would develop and add a year-long mentoring program to their grant initiative.

The Learning Seminar. Another resource offered to Farrier High School students is the Learning Seminar course. This is an elective class that is open to individuals enrolling in two or more AP courses who desire additional time to complete their AP course requirements. This class provides extended learning opportunities for students. Designated teachers and resource staff supervise these classes and they collaborate with AP teachers to determine course requirements and then provide help and support to students in completing their assignments. “We offer the Learning Seminar to students who need additional time to get their AP requirements done. This class helps student complete their AP assignments” (Teacher 3, AP Teacher Meeting, October 26, 2010). “The Learning Seminar provides students the opportunity to have extra time and to get help and support in completing assignments” (Teacher 1, AP Teacher Meeting, October 26, 2010).

Staff members report that the Learning Seminar has been helpful to many students that have utilized the additional time to complete their work and to successfully meet course requirements. “Many of my students have utilized this class as a resource and have then been successful in their AP courses” (Teacher 3, Curriculum/AP Program Information Night, January 24, 2011). “Students have benefitted from taking this class and having the extra time to complete the many requirements of the AP courses” (Teacher 2, AP Teacher Meeting, October 26, 2010). “We each have several students who have benefitted from having Learning Seminar. It is such a support as students have more time to complete the extensive requirements of AP courses” (Counselor 3, Department of Student Services Meeting, January 10, 2011).

Individual Support

Learning strategies. The AP teachers highlighted the importance of providing their students with direct instruction in the area of learning strategies. They noted that they help students with the large volume of material covered in the AP courses by working on task analyses, prioritizing assignments, and addressing key course requirements. “We survey chapters and increase the use of skimming and scanning for key points. We break down large reading assignments into manageable sections of reading material” (Teacher 2, AP Teacher Meeting, October 26, 2010). “We work to develop frameworks to complete the critical reading and thinking exercises” (Teacher 4, AP Teacher Meeting, October 26, 2010). “We also provide individual writing assistance by sitting with students and working on writing mechanics and written expression” (Teacher 1, AP Teacher Meeting, October 26, 2010).

The teachers discussed the use of visual and graphic organizers during lectures and discussions as a way to help students further develop their organizational skills and to manage the large amount of material. “We promote the students’ use of graphic organizers for recording and discussing pertinent points and information. These also help students review and study for tests” (Teacher 4, Curriculum/AP Program Information Night, January 24, 2011).

Working with students on organizing the large volume of information covered in class and the readings, is key to their success in the course. We use graphic organizers for each chapter we cover in class and students tell us that these are helpful to their learning. (Teacher 5, AP Teacher Meeting, October 26, 2010)

AP teachers also emphasized the use of practice AP exams and timed writing exercises to assist students in further developing their assessment and writing skills. They noted that the use of simulated assessments facilitates learning and better test performance among their students.

“We use the previous years’ published AP Exams to provide our students with practice in taking the AP Exams. This allows students exposure to the format and types of questions on these lengthy exams” (Teacher 5, Curriculum/AP Program Information Night, January 24, 2011). “We use timed writing assignments in class as a way for students to practice their writing skills within a designated period of time. These practice exercises help the students prepare for their writing during the AP Exams” (Teacher 2, AP Teacher Meeting, October 26, 2010). “The practice assessments are key for the students to further develop their writing and test-taking skills” (Teacher 4, AP Teacher Meeting, October 26, 2010).

The AP teachers continue to develop and implement strategies to meet the needs of a more diverse population. These efforts are facilitating student performance and achievement in AP courses.

The Writing Conference Lab. Two years ago, the English department, in conjunction with a neighboring university, created and now maintains a writing center in the school for students to access and seek help to support their writing skills. Retired and current teachers with strengths in teaching and evaluating writing skills work with students in the center before and after school, as well as on some Saturdays. Staff frequently encourages students to utilize this resource to further develop their advanced academic skills. Advanced Placement teachers report that this has been an effective service for their students. “I have referred many students to the lab and this has provided them with extra time and support in developing their writing” (Teacher 2, AP Teacher Meeting, October 26, 2010). “We hold these writing sessions where students bring samples of their work and they get feedback and ways to improve it” (Teacher 5, AP Teacher Meeting, October 26, 2010). “I have many students who use this service to strengthen

their writing skills and to complete their writing assignments” (Teacher 3, Curriculum/AP Program Information Night, January 24, 2010).

Relationships

Personal staff invitations. The Farrier High School staff emphasized the importance of offering personal invitations to students to encourage them to enroll in AP courses. “I spend a lot of time talking with my students and having personal conversations with them about taking AP classes” (Teacher 1, AP Teacher Meeting, October 26, 2010). “I have many personal conversations and encourage various students to take these academic classes. The personal touch is so important” (Director of Student Services, Interview, June 10, 2010). “I need to spend time having one-on-one discussions with students about enrolling in these courses. They need to be invited to the dance” (Teacher 5, AP Teacher Meeting, October 26, 2010).

We speak with students, encourage and invite them to participate. They need to be assured that they can stretch themselves and they can do this. Spending time with students and inviting them to participate is key in increasing enrollment in these courses. (Counselor 3, Department of Student Services Meeting, January, 2011)

We also use personal invitations and I’m always very happy to hear that in different departments, for example the English department, they personally invite students that indicate potential to do well in AP English. They call them. They visit with them. They speak to them personally one-to-one. (Teacher 2, AP Teacher Meeting, October 26, 2010)

The staff also highlighted their efforts to have current AP students visit Honors classes and encourage peers to enroll in AP courses. The Director of Student Services and AP teachers collaborate and set up specific class visits where the AP students share their learning experiences and information about course expectations and requirements. They also answer questions and

elaborated on specific areas of interest for the groups. “It is very powerful to watch AP students explaining to their younger peers why it is important to take these academic courses” (Teacher 2, AP Teacher Meeting, October 26, 2010). “It is meaningful for students to hear from their fellow students about what they need to do to be successful in these classes” (Director of Student Services, Interview, June 10, 2010). “Students love to hear from other students. You can hear a pin drop in the room when AP students talk to our classes. Students want to hear from other students about the AP classes and what they have to do in the classes. They want to know why it is important to take these classes and they want to be reassured by the AP students that they can be successful” (Teacher 4, Curriculum/AP Program Information Night, January 24, 2011).

The AP teachers also shared that a recent initiative was to invite their marketing students to work with them to further develop and strengthen their focus and message of the importance of AP courses and how they can increase their efforts in recruiting and inviting students to take classes these academic classes. “Marketing students know how to showcase programs and make them appealing and noticed by students” (Teacher 6, AP Teacher Meeting, October 26, 2010). “The students will help us highlight the program and attract students to these AP courses. They know how to create eye-catching brochures and come up with slogans that will spark student interest” (Teacher 4, AP Teacher Meeting, October 26, 2010).

Peer invitations. The staff also discussed their efforts to have individual students talk to other students about enrolling and participating in AP courses.

They talk to the students who have never taken AP classes and they explain to them what they have to do. They let them know that they should not be intimidated by or afraid to do it. They tell them to challenge themselves. (Teacher 2, AP Teacher Meeting, October 26, 2010)

“I have my current AP students speak to other students about what it takes to be successful in AP courses. Students always like to hear from their peers. They trust and listen to their accounts of what AP is really like” (Teacher 6, AP Teacher Meeting, October 26, 2010).

The Alumni panel. This initiative involves the Director of Student Services collaborating with the counselors to identify graduates from the previous year and inviting them to attend a panel session that is held in December. Current high school students meet with these graduates and hear their stories about academic success and what they believe are the reasons for their achievement. The students learn about the graduates’ perspective regarding what programs and services they believe are useful and the students should access to be successful. “We invite former students to come and speak with our students about enrolling in AP courses. They speak to students about taking advantage of resources and opportunities here at our school” (Director of Student Services, Interview, June 10, 2010). “With college students returning home, they are eager to come to school and share their success stories” (AP Coordinator, Interview, June 3, 2010). “We love hearing the graduates talk about how to be successful. The students will listen to the older students” (Teacher 4, AP Teacher Meeting, October 26, 2010). The staff believes that the graduate panel is an effective tool to use with younger students as the alumni share their personal experiences, communicate expectations, and highlight pertinent information about the AP Program. The panel members explain how to access support and utilize resources that facilitate success in these academic classes.

The AP Mentor Program. To initiate the AP Mentor Program in 2008, the Principal, Director of Student Services, and the Advanced Placement Coordinator, identified several staff members to serve as mentors to students enrolled in AP courses. The mentors met with students

in September and then worked with and provided support to students throughout the academic school year.

Two years ago we switched and we had the core teachers give us the names of the students that they thought could benefit from a mentor program over the course of the year. So we ended up with the needier kids or the kids who really needed the help.

(Advanced Placement Coordinator, Interview, June 3, 2010)

“I pair students with mentors and I have some experienced ones, especially minority mentors, who have been very effective in working with and helping our students to be successful in these classes”(Advanced Placement Coordinator, Interview, June 3, 2010).

The mentors working with our students on a one-to-one basis, has been very successful.

This is because they tailor the skill development for that particular student. They also work with the teachers to learn more about the situations and provide the students with strategies to communicate and be successful in their classes. (Teacher 2, AP Teacher Meeting, October 26, 2010)

The mentors also get a copy of the first quarter interim and first quarter grades so that they can meet with the students and go over their performance and achievement. The mentors work with students to identify strategies and to help complete any outstanding assignments so the students can improve any poor grades. (Advanced Placement Coordinator, Interview, June 3, 2010)

We ask core teachers to refer anyone who has a “C” or below so we’re not working just with D’s and F’s. We’re trying to get kids up to the B’s and A’s. It’s another safety net.

This year we had no drops for minority students at all. (Advanced Placement Coordinator, Interview, June 3, 2010)

“Our AP Coordinator set up this great mentorship program for kids taking an AP course for the first time and I think that helped tremendously” (Teacher 4, AP Teacher Meeting, October 26, 2010).

This program is also featured and evaluated in the School Improvement Plan. Staff reports that this is a successful program for many of the students. Two years ago there were 74 students enrolled in the program and last year there were 126 who were working with mentors (School Improvement Plan, 2010, p. 30). “We want to continue to offer this program as we believe that it helps the students. We had very few students who dropped their AP courses last year and many shared that it was the mentoring that kept them in the program” (Teacher 6, AP Teacher Meeting, October 26, 2010). “Several of my students let me know that the mentoring program was the best thing that happened to them last year” (Teacher 3, AP Teacher Meeting, October 26, 2010). While the staff is continuing to collect data and examine the effectiveness of this program, they believe that it is a successful initiative and support for students in their school. (October 26, 2010).

Final Comments

Throughout the interviews and discussions related to school programs and strategies that were created and implemented, staff members frequently expressed their beliefs and opinions that these initiatives were successful in increasing minority student enrollment in AP courses. “Overall, we have instituted various successful programs to increase minority student enrollment. These include the AP Summer Program and the AP Mentor Program” (Counselor 6, Department of Student Services Meeting, January 10, 2011). “Using varied instructional strategies and providing the Learning Seminar for students have been key for us having a larger and more diverse population of students in the AP classes”(Counselor 1, Department of Student

Services Meeting, January 10, 2011). “Our recruitment of current AP students to speak with younger students and our staff’s combined efforts to coordinate the Honors and AP courses have been the main contributors to our success” (Teacher 4, AP Teacher Meeting, October 26, 2010).

Providing individual support to students through the use of the Writing Lab and extending personalized invitations to students to encourage them to take AP classes have been the two most effective strategies to increase minority student enrollment. It is all about the relationships with and support of these students. (Teacher 6, AP Teacher Meeting, October 26, 2010)

While the staff has identified these successful initiatives and has attempted to evaluate them through the use of participation data, grades, focused student conversations, and some surveys, they were also quick to share that they needed to further develop tools and techniques to thoroughly evaluate their programs and services. “We are a work in progress and need to develop more in-depth student and teacher surveys to examine why programs are successful and for which particular students” (Teacher 3, AP Teacher Meeting, October 26, 2010). “We are continuing to analyze our data and to evaluate AP classes and services” (Teacher 6, AP Teacher Meeting, October 26, 2010).

Our administrative and instructional teams are collaborating to identify how to further measure and evaluate the effectiveness of our programs. We have successful programs for students but we continue to analyze why they are successful and how we can further promote the successful elements of the services. (Principal, Interview, June 4, 2010)

The staff expressed their desire to continue to improve their craft and skills in accessing and analyzing various types of student and program data. They know that they must carefully examine and evaluate school initiatives and services as they relate to specific student

participation and achievement, as well as to program effectiveness. The staff believes that with this evaluation focus, they can better plan for and serve their students and programs.

Professional Development and Training Opportunities

District Initiatives

The AP Summer Institute. The Cooper County Public School district offers an annual AP Summer Institute Program for all AP teachers in the region. For this week-long training, teachers are provided with an overview of the curriculum, and the structure and content of each specific AP course. There is also focus on teaching strategies and the relationship of the course to the AP Exam. Teachers can also choose from a variety of other professional development training sessions that relate to developing more in-depth content knowledge, diversifying instruction, and expanding assessment opportunities and techniques. “Our teachers attend the training and then bring information and materials back to present to all AP teachers in the fall. The teachers always look forward to these sessions and to hearing and learning from their colleagues” (Advanced Placement Coordinator, Interview, June 3, 2010). “The AP teachers are able to further develop their skills and then return with information to share with colleagues” (Principal, Interview, June 4, 2010). “I have learned so much from the Institute. These sessions allow me to expand my knowledge base and extend my repertoire of skills and strategies. The training is well-worth the time investment” (Teacher 4, AP Teacher Meeting, October 26, 2010). This Institute offers new and experienced AP teachers varied and rich professional development opportunities during the summer sessions.

The AP Lead Cohort Program. Another important initiative that was developed by the District was the AP Lead Cohort Program. Teachers from across the region were recruited to explore and address various issues affecting AP teachers. These educators in-turn shared their

insights and information via presentations to AP teachers and the AP Discussion Group website. Some of the issues that have been discussed this past year include differentiation in instruction and the twice-exceptional child in an AP class. “This venue allows us to further develop our skills and we are better teachers for it. We also model being continuous learners for our students” (Teacher 2, AP Teacher Meeting, October 26, 2010).

There was a workshop called “Diamonds in the Rough” that dealt with the twice exceptional student. One of our teachers attended the session and came back with many new materials that she shared with our group. The materials related to individualizing instruction and meeting the needs of varied learners. I appreciate that we share with each other. (Teacher 2, AP Teacher Meeting, October 26, 2010)

School Initiatives

Extensive training sessions. The staff at Farrier High School believes that it is essential to provide professional development training for teachers, counselors, and administrators to enhance student performance and achievement in accelerated learning opportunities. The Principal emphasized the importance of exposing his entire staff to training in the areas of observation, data analysis, and developing and sustaining relationships with students. He highlighted the school’s initiative to promote the use of learning walks or instructional walkthroughs by colleagues. He noted the value of observing colleagues in their classrooms and identifying effective instructional and management strategies that can be used by all staff.

This year every teacher in the building had to observe another teacher as part of their evaluation. It is a different method of exchanging ideas. We had AP teachers observe other AP teachers. They learned a lot from each other. (Principal, Interview, June 4, 2010)

He also noted that he supported efforts in having his AP teachers observe AP teachers in other schools. “You get your best ideas from observing other people and getting out of the building to see new things. I’d loved to be able to open it up to everyone” (Principal, Interview, June 4, 2010).

The Principal went on to discuss the importance of reviewing and analyzing data. He emphasized his efforts to bring Dan Mulligan, an educational consultant, to the building in 2007 and 2009 for several professional development presentations. “Dan helped the teachers, especially the AP teachers, analyze their data and determine how they could improve their delivery of instruction” (Interview, Principal, June 4, 2010.) “We have spent a lot of time working with the AP teachers to review their data and to determine how we can improve our instruction for students” (Director of Student Services, Interview, June 10, 2010).

The administrative team highlighted the importance of working with staff on their concentrated efforts to further develop relationships with students.

Ron Ferguson of Harvard University has shared strategies and ideas of how to develop strong relationships with our minority students. He emphasizes daily contact, greeting students at the door, and frequently initiating conversations related to areas of interest.

All of our teachers benefitted from hearing these messages. (Principal, Interview, June 4, 2010)

The staff promotes and encourages teachers to take additional education courses in their field of study. “We are stressing that each teacher needs to have their advanced academic endorsement. This helps teachers understand the qualities and needs of advanced learners”

(Advanced Placement Coordinator, Interview, June 3, 2010). “We are also advertising and promoting training sessions for our AP teachers so they stay current in the field” (Director of Student Services, Interview, June 10, 2010).

One of the classes that is really a good course and I encourage all teachers to take is the county’s course on differentiating instruction. This class helps teachers meet the needs of a diverse student population and shows how to provide support to different learners.

(Advanced Placement Coordinator, Interview, June 3, 2010)

The administrative team continues to encourage teachers to learn from each other, both in school and across the district. “We also had a group of identified teachers come and meet with the AP teachers and share ideas about how to differentiate across all of the classes” (Principal, Interview, June 4, 2010). “We are always encouraging the AP teachers to talk with other AP teachers and to learn more about the instructional practices and varied strategies they use to meet the needs of their students” (Director of Student Services, Interview, June 10, 2010).

Professional reading. The administrators also highlighted the importance of staff engaging in professional reading and then holding reading clubs or personal discussions about the material.

We have bought several books for staff members and then asked them to read and discuss the relevant topics. These books include *All Systems Go* by Michael Fullan [2010]; *The Global Achievement Gap* by Tony Wagner [2008]; and *Revisiting Professional Learning Communities* by DuFour, DuFour, and Eaker [2008]. (Principal, Interview, June 4, 2010 and FHS School Improvement Plan Document, 2010)

“The book I most enjoyed reading and discussing was *Transforming Schools: Creating a Culture of Continuous Improvement* by Zmuda, Kuklis, and Kline [2004]” (Director of Student

Services, Interview, June 10, 2010). “Encouraging each other to read and discuss education materials has helped us grow individually and as a group” (Teacher 5, AP Teacher Meeting, October 26, 2010).

With the in-depth and varied professional development training offered at Farrier High School, it is obvious that the administrative and instructional teams value and embrace learning opportunities for the faculty. Their attention to and support of these experiences demonstrates their commitment to staffs’ individual and professional growth. As a staff, all agreed that educational training was a key to the continued success of their school, students and the AP Program.

College Board Resources

AP Central. The College Board offers various information and resources for staff that they can access via their website. This AP Central website features specific information about the AP courses, AP Exams, AP Institutes and Workshops, and AP Discussion Groups. It also includes research and articles on various curriculum, instructional and research topics (<http://apcentral.collegeboard.com/apc/Controller.jspf>, January 31, 2011). The school staff emphasized that they all had access to AP Central.

AP Central on the College Board website is a research resource for educators. There are featured articles and essays on topics that include student learning, educational reform, updated information on AP courses and exams and featured institutes and workshops.

(Teacher 4, AP Teacher Meeting, October 26, 2010)

“There’s a lot of research that’s posted about academic achievement in all the different subjects on this website” (Teacher 3, AP Teacher Meeting, October 26, 2010). The site offers a menu of multi-year institutes and face-to-face workshops with online support for teachers and counselors.

“Some of us on the counseling staff have done the AP Program that AP offers and we do “web-on-air” training sessions. We take advantage of the minority achievement seminars that are offered” (Counselor 3, Student Services Meeting, January 24, 2011). “We can go online and hold discussion group with other AP teachers. It is a great way to discuss a pertinent topic and to discover resources” (Teacher 2, AP Teacher Meeting, October 26, 2010).

The Principal and the Director of Student Services also discussed the importance of talking with colleagues in other schools in the District that offer the AP Program.

Meeting with other Principals who have AP Programs in their buildings, allows me to share ideas with them. It is helpful to exchange information about programs and procedures so that we can learn better ways to do or implement things. (Principal, Interview, June 4, 2010)

“I have the opportunity to meet monthly with the other Directors of Student Services and to share information and ideas with them. The mentoring program came out of an idea exchange with another Director” (Director of Student Services, Interview, June 10, 2010).

The Principal also stressed that despite difficult budgets, administrators need to access funding to support teachers in attending professional development training. He noted that it was essential for teachers to return from training and to present the specific topics and information to the faculty and lead the group in the related discussions.

The AP teachers presented information to our faculty about differentiating instruction and how to provide enrichment activities to all students. The staff appreciated the chance to observe their colleagues in action and to consider and evaluate the material presented. They enjoyed being active participants in the sessions. (Principal, Interview, June 4, 2010)

“Our Principal makes it known that it is important to bring back information and resources from the conferences we attend and then do presentations for our faculty. He stresses that we learn from each other” (Teacher 2, AP Teacher Meeting, October 26, 2010).

AP readers. Each year the College Board invites AP teachers to serve as readers and to grade the AP Exams of students from across the country. This opportunity allows AP teachers the experience of reviewing the main components of the exams and the evaluation procedures used for determining scores. It also provides insight into AP course expectations and focus points of the curriculum and instructional program.

We send our teachers to be AP readers. The College Board provides opportunities for teachers to read and evaluate student essays and this helps our teachers determine what they need to do to work with students so that they will be successful on the AP Exams. (Director of Student Services, Interview, June 10, 2010)

“I have served as a reader and it was a great opportunity to learn about what types of questions are asked and how the exams are graded. It helped me to be able to return to school and explain to the next class what they had to do to be successful on the AP Exams” (Teacher 3, AP Teacher Meeting, October 26, 2010).

Conclusion

As outlined in the beginning of Chapter 4, the purpose of this study was to examine how Farrier High School was successful in increasing the minority student enrollment in Advanced Placement Program courses. The research questions related to examining school policies and procedures for student enrollment in these courses; identifying specific interventions and strategies utilized and implemented to increase minority student enrollment; and determining who the key individuals were and how they influenced the positive enrollment changes.

There were various key factors that contributed to Farrier High School's success in increasing AP Program student enrollment. The first factor highlighted was distributive leadership that was demonstrated by the administrators, counselors, and teachers. This talented and skilled group of committed school administrators and instructional staff viewed leadership as their responsibility and demonstrated their leadership by working together to increase enrollment in these academic courses. There was an open enrollment policy of recruiting and attracting minority students to these classes. The staff believed in high expectations and that students benefited from their participation in the rigorous and relevant AP Program and related courses. This school staff focused on strong communication among all constituents. They implemented extensive academic advisement procedures to provide students and families in-depth program information. These educators also created specific policies and procedures to promote enrollment and support the retention of students in the courses. Another area of focus related to the various programs and interventions that were created and implemented to increase student enrollment in the AP classes. The staff strengthened the scope and sequence of the academic curriculum. There was great emphasis placed on using innovative and varied instructional strategies in the classroom to meet the needs of the diverse population. There were efforts to provide extended learning opportunities and individualized support to students. These educators also emphasized establishing and sustaining relationships with individual students and their colleagues. A final factor involved the administrative and instructional teams' efforts to offer extensive professional development training to the faculty. These teams believed that through specific training, staff members would improve their professional skills and that would benefit the AP Program and students.

Over time, Farrier High School has demonstrated positive changes in the AP Program. There is not a single factor or person who is responsible for this success. Rather, it is a combination of dedicated school leaders with a common vision, working in a positive and engaging culture, and their implementation of focused programs and interventions that are responsible for increasing minority student enrollment in the AP Program and related courses. Hopefully educators, students, and families can utilize, apply, and benefit from the information, insight, and discoveries gathered here.

Chapter 5

Discussion

Overview

The purpose of this study was to identify and examine the interventions and strategies utilized and implemented by a high school that has been successful in recruiting and enrolling minority students in Advanced Placement (AP) Program courses. The design for this case study was based on reviews of the literature and research studies related to student participation in AP courses.

Chapter 5 is divided into the following sections:

- Discussion of findings
- Implications
- Recommendations for future research
- Conclusions

How Has Farrier High School Increased Minority Student Enrollment in the AP Program?

The findings from this case study of Farrier High School reveal that there is not a single factor or person who is responsible for the school's success of increasing minority student enrollment in the AP Program. Rather, it is a combination of multiple factors that are responsible for this achievement. The main success factors are organized under one major domain of distributive leadership and these five related sub-domains: (a) collaborative vision and mission; (b) rationale for the AP program; (c) aspects of the AP program; (d) school programs, initiatives, and strategies to increase student enrollment; and (e) providing professional development training opportunities for the faculty. These domains and corresponding success

factors are very similar and related to the themes in the literature review and related research studies on increasing student enrollment in AP courses.

Distributive Leadership

The distributive leadership of school administrators, counselors, and teacher leaders was an important factor in the successful AP Program at Farrier High School. This result is consistent with previous research (e.g., Hallinger & Heck, 1996; Leithwood et al., 2004; Waters, Marzano, & McNulty, 2004). These researchers all highlighted the importance of leadership in schools and its positive influence on student achievement and performance.

The Principal at Farrier High School views his role as that of a facilitator and remains focused on providing direction and support to his administrative and instructional teams. He has worked with his administrative staff to hire strong and talented teachers, including AP teachers. The administrators are tireless in their efforts to access and provide materials and resources to their staff and students.

The Director of Student Services and the counselors are committed to providing strong and effective academic advisement and service programs to their students. They collaborate with administrative and instructional colleagues to analyze student and program data, make instructional decisions and determine program direction. They are committed to the academic achievement and performance of all of their students.

The AP Coordinator is a key consultant to AP teachers and students. She works hard to collaborate with colleagues on instructional and assessment practices and to access resources and services for staff and students. The AP teachers are knowledgeable and passionate about their subject matter. They are teacher leaders committed to taking the initiative and having a vested

interest in working with their students and providing frequent encouragement and support to them.

The school's leadership created a culture in which there is an emphasis on the importance of developing and sustaining relationships with students and families, as well as with each other. These educators have passion for all of their students and they demonstrate daily their care for, interest in, and understanding of these individuals. The Farrier High School faculty makes great efforts to connect with students and to get to know them personally. They are consistent in their efforts to reach out, work with, and support their diverse student population.

One of the striking features of the leadership demonstrated at Farrier High School is that it is shared or distributive leadership. Elmore (2000) established the foundation for shared leadership among all school constituents. Spillane et al. (2001) reinforced that distributive leadership expands the expertise and responsibilities across various staff members, and thus strengthens the school initiatives. The research of Ovando and Alford (1997) and the Education Trust (2005) highlighted the importance of shared leadership and its positive influence on student enrollment in AP courses.

Farrier High School distributes the responsibilities for the AP Program across many staff members. These educators are unified in their commitment to promote and support the AP Program. They share a mutual respect and are able to contribute their various areas of strength and expertise in addressing and achieving the goal of increasing student enrollments in AP courses. The Principal, Director of Student Services, Counselors, AP Coordinator, and AP teachers all collaborate and work together to embrace and support their vision and mission, establish policies and procedures, and implement specified initiatives for increasing minority student enrollment in AP courses. They believe it is their duty to offer and implement an

exceptional curriculum. They feel a responsibility to identify students with potential and to invite and encourage them to participate in the AP courses. They are determined to offer relevant and meaningful daily instruction to their students. This is demonstrated through their efforts to provide varied instruction to their students. This group is also committed to encouraging and supporting students who are enrolling in these courses. The staff demonstrates their responsibility to keeping students in these classes by providing extended learning time and extensive individualized support and assistance to them to help ensure success.

While many factors contributed to this success, it is leadership that was the true catalyst for influencing all of the related areas. The school leaders' commitment to the students and AP Program and their focused daily actions positively influenced student enrollment in the AP courses. Because of their efforts, there is an established record of documented success in promoting greater minority participation in AP courses. The importance of shared leadership and its positive impact on student participation has been demonstrated at Farrier High School. This case study research emphasized the importance of various school staff members engaging in meaningful work to create and implement programs and strategies that increased student enrollment in rigorous academic courses. The power and influence of distributed leadership across the school was demonstrated here. Through these educators' extensive leadership initiatives and efforts, student participation in AP courses was enhanced and increased.

Collaborative vision and mission. The Cooper County Public Schools and Farrier High School have a shared commitment to advanced academic goals, student achievement and the performance expectations of increasing the number of minority students in the AP Program. The school is also committed to its established open enrollment policy for the AP courses. The importance of educators being unified in setting direction and defining and communicating

school mission is highlighted in the literature and research (Elmore, 2000; Hill, 1998; Leithwood, 2002). In identified schools where there was a clearly defined focus on a common vision and mission, and educators collaborated to make these a reality, student learning and achievement were influenced and enhanced. The emphasis on all students having open access to rigorous academic curriculum and the positive influence it has on student achievement is also well documented in the literature and research (Adelman, 1999, 2006; Cotton, 2003; Haycock et al., 2001; Tafel & Eberhart, 1999).

The educators in the CCPS District and Farrier High School have a clear mission and are dedicated to providing learners with opportunity and access to the AP Program. The staffs are unified in their shared goals of collaborating and working hard to promote and encourage all students, including minority students, to enroll and participate in the rigorous AP classes.

A factor in the success of Farrier High School's success in increasing minority student participation lies in the staff's commitment to their open enrollment policy. The administrators, counselors and AP teachers at Farrier High School expressed and demonstrated a true willingness to work hard in providing their students' access to the AP Program. There is a clear message to the school community that all students with the desire and commitment are welcome in the AP classes. Students are frequently and consistently invited and encouraged to enroll and participate. The educators often express their belief that given opportunity and access to this rigorous curriculum, students will perform and achieve. They all work extremely hard to make this vision a conviction and reality in their school. They have embraced the mission of increased minority student enrollment in AP courses and student enrollment, performance, and achievement have increased over the past six years (Farrier High School Profile Sheet, 2010).

Rationale for the Advanced Placement Program. The Farrier High School staff frequently emphasizes the importance of having high student expectations, offering a rigorous and relevant AP Program curriculum, and successfully transitioning students to post-secondary experiences. An extensive body of research highlights the importance of establishing high expectations for students that then results in documented student achievement (Haycock, 2001; Kahle, Meece, & Scantlebury, 2000; Martinez & Klopott, 2005; Sadowski, 2001). The literature and research also support the concept that participating in rigorous curriculum allows students to develop their academic skills and increase their achievement (Adelman, 2006; College Board, 1999; Elmore, 2000; Ferguson, 2000; Gamoran & Hannigan, 2000; Green, 2001; U.S. Department of Education, 1998). The research has also highlighted that providing rigorous academic experiences help students further develop their self confidence and self advocacy skills as they transition to post-secondary experiences (Clark, 2001; Martinez, 2002). The evidence is clear that a demanding curriculum has extensive intellectual and practical benefits for students of all backgrounds, races, and ethnicities across post-secondary educational experiences (Bottoms & Creech, 1997; Bridgeman & Wendler, 2004; Gamoran, 1992b; Hallinan & Kubitscheck, 1999; Pelavin & Kane, 1990).

The Farrier High School educators believe that high expectations are the cornerstone for their students' learning experiences. School personnel embrace the AP Program. They believe that it offers extensive in-depth curriculum across various content areas and it also enables students to further develop their critical, analytical, problem solving, and application skills. This staff frequently communicates how important it is for their students to challenge and extend themselves through their enrollment in the AP Program courses. They believe that through their participation in rigorous courses, student learning is enhanced and that it has been a factor in

their documented increases in student achievement and performance over the course of the last several years (CCPS Individual School Report, 2010).

This school staff highlights that another benefit of students participating in the AP Program includes their preparation for successful transition to post-secondary education and life experiences. They believe that the AP classes are as demanding, if not more demanding, than college courses. They also believe that this has contributed to their strong graduation and post-secondary education rates (CCPS Individual School Report, 2010).

Aspects of the AP Program. During the interviews and observations at Farrier High School, it was evident that staff utilizes frequent and varied types of communication to promote the AP Program and to encourage student participation in it. The importance of having strong communication channels in place is highlighted in the research (Sanders et al., 1981). From the Curriculum/AP Program Night to the various course brochures and website resources that highlight course expectations and requirements, the AP Program at Farrier High School is showcased and highlighted to students and parents. The staff is committed to sharing and discussing detailed program and course information with families. They willingly market and advertise this program in an effort to share the positive aspects of the courses and the benefits to students participating in them. They are committed to providing frequent and varied AP Program information to students and families to ensure that they are well informed.

The entire staff at Farrier High School is committed to actively participating in the academic advisement process for all students. The importance of academic advisement is emphasized in the Frome and Dunham (2002) research report. This research highlighted the emphasis on and importance of counselors' encouragement and strong academic planning procedures that were essential to high student enrollment in the academic courses. The

administrators, counselors, and teachers at Farrier High School work as a team and feel a responsibility to speak with students and families as they provide detailed program and course information to them. There is extensive review and discussion of academic records, transcripts, test scores, and grades as staff and students analyze relevant information in making courses selection decisions. There is also extensive outreach as various staff members visit classes and invite students to challenge and stretch themselves by enrolling in AP courses. There is a great deal of individualized thought and attention given to each student during the academic advisement process.

At Farrier High School there is a concentrated focus on staff using data in making student and program planning decisions related to the AP Program. There is extensive research that highlights the importance of continuously monitoring student and program data and how these practices positively influence student achievement (Borman et al., 2003; James et al., 2001; Johnson, 2002; Reeves, 2000; Sandham, 2001; Valverde & Schmidt, 1998). These studies highlighted that through focused monitoring and analysis of student and program data, there was accountability for all students and staff. Because of these focused data practices, student performance and achievement were enhanced.

The Farrier High School educators embrace the use of the AP Potential tool to identify students with promise and then to encourage their enrollment in AP courses. The administrators, counselors, and teachers also emphasize their practice of analyzing and using achievement data to make student decisions, as well as to determine future programming direction. The staff credits their use of the AP Potential tool and in-depth data analysis as contributors in their successful recruitment and enrollment of more minority students in the AP courses.

The staff has implemented various AP Program policies and procedures over the last several years that have facilitated the retention of students in the AP courses. These educators believe that by setting the expectation that students will honor their selected schedules and remain in the AP courses for at least one grading period, they have helped keep students committed and enrolled in their classes. Many Farrier High School staff members also noted that the implementation of the Schedule Change Committee several years ago has helped students and families in their process of discussing and evaluating student performance, participation and retention in classes. In order for students to drop an AP class, they must demonstrate that they have participated in intervention and communicated with all involved parties. This multi-step process involving various individuals has helped students to problem-solve, identify solutions, access resources and resolve issues that have in-turn supported their performance in these classes. This has led to greater student participation and retention in the classes. The policies and procedures that are implemented in this school reinforce the student and staff commitment to the AP Program. They highlight and honor the agreement and the importance of students remaining in their courses and working hard to achieve.

School programs, initiatives, and strategies to increase minority student enrollment and participation in the AP Program. The staff at Farrier High School identified various programs, initiatives, and strategies they believe have influenced and increased minority student enrollment over the course of the past six years. The first main initiative was to focus on vertical articulation relating to Honors and AP courses. The research shows that aligning and strengthening the articulation of curriculum and instruction can enhance student performance and achievement in AP courses (Darity et al., 2001; McLain & Thompson, 2001). These studies highlighted the importance of vertical articulation and Honors and AP teachers working together

to strengthen their scope and sequence of curriculum. These strong collaborative planning and implementation efforts resulted in increased student performance and achievement.

The Farrier High School educators are proud of their work to strengthen the vertical articulation of the curriculum in this school. They frequently noted the efforts and accomplishments of the Honors and AP teachers working together to develop and define expectations, make connections, and refine the scope and sequence of the AP curriculum. By working with students to develop their content knowledge, learning strategies and study skills in the Honors classes, the staff has helped individuals develop a firm foundation for their participation in AP courses. The staff has also concentrated on developing and sustaining long standing relationships with these students so that they could support them throughout their tenure in both the Honors and AP classes.

This Farrier High School staff also collaborated to develop and incorporate various innovative teaching methods into their instructional program. There is research to support that student achievement can be enhanced with teachers expanding their repertoire of skills and providing students with varied and challenging learning experiences. By addressing student interest and abilities and matching instruction to individual strengths, student achievement was facilitated and increased (Camara et al., 2000; Ford & Grantham, 2003; Gentry & Springer, 2002; Kerr & Sodano, 2003, Tirozzi, 2001).

The Farrier High School educators recognized the need to expand their repertoire of strategies as they worked to provide relevant and meaningful lessons to their diverse student population. The use of varied modalities and technology has increased students' active participation in lessons and activities. Staff also emphasized that their focus on providing direct instruction to students in the areas of study skills and learning strategies has facilitated their

learning and performance. All of these initiatives were cited as reasons for increased student enrollment in the rigorous academic courses.

Over the past several years, the Farrier High School staff has worked hard to create and implement specific initiatives that provide students with extended learning time. Research has demonstrated that efforts to provide extended learning experiences to individuals can result in increased student participation and performance (College Board, 2001). The initiatives implemented at Farrier High School to provide extended learning time included: the AP Summer Program and the Learning Seminar. As noted frequently by the school educators, students' participation in these program and service options, have given them opportunities for additional time with staff members to focus on the extensive academic course requirements.

An initiative to provide individualized support to students at Farrier High School was to establish the Writing Conference Lab. In this setting, students are able to work individually or in small groups with educators on their writing skills and class requirements. There has been research related providing individual support to students. In various schools where staff offered specific intervention time and supplementary programs and services, there were documented gains in minority student achievement (College Board, 1999; Reynolds, 2006; Saunders & Maloney, 2004).

The educators at Farrier High School highlighted the importance of identifying students with potential and recruiting them to enroll and participate in the AP Program. Research supports the staff practices of inviting and recruiting students to enroll in advanced academic courses (College Board, 2002; Ford & Harris, 1990; Ford & Milner, 2005). The focused recruitment efforts of staff and students to engage younger students and promote their enrollment in these classes resulted in increased student participation.

Farrier High School administrators, counselors and teachers noted their efforts to meet with individual students and have personal conversations, as well as to visit classrooms to share information and answer questions. They have also utilized current AP students to serve as role models and to speak with the younger students about the benefits of the AP Program. These were all frequent means used to invite, encourage and support student enrollment in these courses.

This school has worked hard to develop and sustain relationships with students through initiatives such as the AP Mentor Program. There is an emphasis in the research on establishing and sustaining relationships with students (Alson, 2003; Martinez & Klopott, 2005; Watt et al., 2004). These studies highlighted the concept that having positive, encouraging and demanding relationships with others was essential for minority student achievement. There is also research to demonstrate the value and effectiveness of providing mentors for students enrolled in these academic courses (Sadowski, 2001; Alson, 2003). In these studies, mentors provided individualized attention to and helped students acquire skills and identified resources that supported them in their academic efforts to be successful in these classes.

The mentors at Farrier High School provided students with support during the Summer Institute and also throughout the academic school year. They helped students with course requirements. They also supported individual students develop their academic reading and writing skills and strengthen their learning strategies and study skills. They emphasized the importance of working frequently and consistently with the students so that they could encourage and support their performance and achievement in these rigorous classes. These mentors embraced the concept and conveyed the message that these students could be successful in the rigorous academic classes and they were true advocates for them.

Professional development and training for faculty. The faculty at Farrier High School has been committed to participating in extensive professional development experiences for the past six years. Research highlights that professional development training for staff plays an important role in improving teaching and learning. It has been noted that when staff is able to learn more about research-proven strategies and expand their skills of engaging and supporting minority students, that can lead to facilitating student participation and performance in these academic courses (College Board, 1999; Galley, 2004; Gordon, 2004; Luce & Thompson, 2005).

The Farrier High School administrators, counselors, and teachers have focused on strengthening their individual knowledge and skills in the areas of curriculum, observation, data analysis and developing and sustaining relationships. Many staff members took content-related courses to earn their advanced academic certification. They participated in training sessions on relevant topics that included alternative assessments, diversified instruction, and the twice-exceptional learner. These educators also participated in extensive colleague observations that allowed them opportunities to identify and discuss new ideas and techniques to use in the classroom. They engaged in training exercises on reviewing, analyzing, and evaluating student and program data. The teachers also collaborated with other AP teachers in the district to share information, exchange ideas and discuss pertinent topics. They believe that these experiences strengthened their planning efforts while also facilitating program effectiveness and student performance.

The school staff has also accessed various College Board resources for professional growth. “College Board has expanded and enlarged its website, AP Central, which allows teachers from across the nation to share and communicate about curriculum and instructional concepts and strategies” (Hurwitz & Hurwitz, 2003, p. 4). College Board resources have

enhanced the ability of educators to communicate and exchange ideas and strategies related to the AP Program. The Farrier High School staff has taken advantage of these resources and frequently use the College Board's AP Central website to hold discussion groups with other AP teachers from across the country to identify solutions and discuss possible ways to address current issues related to the AP Program. They have actively participated in AP Institutes and Workshops. The teachers also participate annually in the AP Summer Institutes that provides various training sessions related to in-depth content knowledge, diversifying instruction and expanding assessment opportunities and techniques. Many of their teachers have served as summer AP Readers. This has helped teachers in framing their curriculum and better determining and preparing students for what content will be included on the AP Exams.

Implications

In reviewing the data from this research, there are many implications for school leaders to reflect on as they concentrate on this area of study. If educators want to increase minority student enrollment in the AP Program, there are several factors they should consider and address. They should collaborate with all district and school constituents to develop and embrace a strong, articulate vision of providing extensive opportunities to all students through access to rigorous, meaningful academic programs. School staff should create and support an open enrollment policy that communicates to students and families that all individuals with the motivation and desire are welcome to enroll and can participate in these academic courses. Educators should work together to eliminate barriers and create pathways for student access to these rigorous classes.

Staff should believe and communicate that they have high expectations for all students. They need to create and offer an extensive AP Program for their student body so that these

individuals have exposure to and experience with an in-depth curriculum. They should give students opportunities to stretch themselves, as well as to further develop their critical thinking and application skills.

School personnel should provide frequent and consistent communication to all school constituents regarding expectations and requirements of the AP Program. The entire school staff should be part of the academic advisement process for students and their families so they have many consultants and extensive information at hand to make sound academic course selections and long-range career decisions.

Administrators should consider the hiring of excellent staff to be a true priority. It is essential to recruit and employ AP teachers who are knowledgeable and passionate about their curriculum. They need to be open and flexible in working with students, staff, and families. They should be receptive to new ideas and willing to develop and implement different and varied instructional methods and strategies to meet the needs of diverse student populations. They should be committed to matching challenging learning experiences to students' interests and strengths. The administrative team should also select an AP Coordinator for their school. It is essential to fund this position as this individual can be a true resource and mentor for the AP teachers and students.

The entire faculty should also be involved in creating and implementing extended learning opportunities and individualized instructional support to all of their students. They should be vested and willing to offer and provide varied academic experiences and services to their students.

All educators should demonstrate their leadership through their unified efforts to recruit students for the AP Program and support their performance in the AP courses. The

administrative and instructional teams must work together, share their knowledge, and contribute extensive time and efforts to influencing student enrollment and participation in these rigorous academic classes.

The school staff should also be committed to personal and professional growth. Faculty must be willing to participate in relevant professional development training. Despite difficult economic times and budget concerns, school leaders must find ways to access resources and provide funding support for professional training initiatives. One of the most promising and least expensive training practices involves colleagues observing and collaborating with each other. Whether coordinating efforts with another teacher in the building or across the district, AP educators can learn from and support each other. It is important to utilize a most important resource, each other as colleagues.

For a school to have a successful AP Program with strong student enrollment, performance and achievement, distributive leadership is required. It takes the commitment, expertise and care of all educators to influence these areas of focus.

All of these highlighted factors must be considered and addressed if a school truly wants to increase their student enrollment and strengthen their AP Program. There is great comfort and motivation in knowing that these goals can be achieved given the combined efforts of a dedicated school community.

Recommendations for Future Research

This research focused on the issue of the under-enrollment of minority students in the AP Program and then exploring the successful initiatives that have been utilized to recruit and enroll minority students in AP courses. A future research topic could relate to the issue of the low gender and minority student enrollments in AP math and science courses. Current data show that

students enrolled in advanced math and science classes do not correspond to true gender or minority representation of the total national and local school populations. It is important to identify, examine, and evaluate programs and initiatives that have been implemented to address this issue.

Another possible research topic is the further exploration of students' perception and responses relating to their personal experiences of participating in the AP Program. It could be beneficial to conduct research on student perspectives relating to counselors, academic advisement, teachers, course expectations and requirements, instructional practices and strategies, and the availability and effectiveness of resources and support services.

A third research topic of interest is the relationship of the three related components of AP Program participation, AP course grade performance, and AP Exam scores. It is important to examine and understand the relationships of enrollment, performance, and achievement across all aspects of the AP Program.

An additional area of research could focus on doing an in-depth study of the Honors courses that are offered at the secondary school level. Since Honors courses provide a strong foundation for students enrolled in AP courses, this is a relevant area of interest. It is important for educators to examine the policies and practices relating to Honors course selection and registration procedures, student placement, course expectations and requirements, instructional practices, resources and support services, and student achievement in these courses.

Research related to the AP Program remains relevant as educators continue to identify ways to strengthen the curriculum and support students' enrollment in it. It is important to continue to utilize research to influence program effectiveness, as well as student participation, performance and achievement.

Conclusions

The review of the literature, research, and results of this case study highlight the importance of educators working together to promote and support minority student participation in the AP Program. District and school personnel established a shared vision, reinforced high expectations for all students, and encouraged them to academically challenge and stretch themselves. Educators at Farrier High School collaborated to offer and implement a rigorous and meaningful curriculum for all students. The staff members frequently engaged individuals and communicated a clear message that the AP Program was open to all students and they were welcome to access it. Educators actively pursued, invited, and recruited students to participate in the AP courses. They conveyed their beliefs and convictions that their students would be successful in these academic courses. They also committed to supporting individuals who were enrolled and participating in these courses. Staff worked actively and tirelessly to provide extended learning opportunities, instructional resources and individualized support services to students. These initiatives were paramount to their performance and success in these courses.

The shared leadership of administrators, counselors, and teachers was also essential to the success of the students and the AP Program. It was imperative for these educators to be unified and to give valued importance to their creating and implementing a strong, meaningful AP Program. All staff members were committed to increasing and having ample and diverse student enrollment and participation in the AP courses. The educators collaborated to create and implement an exceptional instructional program that provided enriched learning experiences for all students. These individuals developed and sustained long-term relationships with their students and with each other. Staff was also willing to participate in varied and meaningful training opportunities that helped them to further develop their professional and personal skills.

All of the factors outlined above contributed to the success of this school increasing their minority student enrollment in the AP Program. Their collaborative and collective efforts have resulted in this school providing an exemplary AP Program for a diverse student body. Through demonstrated leadership by all constituents, the Farrier High School community was able to influence and promote student achievement and school performance. As noted by Figure 1, distributive leadership influenced the identified success factors that led to increased minority student enrollment in AP courses.

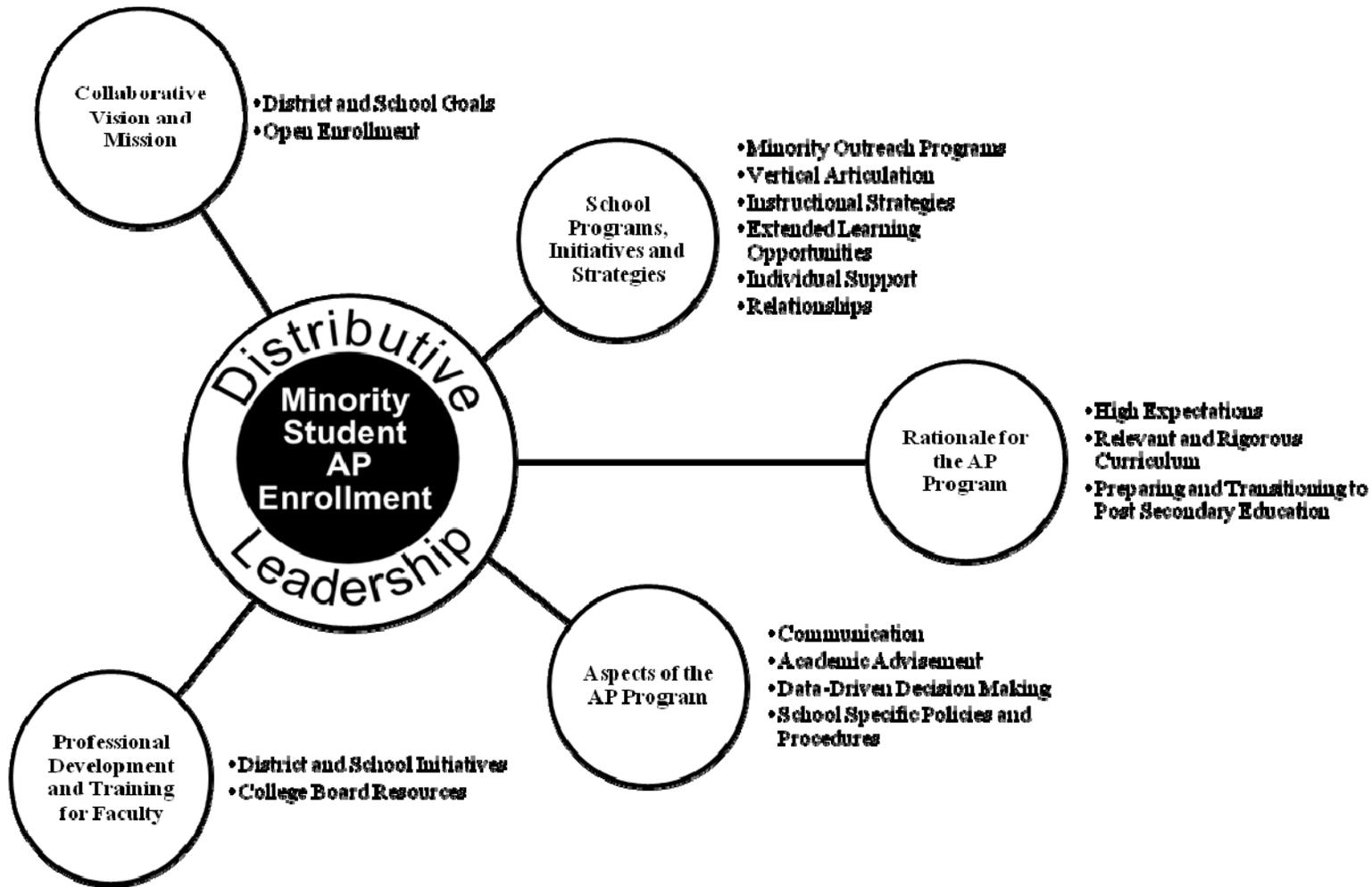


Figure 1. A model for increasing minority student participation in the Advanced Placement Program.

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Appendix A

Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: “Examining Educational Initiatives to Increase Minority Student Participation in Advanced Placement Program Courses”

Investigator: Jane Lipp, Virginia Tech Doctoral Student

Purpose of this Research: A continuing and pertinent education issue today is the minority achievement gap. One specific program that has been developed and implemented over the last several years in an effort to provide strong academic curriculum and to raise student achievement, including minority student achievement, is the Advanced Placement (AP) Program. There is a specific concern that although the AP Program has a long tenure and is an integral component of our high school curriculum, there is an under-representation of minority students in high school AP courses. There has been relatively little research collected on minority student participation in AP courses. This qualitative research project involves completing an in-depth case study of a secondary school in our district that has been successful in recruiting and enrolling majority and minority students in the AP courses. The purpose of this research is to identify the policies, procedures, interventions and strategies used to recruit students and increase their enrollment in AP courses. It is also to identify the individuals who influence the student enrollment and determine how and why they influence their participation in these academic courses.

This researcher will conduct semi-structured interviews with the Principal, Director of Student Services, and the Advanced Placement Program Coordinator in your school which has been identified as the case study site. This researcher will also complete observations of AP Program related activities and events, as well as complete a review and analysis of relevant documents and materials.

Procedures: This researcher has reviewed school data from each of the eighteen high schools in our district that offer AP Program courses. Your particular school has demonstrated pertinent growth over the last four years related to recruiting and enrolling students in AP courses. This researcher would like to conduct the interviews with the identified staff at the school site. Your semi-structured interview should take approximately one to one and one-half hours to complete. This researcher would also like to observe pertinent events and activities that relate to student academic advisement, course selection and registration for the upcoming school year. This researcher would also like to collect other pertinent and relevant documents for the study. These documents may include meeting minutes, logs, announcements, letters sent to students and families, formal policy statements and program descriptions relating to the AP Program. Permission for all study participants, including you, will occur prior to the beginning of the case study. This researcher is contacting the Principal via telephone and then you and the other subjects through a letter in the mail to invite all identified subjects to participate in the study. The researcher will also make telephone contacts with you and the other the identified subjects to confirm participation, set specific meeting dates and times, and secure additional professional and program information.

This researcher will use two taping machines to record all interviews and to ensure that all information is retrieved for transcribing and analysis. A questionnaire guide will be used during the interview. This researcher will also take notes; keep a journal and record relevant information following each interview so as to allow for reflections, observations and descriptive notes. An observational protocol will also be used to record notes during the designated observations of meetings and information sessions.

This researcher would like to request and collect from the administrative team specific school documents relating to the AP Program. These may include the district's Program of Studies (POS); district and school regulations and policies relating to the AP program; the school profile; school and student achievement and testing information; school policies and procedures relating to academic advising and course selection; school curriculum handbooks, course catalogues and class selection guides; school newsletters and articles shared with students, staff and families; faculty and department planning meeting agendas and notes; and related school memos and other pertinent documents.

Risks: There are no more than minimal risks for you as a study participant. This researcher will assure you and all other individuals in this study their confidentiality. This researcher also emphasizes that you have the opportunity and right to change your mind and withdraw from the research process at any time during the process. If you must seek medical or counseling services as a result of your participation in this research, neither this Investigator nor Virginia Tech have funds to pay for such services, and the costs of such services must be paid by you.

Benefits: While no promise or guarantee of benefits have been made to encourage you to participate in this study, this researcher hopes that there will be larger educational benefits from this research. By completing the in-depth case study, this researcher hopes to identify and share with other educators, students, and families, the specific policies, procedures, interventions and strategies used to recruit and increase student enrollment in AP courses. This researcher also hopes to identify the specific individuals who influence student enrollment and determine how and why they influence the participation in these classes. By sharing the pertinent information, this researcher hopes that other schools can utilize it to influence and increase their student enrollments in these academic classes.

Extent of Anonymity and Confidentiality: This researcher assures you confidentiality throughout this research. While individuals can be identified directly or through identifiers, this researcher promises not to divulge that information. Our designated school district, your specific school site and all individuals in this study, including you, will be identified with assigned pseudonyms. This researcher will identify a study code/key used that will be used to identify individuals and data documents. This key will be stored with Dr. Glenn, the Virginia Tech Professor and Advisor for this case study, and will be locked in a cabinet at the Northern Virginia Tech site. This researcher will transcribe the case study data. Only Dr. Glenn and this researcher will have access to the study data. It is possible that the Institutional Review Board (IRB) may view this study's collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research. This researcher will retain the study data for five years.

Compensation: There is no direct compensation offered to any of the subjects who participate in this study.

Freedom to Withdraw: As previously noted, you have the opportunity to change your mind and withdraw from this study at any time during the research process and without penalty. You are also free to not answer any of the specific questions or not respond to any situation or request during this process and without penalty.

Subject's Responsibilities: I voluntarily agree to participate in this study. I have the following responsibilities:

I will participate in a semi-structured interview with the designated researcher.

I will provide the researcher with requested school documents and materials relating to the Advanced Placement Program.

Subject's Permission:

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

Subject Signature: _____ Date: _____

Should I have any pertinent questions about this research or its conduct, and research subjects' rights, and whom to contact in the event of a research-related injury to the subject, I may contact:

Jane Lipp
Investigator
Dr. William Glenn
Faculty Advisor

703-446-1605/Jane.Lipp@fcps.edu
Telephone/e-mail
703-538-8493/wglenn@vt.edu
Telephone/e-mail

If I should have any questions about the protection of human research participants regarding this study, I may contact:

David M. Moore
Chair, Virginia Tech Institutional Review
Board for the Protection of Human Subjects
Office of Research Compliance
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, VA 24060

540-231-4991/moored@vt.edu
Telephone/e-mail

Appendix B

Interview Questionnaire Guide

Pilot Interviews with Principal, Director of Student Services and AP Coordinator:

Sawyer HS

Case Study Interviews with Principal, Director of Student Services and AP Coordinator: Farrier

HS

The enclosed preliminary data relating to personal demographic and Advanced Placement Program information will be collected by the researcher in a telephone conversation with each Principal, Director of Student Services and AP Coordinator. This will occur following confirmation of their research participation and after establishing the specific meeting date and time for the interview sessions.

Personal Demographic Information

1. As of the beginning of this current school year, how many years have you served as a public school Principal, Director of Student Services or AP coordinator?
2. How many years have you served at the current school site?
3. What is your highest educational degree? Briefly highlight the roles, responsibilities and experiences of your professional life.

Advanced Placement Program Information

1. In what year was the AP program implemented in your school?
2. What is the total number of AP teaching staff in your school?
3. What is the racial/ethnic composition of your AP teaching staff?

_____ Percentage of Native American/American Indian Teachers
_____ Percentage of Asian/Asian American Teachers
_____ Percentage of Black/African American Teachers
_____ Percentage of Hispanic Teachers
_____ Percentage of White Teachers
_____ Percentage of Other Teachers (Please specify: _____)

4. Please record the number of AP teachers who have taught in your school for the specified number of years.

_____ 0 to 2 years

- _____ 3 to 5 years
- _____ 6 to 10 years
- _____ 11 to 20 years
- _____ 20 or more years

5. Please indicate the number of AP teachers who have Master's or Doctoral Degrees

- _____ Number of AP teachers with Master's Degrees
- _____ Number of AP teachers with Doctoral Degrees

6. What are the primary responsibilities of your AP Program coordinator?

7. What is considered when recruiting new AP teachers?

8. What type of support is provided for AP teachers to participate in AP workshops and institutes?

Appendix C

Interview Questions

These are the questions that will be asked during the interviews with Principals, Directors of Student Services and AP Coordinators.

Background Statement:

These interviews are an introduction to my dissertation and case study research on successful programs, services and resources that school administrators and staff have implemented to recruit minority students and increase their enrollment in AP Program courses. I am very interested in your experiences, observations and views relating to this topic. What you share and discuss will assist me in designing questions that I will use to interview administrators and school staff at the selected school site for the identified case study. You are currently a High School Principal/Director of Student Services/AP Coordinator in a school that offers the AP Program and related courses. We appreciate your vast experience and insight into this current and pertinent topic and we appreciate you sharing and exchanging information and viewpoints. I am audio taping this conversation as I want to capture your exact language and specific information and details shared during the interview.

Introductory Questions

1. Do you believe that it is the district's and your school's vision and priority to increase minority student enrollment in Advanced Placement courses? Why or why not?

2. Do you believe that Advanced Placement courses provide rigorous curriculum and assist students in preparing for and transitioning to college? Why or why not?

Transition Questions

3. Who influences and what are the specific school policies and procedures for enrolling students in AP Program courses?

4. What are your policies for students adding or dropping AP courses during the school year?

Key Questions

5. Who provides academic advising and influences decisions about student enrollment and placement in the appropriate academic courses?

6. How is the AP Program curriculum, course selection and placement information communicated to students, staff and families?

7. What school initiatives, programs and strategies have you implemented to recruit minority students and to increase their enrollment and participation in AP courses?

8. What staff development and training have you or your personnel attended or implemented relating to the topic of minority students and their enrollment and participation in AP courses?

9. How do you in your role as Principal/DSS/AP Coordinator access and provide resources and support to the Advanced Placement Program and staff?

Ending Questions

10. How do you collaborate with colleagues to evaluate current programs and interventions as well as to identify new initiatives to address the issue of minority student under-enrollment in AP courses?

11. Is there any additional information that you want to share with me?

Additional comments will be documented.

Appendix D

AP Meeting Observation Protocol

Date and Time of Meeting:

Meeting Participants:

Agenda Items Presented:

Agenda Items Covered and Discussed:

Responses of Meeting Participants:

Reflective Notes and Observations:

Each meeting will be filmed and taped by researcher and descriptive and reflective notes will be taken.