Equity in Education: Minority Students' Participation in Honors/AP Programs

by

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Abstract

Closing the achievement gap has been a goal of educators for many years (Ferguson, 1998; Haycock, 2001; NCES, 2005; Norman, Ault, Bentz, & Meskimen, 2001). Although a major concern for schools, districts, and states, there is insufficient research recommending specific strategies and interventions to increase the achievement of minority students and close the gap that separates them from their White peers. One of the contributing factors to the disparity in student achievement is the disproportionate number of minority students enrolled in honors and advanced placement courses (CollegeBoard, 2003; Darity, Castellino, Tyson, Cobb, & McMillen, 2001; Ndura, Robinson, & Ochs, 2003). While an abundance of studies report the impact the school environment has on minority student achievement (Alvidrez & Weinstein, 1999; Carbonaro, 2005; Clotfelter, Ladd, & Vigdor, 2005; Ferguson, 2003; Ogbu, 1986; Haycock, 1998; Herbert & Reis, 1999; Hunter & Smith, 2007; Schmidt, 2004; Schmidt, 2007; Stanley et al, 2004; Tennebaum & Ruck, 2007; Uline & Tschannen-Moran, 2008) little research exist specifying steps to increase minority students' representation in honors and advanced placement courses (CollegeBoard, 2002; Darity et al, 2001; Ndura et al, 2003;).

This study used Invitational Theory to analyze the underrepresentation of minority students in honors and advanced placement courses at a high school located in the south eastern United States. Both quantitative and qualitative data were collected that gathered information on students' perceptions of the school environment. Developed from Invitational Theory, the Program Access Student Survey (PASS) assessed the level to which students perceived their

school as “inviting”. The study also sought to determine if students’ responses to PASS differed based on the level of curriculum received, students’ ethnicity, and socioeconomic status. Finally, the study explored contributing factors related to students’ decisions to enroll (or not enroll) in honors/AP courses.

ANOVA tests were statistically significant for ethnicity and level of curriculum received. With regard to ethnicity, scores for Hispanic, Multiracial, and White students were higher than scores for Asian, Black, and American Indian students, indicating that Hispanic, Multiracial, and White students held the school in a more positive regard than Asian, Black, and American Indian students. Regarding the level of curriculum received, students who were exposed to honors or advanced placement courses perceived the school more “inviting” than those who were not in the honors and AP curriculum. ANOVA tests found no difference in students’ perceptions of the school environment based on socioeconomic status. Students who received free and reduced lunch had similar scores as those who paid full price for lunch.

According to the qualitative data analysis, students who chose to enroll in honors/AP courses had similar categorical responses as students not enrolled in honors/AP courses in terms of factors influencing their decision on the level of curriculum to take. The major themes reported were the individual teachers teaching the class, the level of encouragement received, expectations set, by either parent or teacher, and the level of rigor in the course. Results from the qualitative analysis also confirmed the six elements from Invitational Theory as being instrumental in minority students’ achievement and enrollment in honors and AP courses.

The findings from this study can help educators understand students’ perceptions of the school environment as it relates to their decisions to enroll in the more rigorous courses. Although this study can not be generalized to other populations, it is recommended that

educators use Invitational Theory as an appropriate framework to create and maintain successful schools, first gauging the school environment through the eyes of the students, and then taking intentional steps to identify areas of improvement with the goal of increasing minority students' achievement and enrollment in honors and advanced placement courses.

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Table of Contents

List of Tables

List of Figures

CHAPTER 1. INTRODUCTION

> *"We can, whenever we choose, successfully teach all children whose schooling is of importance to us. We already know more than we need to do that. Whether or not we do it must finally depend on how we feel about the fact that we haven't so far."*
>
> — Ron Edmunds, Educational Researcher

History

Educational researchers have long been concerned and intrigued with the achievement gap that separates minority students and their White peers. The Black-White gap and the Hispanic-White gap narrowed between 1970 and 1988, decreasing by almost 50% (Haycock, 2001). According to the National Assessment of Educational Progress (NAEP), during that time frame, minority students' performance in reading and math rose in nearly all grade levels, with White students' performance remaining the same (Rothman, 2001). However, progress made came to a stand still in 1988, and the gap widened significantly in the 1990s (NAEP, 2001), and has continued to increase each year since (Bali & Alvarez, 2004; Bruce, 2009; Card & Rothstein, 2007; Lee, 2002). Although the gap has been a concern of educators for years, a renewed interest in the achievement gap has emerged with educators and researchers exploring the contributing factors and examining various efforts to remedy the situation.

Several studies suggest an increase in minority students' enrollment in more rigorous courses could result in a narrowing of the achievement gap (Darity, Castellino, Tyson, & McMillen, 2004; George & Harrison, 2001; Ndura, Robinson, & Ochs, 2003). Because an increase in minority students in honors/AP courses at the high school level would require more

minority students receiving advanced level courses at the middle and junior high levels, this may in turn lead to a narrowing of the achievement gap that separates minority students from their White peers. Furthermore, because contributing factors to the achievement gap mimic those factors related to the honors/AP enrollment gap, studies suggest that efforts to improve one might bring about a positive change in the other (Darity et al., 2004; Ndura et al., 2003). Since elementary and middle school courses serve as the first step towards preparation for honors/AP courses at the high school level, minority students who are tracked into lower curriculum classes are unable to gain the knowledge and skills necessary to successfully function in honors/AP courses (Darity et al., 2001; Ford, 1998; Taliaferro & DeCuir-Gumby, 2008). Therefore, efforts aimed at increasing minority student achievement, bringing about a narrowing of the achievement gap, would improve the number of minority students prepared for honors/AP courses, and increasing the number of minority students participating in more rigorous curriculum. Thus, it is proposed that the two concepts are interrelated, perhaps interdependent with each other.

The review of literature identifies key factors that have contributed to both the achievement gap and the gap in honors/AP enrollment. While there are many contributing factors that are beyond the school's control, there are a number of factors that schools have the influence and the opportunity to change in an attempt to increase the minority population enrolled in the more rigorous courses while simultaneously closing the gap that separates them from their White peers.

Among those factors within the school's influence is the environment in which students learn. Administrators are responsible for the overall operations of the school including the environment with which teaching and learning occurs. Several studies focus on the impact of the

school environment on student achievement, and the need for building-level administrators to assess the environment, making appropriate changes to ensure students are encouraged to succeed academically (Hebert & Reis, 1999; Salinas, 2002; Schmidt, 2007; Stanley, Juhnke, & Purkey, 2004). In order to ensure the school environment is conducive to maximizing students' potential, administrators must accurately gauge the school environment as seen through the eyes of the students.

One measure of evaluating the school environment is the use of Invitational Theory of Practice (ITOP). Using this theory, administrators can assess the level to which schools are considered "inviting", using the elements of equity, expectation, encouragement, empowerment, enlistment, and enjoyment. According to Invitational Theory, students who rate their schools high in the 6 Es are more likely to feel a sense of belonging and feel supported by the faculty (Schmidt, 2007). Because other literature concurs with the 6 Es as the elements important for minority student growth (DeCuir & Dixon, 2008; Ferguson, 2003; Johnson & Kritsonis, 2006; Schweinle, Turner, & Meyer, 2008; Tenebaum & Ruck, 2007), I sought to use the 6 Es as a framework to determine the extent to which schools are considered to acknowledge, value, and celebrate diversity.

Statement of the Problem

Equity and equality in schools have been widely stated as goals, but with elusive targets and nonspecific commitments to make achievement for all students a priority. Among the issues educators seek to improve is the lack of minority students present in the more rigorous courses. Minority students enroll in high school honors and advanced placement courses at a rate disproportionate to their population in the United States (CollegeBoard, 2002; Darity et al., 2001; Herr, 1992; Johnson & Kritonis, 2006; Klopfenstein, 2004; Ndura, Robinson, & Ochs, 2003;

Solorzano & Ornelas, 2004). Because these students are more likely to be exposed to lower level curriculum at the middle and junior high school (Berlak, 2001; Darity et al., 2001; Johnson & Kritsonis, 2006), they lack the prerequisite skills needed to succeed in honors/AP courses. With honors/AP classes serving as the gateway to college admittance and opportunities for scholarships, the topic warrants attention as educators strive to increase the number of minority students prepared for college and close the achievement gap separating minority students from their White peers.

Past studies have explored contributing factors to students' decisions to enroll (or not enroll) in honors/AP courses: teacher expectations, parental involvement, socioeconomic status, tracking, and the selection and identification process (Archbald, Glutting, & Qian, 2009: Burton, Whitman, Yepes-Baraya, & Kim, 2002; CollegeBoard, 2002; Darity et al., 2001; Fordham & Ogbu, 1986; Klopfenstein, 2004; Salinas, 2002; Solorzano & Ornelas, 2004; Taliaferro & DeCuir-Gunby, 2008). While a limited number of studies explore the topic from the perspective of the students (Fordham & Ogbu, 1986; Ndura et al., 2003; Tyson, Darity, & Castellino, 2005), very little quantitative research exists examining the students' perspective.

Research confirms the elements of Invitational Theory as being crucial to promoting student growth, and ideal to creating the environment necessary to increase minority student achievement (Archbald et al., 2009; Carbonaro, 2005; Lee, 2002; Stanley, Juhnke, & Purkey, 2004; Taliaferro & DeCuir-Gunby, 2008; Wakelyn, 2009). Although several studies stress the importance of the school environment (Carbonaro, 2005; Clotfelter et al, 2005; Herbert & Reis, 1999; Hunter & Smith, 2007; Schmidt, 2004; Schmidt 2007; Stanley et al, 2004) and the need to gather students' perspectives (Fordham & Ogbu, 1986; Ndura et al, 2003; Tyson et al, 2005) little research exists that examines the school environment through the eyes of the students.

Current studies that include students' perspectives narrowly focus on their experiences with teachers, parental involvement, and the influence of their peers yet, despite the importance of the school environment, studies considering the school environment as it relates to honors/AP enrollment are nonexistent.

Purpose of the Study

The purpose of this study is multi-faceted. First, the study sought to examine the honors/AP enrollment gap that existed between minority students and their White peers at Southeastern High School. Developed from Invitational Theory, the PASS assessed students' perceptions of characteristics of the school environment that both promote and prevent minority students from achieving success through enrollment in more rigorous classes. Using the PASS, the study described the level to which the school is seen as "inviting" through the eyes of the students. A second purpose was to determine if students' responses to PASS differed based on ethnicity, socioeconomic status, and the level of curriculum received (standard or honors/AP). Finally, the study explored factors contributing to students' decisions to enroll (or not enroll) in honors and advanced placement courses.

Significance of the Study

This study sought to contribute to existing research regarding disparities that exist between White students and minorities in honors and AP courses. Numerous research projects and studies exist in various states and throughout the country, as the review of literature revealed (Burton et al., 2002; CollegeBoard, 2002; Darity et al., 2001; DeCuir & Dixson, 2004; Johnson & Kritsonis, 2006; Klopfenstein, 2004; Lubienski, 2002; Ndura et al., 2003; Taliaferro & DeCuir-Gunby, 2008; Tyson et al., 2005; Wakelyn, 2009). However, no studies have been

conducted specifically to address the issue of low honors/AP enrollment rates among minorities in the state of Alabama.

Specifically, educators and policymakers will be able to examine current policies and practices to determine systems in place that intentionally or unintentionally prevent some students from enrolling in honors and AP courses. Additionally, individuals in the position to effect change can seek to increase the number of minorities offered pre AP and more rigorous courses at the middle and junior high level, preparing them for high school honors/AP courses. Finally, prior studies on the topic are primarily qualitative and from the perspective of the teachers and administrators (Archbald et al., 2009; Herr, 1992). This study, incorporating both quantitative and qualitative methods, captures the students' voices in exploring the gap in enrollment in honors/AP courses. This is a very important element in that understanding their perspectives can lead educators to improve both policies and practices, ensuring equal access for all students.

Theoretical Framework

Invitational Theory of Practice (ITOP) is a framework school administrators can use to create and sustain successful schools. It addresses the entire school environment, focusing on how individuals communicate with each other (Stanley et al., 2004). It is based on the belief that the key to individual's success is creating an environment that fosters their growth and development. Professionals are encouraged to look beyond satisfying immediate needs, instead working towards improved human development for all (Stanley, 2004). ITOP advocates educational programs that have systems in place that are respectful of various individuals and programs designed to ensure success for all populations (Schmidt, 2004). Because it was intended for diverse populations, it is an appropriate theory for school administrators to use to

gauge the school environment. The 6 Es (equity, expectation, encouragement, enlistment, empowerment, and enjoyment) are used to assess the level to which schools accept, celebrate, and value diversity (Schmidt, 2007), and are the elements from which the PASS survey was developed.

Research Questions

The following research questions guided the study:

1. What difference, if any, exists among honors/AP students and non-honors/AP students' perceptions of the school environment?

2. What difference, if any, exists among minority students and non-minority students' perceptions of the school environment?

3. What difference, if any, exists among free/reduced lunch students and non-free/reduced lunch students' perceptions of the school environment?

4. What factors do students report as playing a significant role in their decisions to enroll in honors/advanced placement courses?

5. What factors do students report as playing a significant role in their decisions not to enroll in honors/advanced placement courses?

Limitations of the Study

My role for this study focused on students' perspectives of their school environment and the relationship it had on their decisions to enroll (or not enroll) in honors and advanced placement courses. I served as Assistant Principal for the school in which the study took place, and held that position at the time of the study. While my position at the school was beneficial to the study (allowing for easy identification of students to interview for the qualitative

component), it also presented a concern with the extent to which students were honest in their responses because of an administrator's presence.

This study was limited to one school in south central Alabama. Therefore, findings may not be generalized beyond the population surveyed. Due to the importance of this study, other schools might pursue surveying their student population to gauge the school environment.

Assumptions of the Study

The study assumed that students surveyed were honest in their responses on the PASS. It is also assumed that student performance in other academic areas (history, science, and language) was consistent with their performance in reading and math, and the achievement gap in those areas would mimic the reported gap for reading and math. Because reading and math are the subjects used for accountability, they are often the only subjects involved in extensive research.

Definition of Terms

Academically and Intellectually Gifted (AIG) — The state of North Carolina defines AIG students as those who perform at significantly high levels of achievement compared to others the same age, experience, or from the same environment (Darity et al., 2001).

Achievement gap — the disparity in academic achievement that exists between two populations of students, as evidenced by standardized test scores (Rothstein, 2004b). In this study, the term refers to the gap between minority students and White students.

Acting White — A disparaging term used to describe minority students believed to have adopted White America's social expectations, thus betraying their own culture.

Adequate Yearly Progress (AYP) — a cornerstone of No Child Left Behind, measures achievement of schools, districts, and states. In the state of Alabama, 83% of schools made AYP for the 2010–2011 school year (ALSDE, 2010).

Advanced — Curriculum that places students ahead of the minimum requirements or standards for a particular course or grade level. The term is synonymous with the term "honors".

Advanced Placement (AP) — A rigorous academic program that allows high school students to earn both high school and college credits simultaneously (Wakelyn, 2009). Students are awarded college credit after scoring 3 or above on AP exams. The AP program is standardized throughout the United States and is governed by CollegeBoard.

African American/Black — For the purpose of this study, these two terms will be used interchangeably to refer to individuals that have origins in any of the Black racial groups of Africa but are American born.

Disparity Index — A statistic to gauge the significance of the enrollment gap in honors/AP courses. To determine the disparity index, calculate the percentage of minority students in honors/AP courses divided by the percentage of minority students enrolled at the school (Darity et al., 2001).

Dual Enrollment — Curriculum program where students are enrolled in high school and college courses simultaneously and are awarded college credit upon successful completion of the course.

Empowerment — To empower students is to boost their self-confidence and self-efficacy by giving them a sense of authority and power (Schmidt, 2007). It also involves equipping them with the knowledge needed to make informed decisions.

Encouragement — Another element that seeks to boost self-confidence and self-efficacy, Schmidt (2007) defines encouragement as genuinely investing in students, and being a source of support for them.

Enjoyment — From an invitational perspective, enjoyment refers to a state of anticipation and happiness; students should experience such feelings in relation to school (Schmidt, 2007).

Enlistment — Schmidt (2007) defines enlistment as working cooperatively with individuals, in this case students, to help move towards progress and improvement.

Equity — From an invitational perspective, equity describes promoting fairness and justice through policies, procedures, and practices (Schmidt, 2007).

Expectation — From an invitational perspective, expectation is defined as an individual's perception which serves as a point of reference for behavior (Schmidt, 2007).

High School Grade Point Average (HSGPA) — A measure of academic achievement determined by dividing the total number of quality points received by the total number of classes taken.

Honors — Increased complexity in curriculum and coursework compared to standard curriculum. The term is synonymous with the term "advanced".

Inviting — Invitational Theory describes an inviting school as one whose beliefs and values acknowledges, embraces, and celebrates diversity (Stanley et al., 2004).

Minority – Any racial/ethnic group categorized as non-White.

National Assessment of Educational Progress (NAEP) — A national assessment given to students determine their academic levels in the areas of reading, mathematics, science, history, science, and writing.

Socioeconomic status (SES) — A measure of an individual's or family's relative economic and social ranking (high, middle, or low). Students' SES is determined by their categorization as receiving free or reduced lunch, or paying full price for lunch, as determined by their parents' income.

Tracking — Grouping students based on academic ability and providing curriculum deemed "appropriate" for their level of achievement.

Overview

Chapter 1 provided a discussion of the research problem and the purpose of the study. The theory upon which the study is based was introduced and the study's significance was explained. Five research questions were presented. Chapter 2 will provide an extensive review of related literature applicable to this study followed by chapter 3, which will include the methods used to select the site and participants; techniques used to collect and analyze data; and procedures used to conduct the study. Chapter 4 will synthesize the study's results. The final chapter will discuss themes that emerged from the research questions and implications for the educational community.

CHAPTER 2. REVIEW OF LITERATURE

> *"True equity is not achieved until the demographics of AP participation and performance reflect the demographics of the nation."*
> — CollegeBoard, 2010

The review of literature will explore existing research that is pertinent to this study. The chapter opens with a discussion of the achievement gap and the gap in honors/AP enrollment, explaining the concepts as being interrelated, with contributing factors consistent among both. The next section discusses Invitational Theory as a possible framework educators can use to assess the school environment which impacts students' enrollment and participation in honors/AP courses.

Researchers acknowledge the great disparity in student achievement between minority students and their White peers (Bali & Alvarez, 2004; Burris & Welner, 2005; Card & Rothstein, 2007; Clotfelter, Ladd, & Vigdor, 2005; Darity, Castellino, Tyson, Cobb, & McMillen, 2001; Ferguson, 2003; Haycock, 2001; Ladson-Billings, 2006; Lee, 2002; Singham, 2003), as well as minority students' lack of participation in advanced and honors classes (Archibald, Glutting, & Qian, 2009; Ford, 1998; Johnson & Kritsonis, 2006; Klopfenstein, 2004; Ndura, Robinson, & Ochs, 2003; Taliaferro & Decuir-Gunby, 2008). This chapter will explore the history of the achievement gap and its relation to the enrollment gap in advanced and honors level courses, and contributing factors associated with both the achievement and the honors/AP enrollment gap. Also introduced is Invitational Theory as a possible framework to explain differences in students' decisions to enroll in honors and advanced placement courses.

While the majority of research provides sound rationales for both the achievement gap and the gap in honors/AP enrollment, very few studies provide solutions for the increasingly growing problem. The present study suggests educators gauge the level to which institutions are inviting to minority students, and proposes a framework for gathering said data. The literature review ends with a brief review of Invitational Theory and a thorough discussion of the 6 Es as a framework to assess the level to which schools are perceived as being "inviting" (Schmidt, 2007), from the students' perspective. Knowing the specific environment that increases the students' level of comfort and their likelihood to register for advanced and honors courses, it is plausible that educators can use those characteristics as a guide to assess their school environment as viewed from the students' perspectives. The 6 Es of Invitational Theory (equity, encouragement, expectation, enlistment, empowerment, and enjoyment) suggests a possible structure for assessing the school environment as an explanation for decreasing enrollment in advanced and honors courses with minority students.

The Achievement Gap

Closing the achievement gap has been a goal of educators for many years (Bali & Alvarez, 2004; Bruce, 2009; Haycock, 2001; Lee, 2002; National Center for Educational Statistics, 2005; Viadero & Johnston, 2000). Teachers, administrators, school districts, and states have struggled to bridge the gap that separates affluent and White students from poorer students and students of color. Studying the achievement gap is essential to exploring the gap in minority student enrollment in more rigorous courses as it is plausible that both phenomena are interrelated, perhaps interdependent with one another. Racial achievement gaps directly impact proportional percentages of students' identified and selected in middle and junior high schools for gifted and advanced programs, with the curriculum that serves as precursors to honors and

advanced placement courses in high schools. Low minority enrollment in gifted programs at the elementary level leads to low minority enrollment in more rigorous courses at the high school level.

According to the Coleman Report (1996), on every academic measure of achievement, Black students fall behind their White counterparts. Although an urgent concern for educators, the goal of narrowing the achievement gap has been in place for a number of years, with limited success. Between 1970 and 1988, the achievement gap between White and minority students decreased by 50%, with the Hispanic-White gap showing a decline as well (Haycock, 2001; Rothman, 2001). That same period saw gains as the gap between 13-year-old Caucasians and African Americans decreased in reading by two grade levels (Rothman, 2001). Similarly, the gap that existed in mathematics narrowed between 1973 and 1986 (Haycock, 2001). Both situations saw an increase in African American students' performance while White students' performance remained stable. That progress came to a standstill in 1988, and the gaps have since widened (Haycock, 2001; Lee, 2002; Snyder & Hoffman, 2001).

Referred to as the "race-gap", differences between Black and White students' achievement are experienced across the nation. The National Association of Educational Progress (NAEP, 2000) scores indicated that Black 17-year olds read at the proficiency level of White 13-year olds, and SAT scores reflect very little overlap in the distribution of Black and White test scores (Bali & Alvarez, 2004). NAEP reports that 89% of African American eighth graders read below grade level, compared to 53% of White eighth graders (Alliance for Excellent Education, 2007).

According to the Stanford Achievement Test (SAT), a norm-referenced test widely used by school districts throughout the U.S., the gap separating minority students is wide and

continuously grows at a steady pace. In 2003, Black students scored proficient at a rate of 23% in reading and 29% in mathematics, compared to White students who tested proficient at rates of 50% and 61% in reading and math, respectively (Bali & Alvarez, 2004).

Research from various states yielded results similar to national findings with minority students' achievement disproportionately lower than White students. The Texas Assessment of Academic Skills (TAAS), a measure of student achievement in reading, math, and writing, is used to measure student performance and has tracked the achievement gap between minority students and their White peers since 1990 (Linton & Kester, 2003). Commended for providing disaggregated data on individual ethnic groups and holding them accountable to the same standard of performance, longitudinal data from the state of Texas, as displayed in Table 1, shows that passing rates for minority students have grown at a faster rate than all other ethnic groups (Linton & Kester, 2003).

Table 1

TAAS 8th Grade Mathematics Test: Comparison of Student Performance by Ethnic Group

	Percent Passing		
Ethnic Group	1996	2000	Percent Gain
African American	43.8	80.9	37.1
Hispanic	51.4	85.5	34.1
White	77.7	94.8	17.1

From "Exploring the Achievement Gap Between White and Minority Students in Texas: A Comparison of the 1996 & 2000 NAEP & TAAS by T. Linton & D. Kester, 2003, Education Policy Analysis Archives. Reprinted with permission.

In the same study, comparing results in eighth grade math between 1996 and 2000, TAAS scores for White students were significantly higher than either African American or Hispanic students. Comparing mean TAAS scores for the same years, the achievement gap between White and minority students narrowed. Furthermore, NAEP scores, during that same time, increased for Hispanic students, but not for Caucasian or African American students (NAEP, 2000). Cautious of prematurely reporting a decrease in the achievement gap, researchers state that despite progress observed in minority students' achievement, the achievement gap between minority students and their White peers continues to exist and grow (Haney, 2000).

The ceiling effect is presented as a possible explanation for the previously reported scores from the TAAS. In 2000, over 60% of White students scored in the top 10% on the TAAS, reducing the possibility for further growth (Linton & Kester, 2003). The ceiling effect limited the possibility of improvement in scores for White students, creating a false perception that the achievement gap between White and minority students had narrowed. Haney (2000) suggested that the perceived narrowing of the achievement gap and increase in passage on the TAAS is moderately due to high dropout rates for minority students. He stated that while there is a high percentage of students experiencing academic difficulties, those who are unable to pass the high-stakes test dropout of high school, leaving only those students who have a greater chance of passing the TAAS, or who have already passed the TAAS (Haney, 2000). Because accountability measures only consider those students exiting 12th grade, individuals who leave prematurely, not attaining a high school diploma, are not represented in the accountability reports. Also, because of the various discrepancies with TAAS, some researchers prefer to use

NAEP test results to evaluate student achievement in Texas. NAEP results for the previously reported time period show no gain or small gains for both minority and White students, and present no evidence to validate success reported on the TAAS (Linton & Kester, 2003).

Similar results were reported in the state of North Carolina where, regardless of the unit of measure, the gap between minority students and their White peers is significant and widespread. NAEP results concluded that Black, Hispanic, and American Indian students lagged 28, 24, and 21 percentage points behind their White peers, respectively (Thompson & O'Quinn, 2001). End-of-course examinations produced similar outcomes whereas the gap between Black, Hispanic, and American Indian students and their White peers was 27, 18, and 14 percentage points respectively (Thompson & O'Quinn, 2001). These gaps in achievement, as significant as they appear, are contributing factors to low minority enrollment in advanced and honors courses (Darity, Castellino, Tyson, Cobb, & McMillen, 2001).

Researchers agree that the existing gaps in learning and achievement in middle and junior high school lead to lower identification of minority students for gifted, honors, and advanced programs, which further leads to lower enrollment in high school honors and advanced placement courses (Archibald et al., 2009; Card & Rothstein, 2007; Darity et al., 2001; DeCuir & Dixson, 2004). The Chicago Public School System, through the Annenberg Challenge, initiated a study documenting the achievement gap and providing support linking access to rigorous courses as a viable option for reducing the existing gap (Smylie & Wenzel, 2003). The goal of this initiative was to promote more challenging, rigorous work for all students in an effort to close the achievement gap. Citing that more challenging curricula is associated with improved student performance on the Iowa Test of Basic Skills, a study of a large metropolitan school district yielded results leading educators to believe that a reduction in the achievement gap could

come by increasing the number of students in advanced and honors courses (Smylie & Wenzel, 2003).

Continuing to study race gaps, researchers attempt to determine at what point the disparities commence and how they evolve. There are studies that suggest the achievement gap in reading scores begins as early as first grade (Fryer & Levitt, 2003; Phillips, 2000), while others suggest the gap develops in later elementary years (Murphy, 2009; Singham, 2003). Although there appears to be some controversy with regard to when the achievement gap first begins, the majority of literature suggests that the achievement gap first arises in the elementary years, specifically fourth and fifth grade, progressively widening as students get older (Bali & Alvarez, 2004; Murphy, 2009; Singham, 2003). More specifically, data gathered showed that the achievement gap between Hispanic and White students tend to develop in the higher grades, whereas gaps between Black and White students develop in early elementary, with those gaps being twice as large as the former group (Bali & Alvarez, 2004). Because these gaps, developing in the elementary years, decrease the likelihood of minority students receiving the prerequisite skills needed for honors/AP courses, it directly impacts the number of minority students referred and enrolled in such rigorous classes, thus connecting the achievement gap and the gap in student enrollment in honors/AP courses.

When comparing perspectives from various audiences, researchers get a different view of what individuals think is the source of low minority student achievement. Adults' comments tended to focus on students' home situations, with statements such as "they're poor", "their parents don't care", and "they don't have enough books in the home", indicating that the children and their families are the reasons for low minority achievement and the existing achievement gap (Haycock, 2000). Conversely, students were inclined to blame educators stating that they often

have teachers who lack knowledge of the content in their subject area, and that administrators, counselors, and teachers underestimate their potential, often resulting with them being placed in lower level curriculum courses (Haycock, 2001).

Ladson-Billings (2006) contended that when focusing on the achievement gap, educators and policymakers tend to look towards short term remedies as opposed to long term solutions. She charged educators and researchers to reframe the way they view disparities in student achievement, suggesting that the term "achievement gap" places the burden on those children born in disadvantaged situations. Ladson-Billings (2006) recommended that educators view disparities as an "education debt" (p. 5), owed to the disadvantaged and traditionally marginalized populations, shifting the focus towards long-lasting improvement addressing the underlying problem. This debt, according to Ladson-Billings, includes historical, economical, political, and moral elements, and only when viewed from this lens, can educators and policymakers begin to accurately assess the situation and move towards sustained improvement (Ladson-Billings, 2006).

Previous research exploring the race gap in students' achievement scores state the need for further studies that include longitudinal data with a large minority population, enabling researchers to better study the various educational backgrounds and experiences. While Fryer and Levitt's (2003) study included schools with diverse populations, they recognized the value in gathering data from schools where minorities represented a larger portion of the student body, even suggesting that such studies might produce results significantly different from their study. Also noted is the opportunity to use such studies to explore the dynamics of the achievement gap in situations where minorities are among the majority group (Bali & Alvarez, 2004; Fryer & Levitt, 2003). A three-year study by Hebert and Reis (2009) did just that, investigating high-

achieving students in an urban high school. Results showed one of the main contributing factors to students' success is the enrollment in challenging, rigorous courses (Fryer & Levitt, 2003).

While there has been some success in narrowing the gap that separates minority students' achievement from their White peers, educators have yet to find sustained improvement in decreasing the ethnic disparities that exist in student achievement. The problem is widespread, occurring throughout the United States, and is consistent whether using national or state tests as units of measure. Just as an achievement gap exists, a high school dropout gap also exists, separating Black and Hispanic students from their White counterparts (Lee, 2002). The high school dropout gap narrowed during the same period that the achievement gap decreased and, just like the achievement gap, widened and has continued to increase since (Lee, 2002).

High School Dropouts

A discussion of the dropout rate should accompany any analysis of the achievement gap. A study spanning over 3 decades found that overall, Black students dropped out of school at a rate 1.5 to 2 times higher than their White peers (Kaufman, Kwon, Klein, & Chapman, 2000). The dropout rate for Black students improved, decreasing more than the dropout rate for White students until the mid 1980s. However, in the mid 1980s, the dropout rate for Black students remained constant, while continuing to decrease for White students. Because of those trends, the Black-White dropout gap narrowed in the 1970s and 1980s, but widened in the 1990s (Kaufman et al., 2000), and continues to widen, similar to the achievement gap.

Sufficient literature identifies academic difficulties as a significant factor in African American students' decisions to drop out of school (Bali & Alvarez, 2004; Lee & Burkham, 2003; Singham, 2003), and because many high ability students from culturally diverse populations in economically deprived urban environments are often high school dropouts

(Hebert & Reis, 1999), the literature in this area warrants review. Having made the connection between the achievement gap and the honors/AP enrollment gap, and because the patterns for the Black-White dropout rate mimic those for the achievement gap, perhaps the honors/AP enrollment gap could be linked to the dropout rate.

The Alliance for Excellent Education (2007) reported that 1.23 million high school students drop out each year, with minorities accounting for a large percentage of these students. Statistics for the state of Alabama reported that only 59% of high school students are graduating; these numbers being significantly lower than the national average of 69%, placing Alabama 47th in the nation in graduation rate (Alliance for Excellent Education, 2007).

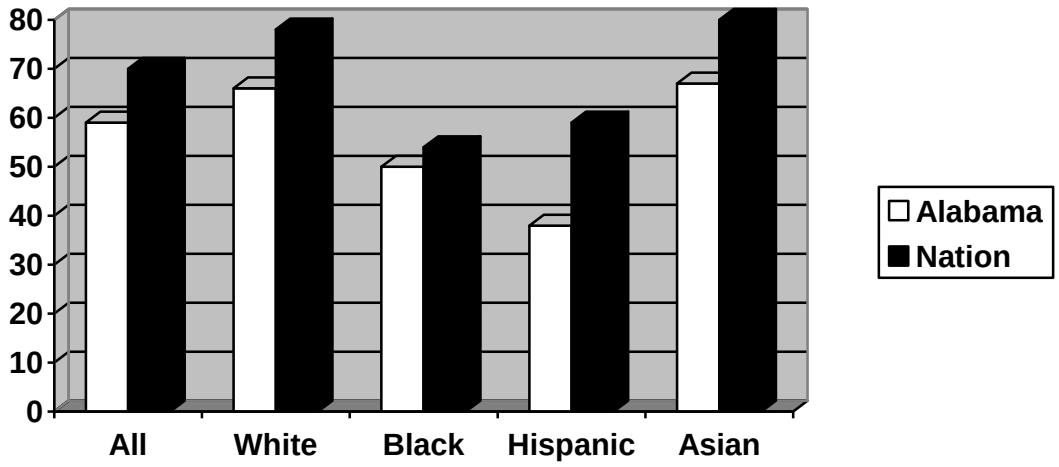

Figure 1. Graduation rates by race. Adapted from "Factsheet: High School Dropouts in America". Alliance for Excellent Education, Washington, DC.

The U.S. Census Bureau estimates that by 2050, about 50% of the U.S. population will be African-American, Hispanic, or Asian. With that shift in demographics, the performance of these students is a factor that should be considered. Nationally, the dropout rate for African American students is 23% higher than their Caucasian counterparts, and 15% higher in the state

of Alabama (Alliance of Excellent Education, 2007), warranting the need to investigate students' dropping out of school.

The Silent Epidemic, a study focusing on student dropouts, found the following:

- Half of dropouts surveyed stated they left because school was boring
- Over 40% reported peer influences as relating to their leaving school
- Over one third reported they were failing in school
- One-third left to get a job, become a parent, or care for a parent
- More than 80% felt as though they would have stayed in school if classes were more interesting

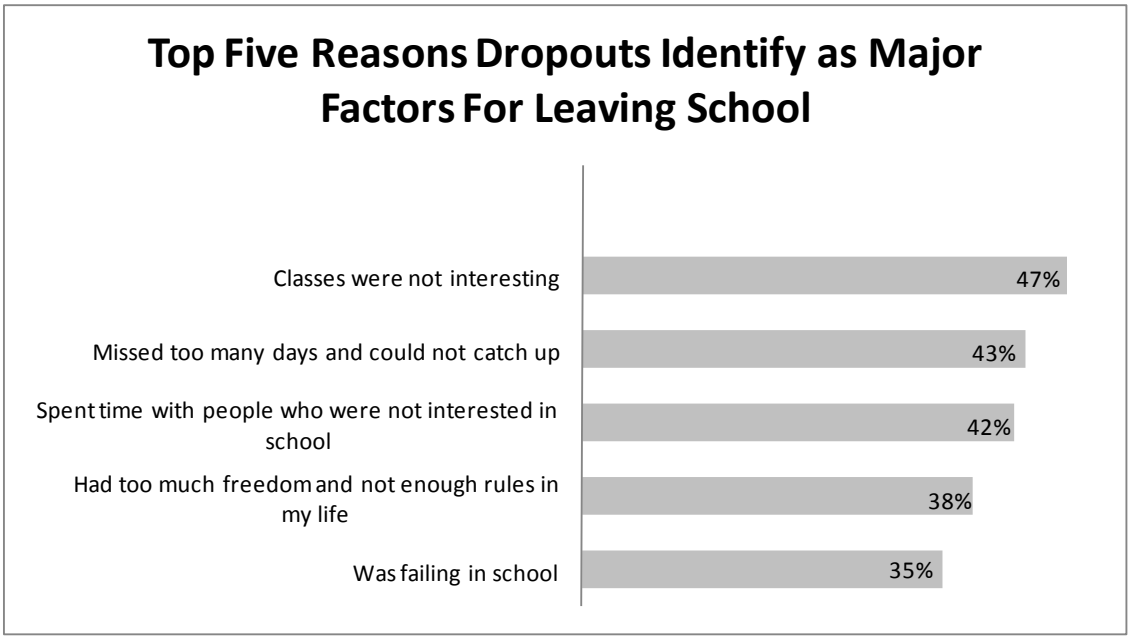

Figure 2. Top Five Reasons Dropouts Identify as Major Factors for Leaving School. Adapted from "The silent epidemic: Perspectives of high school dropouts", by Bridgeland, J., DiIulio, J., & Morison, K. (2006), Bill & Melinda Gates Foundation.

The report also stated that students of parents who were "somewhat involved" or "not involved" are more at risk to drop out than others. These parents often got involved once the child was in danger of dropping out, often being too late (Bridgeland et al., 2006).

The Alliance for Excellent Education (2007) also reported difficult transitions to high school, academic skills below grade level, and a lack of interest were all instrumental in leading to students' dropping out of school. Because most dropouts are already experiencing academic failure at the middle school level and engaging in behaviors that correlate to dropping out of high school, researchers have been able to identify specific risk factors. Some characteristics leading students to be labeled "at-risk" include failing grades, poor attendance, and behavior problems (Alliance for Excellent Education, 2007).

Addressing the dropout rate, Carpenter and Ramirez (2007) studied gaps that exist within ethnic groups as well as those between groups, finding that gaps within groups were more significant than those between groups. Indicators studied include the level of parental involvement, student discipline, and student retention. They found that students who were suspended and whose parents were not actively involved in the learning process are more likely to be the same group of students who did not achieve academically. Although minority students were more likely to be suspended than other students, Carpenter and Ramirez's (2007) study looked within the ethnic population seeking to identify factors that differentiated students within groups.

Although African American students make up 16 percent of the public school population, according to the National Center for Education Statistics (2006), these students are disproportionately concentrated in high-poverty, low-performing schools. Therefore, they are

vulnerable to poor educational outcomes that undermine their chances for success in life, further justifying the need to address African American student achievement and the gap existing between this subgroup and their White peers.

Several studies confirm that a disproportionate number of failing schools, across grade levels, are predominantly comprised of poor and racial minority students (Alliance for Excellence Education, 2007; Bali & Alvarez, 2004; Card & Rothstein, 2007; DeCuir & Dixson, 2004; Lee, 2002), and that these segregated schools tend to have less financial, human, and material resources than schools in more affluent areas (Borman & Kimball, 2004; Clotfelter et al., 2005; Temple, 2006). In thirty-one states, school districts with the highest minority enrollment get fewer resources than school districts with the lowest numbers of minorities enrolled (Alliance for Excellent Education, 2007). Furthermore, in high schools where at least 75% of the students are low-income, there are three times as many uncertified or out-of-field teachers teaching both English and science than in schools with more affluent populations (Alliance for Excellent Education, 2007).

The very limited research, primarily qualitative studies, viewing the achievement gap from the students' perspective, state that teachers' lack of knowledge of content material, inappropriate placement by guidance counselors, and a lack of concern by administration all lead to minority students underperforming in the classroom (Haycock, 2001). Students also cited boredom as the main reason they became disengaged in school, did not perform to their potential, and in some cases prematurely withdrew from school, confirming Haycock's (1998) assertion that "the teacher makes the difference" (p.16).

Coinciding with other literature suggesting very few strategies have been effective in decreasing the achievement gap, Murphy (2009) concluded that educators and policymakers

have the needed information to make significant changes. In fact, he further stated that the manner in which educators view the gap determines steps taken to remedy the situation, also asserting that there are many who are not familiar with the data and how to interpret it once disaggregated. Therefore, efforts towards improvement are destined to fail. Murphy (2009) suggested educators look at several cautions, first noticing the performance of various student subgroups and implementing group specific strategies. Educators commonly assign strategies for educating minority students inclusively, instead of seeking group specific interventions to implement with Black students and specific interventions with Hispanic students. He argues that having one set of strategies applied throughout negates the possibility of maximizing student learning (2009). Murphy (2009) also cautioned that "while the achievement gap literature defines equity in terms of groups, the reality is that equity must be determined one student at a time" (p. 3).

Research to date has been unable to identify a single cause for the gap among students' dropping out of high school; however, the more pervasive the achievement gap, the greater likelihood that the dropout gap will increase. Known is that, just as the dropout gap is related to the achievement gap, as the achievement gap narrowed, then widened, so has the gap separating minority students from their White peers, in terms of their participation in advanced/honors courses. Thus efforts to decrease the dropout gap might bring about change in the achievement gap, consequently increasing the number of minority students prepared for and enrolled in honors/AP courses.

Advanced Placement (AP) Program

Advanced Placement courses have grown significantly since inception. Understanding the benefits of taking AP courses, an increasing number of students are requesting the classes,

compelling secondary schools to increase the course offerings available. Because AP courses are among the most rigorous students can take, they allow college bound students to gain the skills needed for success in college. Thus, these courses have become the "preferred" courses for students with aspirations of attending a college or university upon graduation from high school. Honors courses provide students the opportunity to prepare for the rigor of AP courses and the challenging college environment. Many students in AP courses have previously taken honors courses in middle school; however, because the rigor and curriculum of honors courses depends on the school and teacher, data regarding students' enrollment and minority students' participation in honors classes is unavailable. Therefore, the review that follows focuses sole on the advanced placement program.

The AP program began in the 1950s through the fund for advancement of education through the Ford Foundation (CollegeBoard, 2003). The driving force behind the AP program was the large number of high school students proficient at college-level work, along with the numerous high schools that had both the desire and resources to offer such courses. The CollegeBoard took over the program in 1955 with the intentions of allowing advanced high school students the opportunities to earn college credits (CollegeBoard, 2010; Geiser & Santelices, 2004; Santoli, 2002). The CollegeBoard oversees the program by providing the framework for courses, a standard for testing, and a point of reference for colleges and universities to use to compare student achievement (Geiser & Santelices, 2004; Santoli, 2002). It is responsible for the development and facilitation of all facets of the program including administering the test to high school students meeting prerequisite standards. The standards include, but are not limited to, taking rigorous preparatory or honors courses (CollegeBoard, 2010).

Advanced placement programs have grown tremendously since inception. In 1995, approximately 1,200 students took the AP exams; however, in 2000, 845,000 students took the exams in 19 subject areas (Lord, 2000). Fifteen thousand schools participated in the AP program in 2006 and offered an average of eight different AP courses (CollegeBoard, 2010). Today, over half of America's high schools offer AP courses (CollegeBoard, 2010; Wakelyn, 2009), allowing high ability students to pursue college-level coursework while still enrolled in high school. Students can choose from among 37 courses depending on high school offerings, and examinations in 22 different subject areas, all standardized by the CollegeBoard (CollegeBoard, 2010). At the end of the class, students may choose to sit for the exam related to the course, or, in some schools, may take the exam without having completed the course. Those who score three out of five on the AP exam are awarded college credit in most colleges and universities in the United States, thus being able to get a head start on college coursework (CollegeBoard, 2010).

Students who enroll in AP courses at the high school level get quality points added to their grade point average (GPA), enjoy a more rigorous curriculum preparing for college, and have the opportunity to gain college credits prior to graduating from high school. Among the most common reasons is that of college admissions. The number of honors and advanced placement courses taken in high school is increasingly weighted as a factor in determining college admission and opportunities for scholarships (Collegeboard, 2002; Geiser & Santelices, 2004; Herr, 1992; Klopfenstein, 2004; Santoli, 2002). Although some studies state that such courses place too much pressure on students to achieve, and that the courses themselves are not strong indicators of students' potential to succeed and complete college (Geiser & Santelices, 2004; Klopfenstein & Thomas, 2006), the vast majority of the research presents honors and

advanced placement courses as strong indicators of students' potential to gain entry into college, opportunities for scholarships, and success in college (Archibald et al., 2009; Robinson, Fadali, Ochs, & Willis, 2002; Sadler & Tai, 2007; Wakelyn, 2009).

Advocates believe students' taking advanced placement courses increase postsecondary enrollment by improving motivation to continue academic studies (CollegeBoard, 2010). There has been a growing nationwide concern over the ability of America's high schools to prepare students for college. In the National Postsecondary Student Aid Study (NPSAS:40), 28% of first and second year undergraduates enrolled in four-year institutions are reported to take at least one remedial course (Norman et al., 2001). Simply graduating from high school does not necessarily mean that a student is ready for college level work, and considering that the students not yet ready for college are most likely minority (Darity, Castellino, Tyson, Cobb, & McMillen, 2001; Wakelyn, 2009), further study is warranted to explore their lagging behind White peers, and the connection between the low enrollment of minority students in more rigorous curriculum and the existing achievement gap.

In 2001, President George Bush proposed a plan to award a $28 million dollar increase to the $24 million already slated for the AP program established through the No Child Left Behind Act (CollegeBoard, 2010). The now $52 million increase in spending for the AP program resulted in low-income schools being able to train more teachers in AP and International Baccalaureate (IB), create more incentive grants for developing stronger AP programs, and absorb the cost of AP test fees (CollegeBoard, 2010).

Currently, only 25 percent of students earn a bachelor's degree in six years; a staggering number considering that by the year 2014, two-thirds of the jobs in the United States will require some college (CollegeBoard, 2010). Furthermore, AP courses increase the chances of being

admitted into college as one-third of colleges and universities use AP as criterion to determining scholarship recipients (CollegeBoard, 2010). A 2009 CollegeBoard publication, *Raising Rigor Getting Results: Lessons Learned from the AP Expansion,* revealed, "There are many benefits for students who take AP courses. They can study the subjects they are interested in and challenge themselves with students who are similarly motivated" (p. 2).

Students are also able to take dual-enrollment classes to earn both college and high school credit. However, according to *Lessons Learned from the AP Expansion,* compared to dual-enrollment programs, AP is held in highest regard because the course syllabi and exams are created and scored by teachers considered experts in their respective areas, and the design of the program allows for students and teachers to celebrate success together (Wakelyn, 2009). With dual enrollment, the scope of the course is largely dependent upon the college or university where the class is taken and the individual instructor. Students are given credit for the course after passing the class and paying the college tuition. There are no standardized tests required as with the AP program.

With the emphasis placed on rigorous coursework in preparation for college, AP courses are a viable option for any students who have the academic foundation, motivation, and drive to succeed. Because the courses are among the most challenging offered at the high school level, it is often the curriculum of choice by high achieving college bound students, competing for college admission and scholarships. With many colleges and universities using AP courses as a deciding factor in determining students' eligibility for admittance and scholarship opportunities, high school officials recognize the need to expose all college-bound students to the AP curriculum.

Minority Students' Participation in AP Courses

There are a number of reports that suggest the low enrollment of minority students in honors/AP courses is directly a result of the existing achievement gap, suggesting that an increase in the number of students in advanced classes would bring forth a narrowing of the enrollment gap (Darity et al., 2001; Taliaferro & DeCuir-Gunby, 2008). Although there are numerous factors contributing to the achievement gap, the connection is clear as elementary, middle, and junior high courses prepare students for the rigor of honors/AP courses. Because of the achievement gap, less minority students are enrolled in the pre-AP classes at the middle and junior high level, and therefore less are equipped with the skills needed to be successful in honors/AP courses in high school.

Minorities such as African American and Hispanic students are much less likely than White students with the same test scores to be enrolled in honors and advanced placement level courses (Bali & Alvarez, 2004; Ford, 1998; Lee, 2002). Although African American and Hispanic participation in the AP program is on the rise, a substantial gap still separates the participation of Caucasians and that of African Americans (Darity, Castellino, Tyson, Cobb, & McMillen, 2001; Johnson & Kritsonis, 2006; Klopfenstein, 2004; Ndura, Robinson, & Ochs, 2003), as depicted in Figure 3. In 1985, there were only 2,768 African American students taking AP courses in the United States, making up only one percent of all AP students (Journal of Blacks in Higher Education, 2006), but by the 1990s, African American participation had nearly doubled.

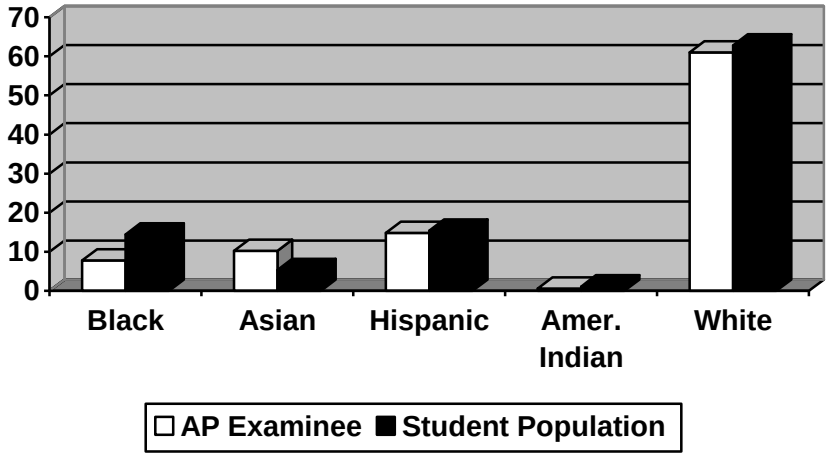

Figure 3. Comparison of High School Population and AP Examinees by Ethnicity

In 2004, African American students accounted for 4.6 percent of all AP test takers, which more than quadrupled the figures from 1985. Growth continued to increase in 2009 as African American students represented 8.2 percent of the AP testing population (CollegeBoard, 2010). But despite their gains, the participation of African Americans still lagged quite far behind that of Whites in AP programs across the nation (Journal of Blacks in Higher Education, 2006). Klopfenstein (2004) concludes that even when Black students are enrolled in schools offering a large number of AP courses, in many ways they do not have access to AP programs. Finding that low income is the single most important factor in the minority AP participation gap, the study asserted that this group of students did not enroll in honors/AP courses because of "unintended" costs related to class supplies and transportation (Klopfenstein, 2004). While low-income students from all races are less likely to enroll in advanced placement courses, Black students are three times more likely to be economically disadvantaged than their White peers (Klopfenstein, 2004).

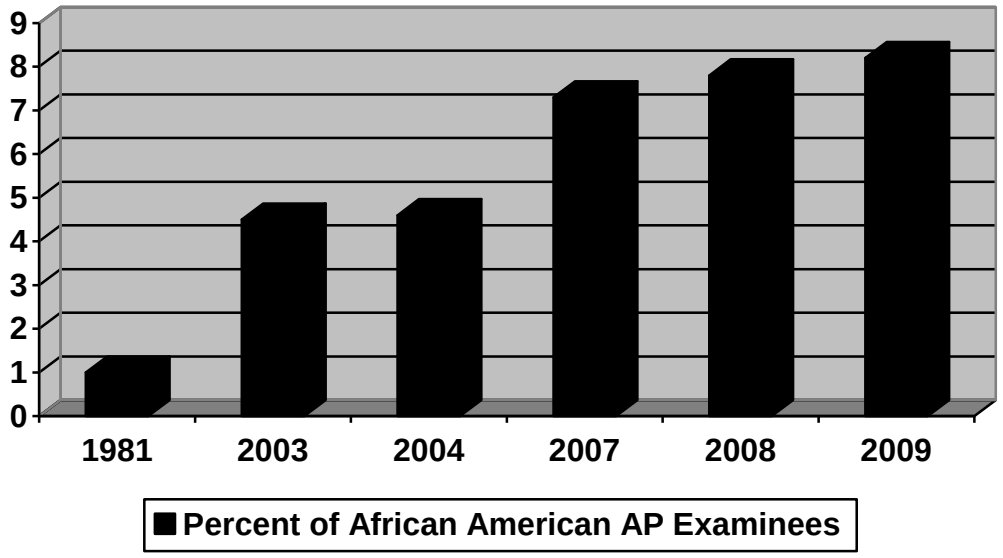

Figure 4. African American Students Represented in AP Population

To compare the extent to which minorities are underrepresented in AP and honors classes, Darity et al. (2001) explained the disparity index as a standard to use across schools, districts, and states to compare the percentage of minority students enrolled in honors or advanced classes to the percentage in the school population. Based on the assumption that the proportion of Black, Hispanic, and American Indian students enrolled in honors and advanced classes should match their proportion of representation in the student body, the disparity index is a statistic to assess the depth of the existing gap. To calculate the disparity index, divide the percent of students in honors and advanced courses that are minority by the percent of minority students in the student body. The result would display the level of representation of minority students in the more rigorous courses. A low disparity index, .25 for example, would indicate a significant level of underrepresentation of minority students in advanced/honors courses. A disparity index of 1.00 is considered parity, when the percentage of minority students in honors and advanced courses is equal to their percentage in the school population.

A study including data gathered from a school district of over 58,000 students attending eight high schools revealed that while minority students make up 30% of the school's population they represent 17% of the students in advanced placement courses (Ndura et al., 2003). Related to this ethnic gap of enrollment are a number of contributing factors, some resting within the individual and family, and others with the school. The list of factors identified as affecting racial and ethnic achievement gaps may include socioeconomic and family conditions, youth culture and student behaviors, and school conditions and instructional practices (Lee, 2002, p. 6). Each of these factors will be discussed and their relation to both the achievement gap and the honors/AP enrollment gap.

Contributing Factors to Achievement Gap and Honors/AP Enrollment Gap

A number of studies conducted have attempted to explain the academic achievement gap between minority students and their White peers. While there have been periods where the gap narrowed, both the achievement and enrollment gaps are realities throughout the nation and are consistent from kindergarten to high school (Lee & Burkam, 2002; NAEP, 2000). Because of the link between the achievement gap and the enrollment gap in honors/AP courses, it is important for educators to understand and explore contributing factors as closing the achievement gaps in the elementary and middle school years might bring about a narrowing of the achievement gap at the high school level and an increase in minority students enrolled in honors/AP courses.

Although a substantial amount of research has attempted to explain reasons for these gaps (Archibald, Glutting, & Qian, 2009; Bruce, 2009; Burris & Welner, 2005; Clotfelter et al., 2005; Darity, 2002; Fryer & Levitt, 2003; Janks & Phillips, 1998; Johnson & Kritsonis, 2006; Klopfenstein, 2004; Lubienski, 2002; Tyson et al., 2005), to date studies have been unable to

identify a single cause for this difference in achievement, but have named several contributing factors. As expected, the contributing factors for the academic achievement gap are similar to those factors that contribute to the gap in enrollment in advanced/honors courses and therefore will be addressed simultaneously. The following review of literature will explore the various factors researchers have associated with these gaps, categorized by home-related factors and factors related to the educational institution.

Home-Related Factors

There are a number of factors contributing to the achievement and honors/AP enrollment gap that separates minority students from their White peers. These factors, outside the school's sphere of influence, include low birth weight, malnutrition, television, student mobility, parental involvement, and socioeconomic status (Barton, 2004). Although difficult for schools to effectively address, they are still important factors to consider when examining what perpetuates the academic achievement and honors/AP enrollment gaps in schools.

Low birth weight. According to Barton & Coley (2009), babies with low birth weights run the risk of having difficulties with delayed motor and social development. Furthermore, they stated that "children falling in this category are more likely to fail or repeat grades due to the impaired development that often accompanies this low birth weight" (p. 9). Another study examining the relationship between birth weight and academic achievement found that smaller birth weight was associated with lower scores in reading and math, particularly in the five to seven age groups (Goosby & Cheadle, 2009). Sastry & Hussey (2003) explored the connection low birth weight has to reading and math scores. Their study yielded similar results stating that the adverse impact on students' abilities create conditions are difficult, sometimes impossible, to overcome.

Other studies confirm the hazardous effects low birth weight has on cognition. Almond, Chay, and Lee (2004) state that a correlation exists between low birth weight and cerebral palsy, blindness, deafness, and asthma in young children, as well as significantly reduced IQ. Also, a number of studies document a decrease in students' educational achievement associated with low birth weights (Behrman, Rosenzweig, & Taubman, 1994; Currie & Hyson, 1999). Conley, Strully & Bennett (2003) conducted a longitudinal study exploring the association between low birth rate and students' academic achievement in both reading and mathematics. Results of the study were consistent with other studies stating that low weight babies had a much greater chance of experiencing academic difficulties in school than other students who were not identified as having low birth weights. Furthermore, Conley et al (2003) reported that, in terms of social class and ethnicity, children are not at equal risk for low birth weight. The most economically disadvantaged students and ethnic minorities, are more likely to be born prematurely and have lower birth weight than their peers (Conley et al, 2003).

Overall, the research confirms the impact of low birth weight on student achievement as "beginning in the womb and extending through adolescence", thus having a significant impact on students' school performance and Behrman, Rosenzweig, & Taubman, 1994; academic outcomes, affecting their postsecondary opportunities and earning potential as adults (Goosby & Cheadle, 2009).

Malnutrition. The impact of proper nutrition is sometimes overlooked as a necessary component for students' successfully learning in the school environment; however, research exists confirming the link between students' nutritional status and their academic performance (Barton & Coley, 2009; Popkin, & Lim-Ybanez, 2002; Themane, Monyeki, Nthangeni, Kemper, & Twisk, 2003). Barton & Coley (2009) reported that malnutrition can have a negative impact

on students' cognitive development. Popkin & Lim-Ybanez (2002) concurs stating that improving students' nutritional status, along with other environmental factors, can improve academic achievement. Barton & Coley (2009) reported that Black and Hispanic children are three times more likely to be hungry than their White peers. Students from low-income homes are more likely to be undernourished and have intellectual deficiencies as a result of improper diet (Barton & Coley, 2009).

A longitudinal study by Themane et al (2003) followed 1,033 students, ages seven to fourteen, over several years with the purpose to determine if their health status was related to their educational achievement. With health status defined as height, weight, and body mass index, the study compared the students over time, looking for trends that emerged. Educational achievement was determined by status on standardized reading and math tests. Results from the study confirmed results from other research. Students' health status was positively correlated to their educational achievement, with age and gender marginally influencing the relationship (Themane et al, 2003). Students identified as being healthy scored higher on standardized tests than those identified as having a low heath status. Although each of the studies acknowledge that socioeconomic status and learning environment should be explored to determine the extent to which they influence the relationship, proper nutrition is clearly identified as crucial to students' well being and growth and development which affects their level of academic achievement (Barton & Coley, 2009; Popkin & Lim-Ybanex, 2002; Themane et al, 2003).

Television. Considering the significant role the media plays in the lives of children, one must consider its' relation to student achievement. Television viewings' negative impact on student achievement is based on the premise that more time spent watching television means less time spent studying. The average television viewing time per week is 27 hours, with students

averaging 8.1 hours studying each week. With a ratio of 3:1, it warrants exploring the relationship between television watching and students' academic achievement.

An abundance of literature spanning over the past 30 years focuses on the impact television viewing has on student achievement. Early studies linking television watching to student achievement are consistent with more recent literature identifying television as a potential barrier to students' academic performance. Angle (1981) and Beentejes (1988) investigated the impact television had on students' achievement in reading while Gorman & Yu (1990) focused on television watching and students' achievement in the area of science. Each of those studies reported a profound impact on academic achievement, with the level of impact being determined by the amount of time spent watching television and the value of the programs watched. Researchers have suggested that the negative relationship begins to manifest after ten or more hours of television per week, with the strongest relationship noticed after 30 hours or more (Thompson & Austin, 2003).

A study conducted in 1999 revealed that over half of U.S. students watched at least three hours of television each day with 60% of parents reporting that they rarely or never limit or monitor their child's television watching (Thompson & Austin, 2003). A study by Razel (2001) showed that the amount of time students spend watching television affects their academic performance in school. They estimated that for each hour a toddler watched television, their risk of attention problems increased by ten percent (Razel, 2001). A study of fourth grade students found that forty-two percent of Black children watched six or more hours of television per day, over three times the percent of White students who watch that amount of television (Barton, 2004), rendering them more susceptible to the harmful effects excessive television watching has on academic achievement. Thompson & Austin (2003) also reported that African American

youth watch television more than their white counterparts, citing that teens in the lowest per week viewing category are more likely to enroll in college, continuing their education.

While some researchers suggest television watching alone negatively impacts student achievement (Angle, 1981; Barton, 2004; Beentejes, 1988; Gorman & Yu, 1990) others suggest that it's not solely television viewing, but that along with lower teacher expectations and less parental involvement that work together to produce academic failure, particularly for minority students (Razel, 2001; Thompson & Austin, 2003). Other factors mentioned include socioeconomic status, student's IQ, and the type of programming watched. Regardless of the presence or significance of other mediating factors, each of the studies highlight the detrimental impact television viewing could have on students' academic performance.

Student mobility. Student mobility, referring to students who change schools frequently or throughout the school year, has an effect on public school students' academic achievement. Researchers distinguish between internal mobility (students moving within the school district) and external mobility (students moving into and out of the school district), indicating that higher income students more often transferred into and out of the district whereas low income students tended to transfer within the school district (Wright, 2000). While both negatively impacts student achievement, low achievement was associated more with internal mobility than external mobility (Wright, 2000).

A number of studies detailed the negative impact mobility has on student achievement, stating that students who have moved frequently tend to have lower test scores and classroom grades, and tend to be retained more often and be placed in special education classes (Rothstein, 2004a; Videro & Johnston, 2000; Wright, 2000). According to Viadero and Johnston (2000), the rate of student mobility is directly related to students living in poverty or in a single parent home.

Furthermore, of students who frequently changed schools, 41% were below grade level in reading, with 33% functioning below grade level in math (Viadero & Johnston, 2000). Because students with high mobility have to readjust to new teachers, classmates, and curriculum, it significantly contributes to their decrease in student achievement (Rothstein, 2004a).

While the negative effects impact students of all levels, it is most profound during the elementary years and within urban settings (Wright, 2000). There is conflicting literature explaining the level of significance assigned to student mobility and its effect on student achievement. Some studies stress the importance of educators acknowledging the role student mobility plays with regard to student achievement. According to Wright (2000), the level of emphasis on student mobility is apparent as some states have measures in place where standardized assessments exclude the results of students considered highly mobile, in terms of evaluating schools and districts.

Parental involvement. Numerous studies show the impact of parental involvement in students' academic standing (Rothstein, 2004a; Taliaferro & DeCuir-Gunby, 2008; Zhao & Akiba, 2009) stating that students whose parents are actively involved are more likely to experience academic success than students whose parents are not involved in their schooling. Taliaferro and DeCuir-Gunby (2008) stated that parental involvement, in research terms, is described as being informed, abreast, and an active participant both at home and at school. This delineation is important in that the teachers often describe minority parents as uninvolved in their children's schooling because their participation is not seen at the school level (Taliaferro & DeCuir Gunby, 2008).

There is sufficient research stating that African American parents are indeed involved in their child's schooling, but that their involvement is at home, not in the school (Taliaferro &

DeCuir-Gunby, 2008). However, because they are not seen at school as often as White parents, African American parents are often viewed as uninterested and unconcerned about their child's academic performance. Although they may be highly interested and involved at home, their absence from the school renders them uninformed about curriculum issues including the availability of AP and honors courses and procedures for enrolling students in such courses.

Additionally, Rothstein (2004) found that children whose parents read to them have a significant advantage over others in the areas of language acquisition and reading development. He asserts that because Black and Hispanic students are read to much less, this has a direct impact on the achievement gap (Rothstein, 2004). In a five year qualitative study of educators throughout the United States, Haycock (2001) asserted that teachers' primary concern with parental involvement was that "the parents don't care, the kids come to school without needed materials, the parents don't have books in the home, and they aren't home to witness what their children are doing" (p. 7). The level of parental involvement also impacts the enrollment gap as the parents of minority students are less visible at the school. Although their absence from the school environment is seen as a lack of care and concern, research indicates that because these parents are often inundated with financial and familial concerns, they often place their trust in the hands of educators, relying on them to make the best decisions for their students. Thus, these are also the parents who are likely unknowledgeable regarding the educational system, and will not advocate for their child's placement in advanced and honors courses. The end result is a lower number of minority students in upper level courses.

Socioeconomic status. Socioeconomic status (SES) also impacts the achievement and honors/AP enrollment gap. Students who live in poverty tend to have socio-emotional, behavioral, and academic problems. Research also shows economic conditions have an impact

on students indirectly by leading to other conditions such as parental distress, strained family relations, and impaired parenting (McLoyd, 1998). Problems associated with the socioeconomic factors were exacerbated by movement of jobs and families from inner cities to the suburban areas, resulting in a hostile environment for those students, families, and schools left in the city communities and schools. Because of such movement, inequalities in education have developed. The movement of families to the suburbs based on economic ability left inner city schools with the low income marginalized population trapped by their lack of economic ability.

Overall, students from homes with low SES traditionally perform worse academically than those from middle or upper- class homes. Also, in homes where parents' level of education is higher, more emphasis is placed on the value of and importance of academic achievement of their children. Students from low-income homes may want to achieve academically and in most cases are able to produce high-quality work; however, the problem comes from parents who do not understand the benefits of their child taking honors/AP courses. These students may not be selected for more rigorous courses and because parents are unaware of the educational system, do not challenge decisions made by teachers, school counselor, or administrator. Researchers believe SES plays a major role in the achievement gap between minority students and their White peers. In 1994, Emerson Elliot, U.S. Commissioner of Educational Statistics stated that "much of the minority/majority differences in achievement are due to the higher incidence of poverty in families of minority children" (Elliot, 1994, p.17). More recent studies confirmed poverty as the strongest contributing factor to the achievement gap (Dee, 2004; Johnson & Kritsonis, 2006; Lubienski, 2002) and honors/AP enrollment gap (Klopfenstein, 2004; Ndura et al., 2003).

Although unable to impact the previously mentioned factors, there are some factors directly related to the achievement and enrollment gap that are within the school's realm of influence. These factors are solely within the school's ability to change or adjust practices, procedures, or policies to increase the number of minority students participating in honors/AP courses.

School-Related Factors

The following factors contributing to the achievement gap and honors/AP enrollment gap are within the confines of the school: teacher experience and qualification, class size, access to technology, school safety, rigor of the curriculum, and tracking (Barton, 2004). These factors are important elements for educators to examine as they present the most practical opportunity to close the achievement gap. Unlike the factors previously mentioned, educators have a direct impact on the following factors that contribute to the achievement gap and the gap in enrollment in honors/AP courses.

Qualifications and experience of teachers. Research has consistently shown that teachers are the single most important factor making the difference in students' academic growth (Wright, Horn, & Sanders, 1997). Recent studies agree with previous research that the effects of an ineffective teacher are profound to the extent that they are damaging up to 4 years later (Borman & Kimball, 2004; Clotfelter et al., 2005; Thompson & O'Quinn, 2001; Wright et al., 1997). The qualifications and experience of teachers are also an important factor in narrowing the gaps that separate minority students and their White peers in both areas of academic achievement and enrollment in honors and advanced courses. There is an abundance of research that states students in high-poverty and high-minority schools are much more likely to be taught by out-of-field teachers (Barton, 2004; Borman & Kimball, 2004; Clotfelter, Ladd, & Vigdor,

2005; Haycock, 1998; Klopfenstein, 2004; Lankford, Loeb, & Wyckoff, 2002). Students in more affluent districts are being taught by highly qualified teachers with advanced degrees and training while poorer districts struggle to recruit teachers with the appropriate training for a particular subject or placement. These teachers — serving disadvantaged, at-risk populations — are ill-equipped to meet their needs. The cycle continues to contribute to the underachieving of minority students and underrepresentation of this group in more rigorous classes. Even well-intended teachers who are hired by these districts are often not prepared to offer the level of quality instruction and attention that is needed to begin to close the achievement gap (Barton, 2004; Haycock, 1998; Klopfenstein, 2004).

To further illustrate the disparity in experience and teacher preparation, minority and low income students are more likely to be taught by teacher with three or fewer years of experience and to be in schools with higher teacher turnover (Barton, 2004; Clotfelter et al., 2005; Haycock, 1998; Klopfenstein, 2004; Lankford et al., 2002). In some schools in poor and urban communities, non-credentialed teachers make up as much as half the faculty (Rodriguez, 2001). Furthermore, Quality Counts 2003 reported that the percentage of students in high poverty schools taught by a teacher without at least a minor in the subject is nearly double that of students in low-poverty schools.

Research citing the significant impact teachers have on student achievement, as well as the fact that minority and low-income students are disproportionately taught by under-qualified teachers provides further evidence that minority students who are behind their peers academically in the elementary years are not likely to progress to the point where they are performing at grade level by the time they reach high school. In fact, Borman and Kimball (2004) reported that when students have a nonqualified or inexperienced teacher, it takes

multiple years to overcome the effects and get students back on grade level, further lessening the chance of these students being able to enroll and succeed in honors/AP courses.

Class size. Class size is a contributing factor to the achievement and enrollment gaps as "shortages of qualified teachers translate into oversized classes" (Talbert-Johnson, 2004, p. 27). Although studies show small classes improve student achievement, particularly with minority students (Borman & Kimball, 2004; Molmar et al., 1999), classes with a high percentage of minority students are more likely to have 25 or more students (Barton, 2004). Several additional studies concur with the previous statement that schools with large minority populations tend to have larger classes (Borman & Kimball, 2004; Camara & Schmidt, 1999; Lankford et al., 2002). The more students that a teacher is responsible for, the less individual attention they can receive. Students benefit from having the ability to participate and interact with their teacher. However, this benefit is negated when students are forced to learn in large class settings (Talbert-Johnson, 2004).

Access to technology. Access to technology is another important factor in the achievement gap. While schools with high populations of minority students have computers, students in these schools are less likely to have access to these computers in the classroom (Barton, 2004). However, the issue of access to computers in schools has become increasingly less significantly in recent years (Technology Counts, 2007), yet gaps exist in the availability of internet in the homes of minority and non-minority students. Minority students are also less likely to be able to use the internet for conducting research at home but have roughly the same access to computers in school as their advantaged peers (Technology Counts 2007). Barton (2004) found that 61 percent of students in schools with low minority enrollments were assigned internet-based research assignments while only 35 percent of students in schools with a high

minority enrollment were assigned those same types of research assignments. A high minority enrollment is defined as 80 percent or more while a low minority enrollment is defined as less than 20 percent according to the U.S. Department of Education (NCES, 2005).

Unsafe schools. A final important factor highlighted by Barton (2004) is the impact of unsafe schools on the achievement gap. Students that attend schools in which they fear for their safety or worry about disruptions do not have an environment that is conducive to learning or study. The percentage of minority students that fear an attack at school or on the way to school is double that of non-minority students (pp. 12–13). Students need to feel safe and comfortable in order to be free to learn. Research has clearly shown that a positive disciplinary climate is directly linked to higher achievement (Barton, 2004, p.12).

Related to the issue of unsafe schools is the consideration that must be given to the physical condition of school facilities. Urban schools with high minority populations are more likely to be dilapidated than schools in more affluent areas. These schools with crumbling structures and little financial and moral support face significant social and structural inequity (Talbert-Johnson, 2004).

Rigor of curriculum. The rigor of the curriculum is a school factor that contributes to the achievement gap. According to several researchers, although all racial/ethnic groups are now taking more challenging courses than in the past, minorities still lag considerably behind, and they are underrepresented in Advanced Placement examinations (Archibald, Glutting, & Qian, 2009; Burton et al., 2002; Darity, Castellino, Tyson, Cobb, & McMillen, 2001). Despite the rise in number of students taking Advanced Placement courses, there is still a disparity in the curriculum that many White students are taking in comparison to their Black and Hispanic counterparts (Berlak, 2001; Darity et al., 2001; Ford, 1998; Johnson & Kritsonis, 2006). A study

conducted in 2000 found that while 90% of both Black and White students reported having taken Algebra and 81% of both groups stated they had taken Geometry, gaps began to emerge with the upper level math courses as 25% of White and 17% of Black students reported taking Pre-calculus, and 13% and 7% of White and Black students took Calculus (Lubienski, 2002). The disparity also appears with access to "gifted and talented" programs at middle and junior high schools. Only 6.9 percent of students of color had access to such programs, compared to 23 percent of White students (Berlak, 2001, p. 9). With such programs often considered the gateway to rigorous honors and advanced placement courses at the high school level, disparities at the elementary and junior high level are mimicked at the secondary level.

Tracking. One of the primary reasons given for the achievement gap and the disproportionate number of minority students in advanced and honors programs is institutional policies and procedures that allow tracking (Archibald et al., 2009; Burris & Welner, 2005; Clotfelter, Ladd, & Vigdor, 2005; Taliaferro & DeCuir-Gunby, 2008). Defined as the grouping of students based on academic ability (Hallinan, 1992), tracking is a controversial topic as educators, policy makers, and the general public debate its role in academic achievement and equity in schools.

Opponents of tracking believe separating students according to their academic level has many negative effects on the students, effects considered detrimental and irreversible (Carbonaro, 2005; Hallinan, 1992). A commonly reported harmful effect of tracking is students' tendencies to develop a low self-concept, resulting in a lack of confidence and motivation to achieve at higher levels (Archbald et al., 2009; Carbonaro, 2005; Hallinan, 1992; Rubin, 2003; Yonezawa & Jones, 2006). Other research agrees with the effect tracking has on students' self

concept, stating that it creates a social hierarchy based on individual student's track level (Burris & Welner, 2005; Clotfelter, Ladd, & Vigdor, 2005).

Those opposed to tracking believe classrooms comprised of students with varying abilities are the optimal learning environment to promote student learning (Ansalone, 2004). Furthermore, it is believed that such classes are more beneficial for struggling learners as they remove the stigma associated with being on a lower or less rigorous track. Finally, opponents of tracking believe students on the lower tracks receive less qualified teachers and inferior instruction (Hallinan, 1992). Additional studies coincide with Hallinan, stating that students in the higher-tracked classes tend to receive more quality instruction than those in the lower tracks (Ansalone, 2004; Carbonaro, 2005).

Individuals in favor of tracking believe that by separating students and grouping according to ability, they are better able to engage learners by incorporating strategies specific to the needs of the students (Ansalone, 2004). Although they may present a convincing argument supporting their stance, for the purposes of this study, the researcher explored the harmful aspects of tracking as a contributing factor to the decreasing number of minority students pursuing advanced courses at the high school level. Once students are placed on a specific track or course placement, subsequent courses are determined by prior courses taken. While students beginning on more challenging tracks can transition to less rigorous courses fairly easily, it is highly unlikely that a student beginning on a lower track would be able to successfully move to more rigorous courses (Archibald et al., 2009; Carbonaro, 2005).

Elementary, middle, and junior high schools engage in tracking students in determining, often limiting opportunities available for students as they enter high school (Archibald, Glutting, & Qian, 2009; Carbonaro, 2005; Rubin, 2003; Temple, 2006). Minorities and disadvantaged

students are also more likely to be placed in classrooms that emphasize lower-order skills, basic knowledge, drill and practice, recitation, and desk work (Lee, 2002). Consequently, underrepresentation in honors/AP courses very often leads to overrepresentation in remedial courses (Clotfelter, 2005). Although a study conducted by Archibald et al. (2009) stated that race did not significantly impact students' placement in courses, and the strongest determinant for placement was prior achievement, the majority of literature found contradicts Archibald et al. (2009) stating students are segregated by tracking and that Black students overwhelmingly make up the majority of students in remedial and standard classes, being underrepresented in advanced and honors courses (Clotfelter et al., 2005; DeCuir & Dixson, 2004; Hallinan, 1992; Solorzano & Ornelas, 2004).

Hallinan (1992) examined two aspects of the practice of tracking students for instruction in the middle school: the structure of a tracking system and the process of assigning students to track levels. The study further states that students assigned to tracks are strongly influenced by their track history, as well as by prior achievement, and there is a modest independent influence of select background characteristics (Hallinan, 1992).

A year-long study conducted by Rubin (2003) followed five ninth graders at a diverse urban school. The student participants were of varying abilities representing different ethnic groups. The study focused on teachers' procedures for grouping students for tracking in the classroom and the impact it has on the social world of the students. Rubin further states that the educational problems that created the need for tracking are rooted in systematic inequalities along race and class lines, which tracking reform alone cannot fully address (Rubin, 2003). Rubin's study confirms the difference in teacher practices and expectations for students, depending on which curriculum track students are on. It also serves as an example of the

difficulties experienced when teachers attempt to reverse the tracking process (Rubin, 2003), after being in place for many years.

Burris and Welner (2005), in a North Carolina Justice and Community Development Center Report, indicated that one of the major reasons there has been under representation of African American students in AP courses is largely due to school systems that have tracked these students through vocational training in lieu of college preparatory classes. Archibald et al. concur in viewing tracking as a major reason for the underrepresentation of minorities in advanced placement classes (2009). According to a U. S. Department of Education study (Archibald et al., 2009), many educators, teachers, principals, and the like, have not felt African Americans were up to the rigorous curriculum, one of the identifying marks of the AP program, and therefore place those students in lower curriculum tracks. Although educators might have had honorable intentions, tracking has produced some unintended consequences, mainly separating students by race and socioeconomic status, with minority students being overrepresented in lower curriculum tracks, and underrepresented in higher tracks (Thompson & O'Quinn, 2001). These factors have all combined to contribute to the consistently low representation in honors/AP courses (Archbald et al., 2009; Barton, 2004; Borman & Kimball, 2004; Haycock, 2001; Ndura et al., 2003; Taliaferro & Decuir-Gunby, 2008; Wakelyn, 2009; Whiting, 2009).

Although very few school officials would admit to having formal policies that track students, 80–85% of high schools offer a standard, advanced, and honors level curriculum that yields similar results — students being selected and geared towards college preparatory, vocational, or general education program (Archibald et al., 2009). However, because "tracking" often has negative connotations, schools may not refer to such practices as tracking, although

their practices group students according to ability level and set them on a path deemed appropriate, as determined by school officials.

Selection criteria/placement. CollegeBoard has been a strong advocate of schools opening AP enrollment to all interested students, stating, "it's not just for the elite, it's for the prepared" (Wakelyn, 2009, p. 3), yet school districts continue to have selection committees and specific criteria students must meet in order to be able to take AP courses (Ford, 1998). DeCuir and Dixson (2004) stated that the manner in which selection and admission into these programs is conducted "guarantee that students of color have virtually no access to high quality curriculum". Among those requirements are often specific achievement and aptitude test scores and teacher recommendations (Ferguson, 1998; Ford, 1998). A fair amount of research exists stating that various screening processes for schools may account for the underrepresentation of minority students in advanced courses (Darity, Castellino, & Ford, 1998; Ndura et al., 2003; Taliaferro & DeCuir-Gunby, 2008). Because of the lack of adequately trained teachers to make appropriate referrals, these students often get overlooked (Ford, 1998). Also suggested is that, because states and school districts have freedom in defining and placing students in gifted, honors, advanced, etc., many do not recognize or provide services to students that might be creatively gifted, artistically gifted, or gifted in leadership; most states serve only those intellectually and academically gifted (Ford, 1998; Oakes & Guiton, 1995), leaving many gifted students neither identified nor served.

In a study by Herr (1992), school administrators in various schools in the states of California and New York completed questionnaires regarding their policies for students' enrollment in honors and advanced placement courses. Over 1,000 teachers and administrators responded. Forty-four percent of schools reported that their AP program was open to all

interested students, while only 32% stated they had open enrollment for their honors classes. Also, from the same study, 22% required students to complete applications for entering AP classes, with 9% of the schools requiring applications for honors classes. Furthermore, 27% reported that they routinely schedule students into honors courses based on prior academic achievement; 10% followed the same procedure for advanced placement courses. The study suggested that admission into honors courses was inconsistent with placement into advanced placement courses. Criteria for placement into AP classes appeared to depend heavily on motivation and past performance whereas enrollment into honors courses relied on teachers' perceptions of students' innate ability, administrative decisions, and tracking.

With advanced placement programs, schools relying on selection committees to determine placement in AP courses might overlook students who have not demonstrated a high level of academic achievement due to boredom or lack of interest (DeCuir & Dixson, 2004; Ford, 1998; Taliaferro & DeCuir-Gunby, 2008). These students, not selected for advanced placement courses, are often minority students (DeCuir & Dixson, 2004; Taliaferro & DeCuir-Gunby, 2008).

A study from the North Carolina State Department of Public Instruction analyzed the underrepresentation of minority students in honors, advanced placement, and academically and intellectually gifted (AIG) programs, utilizing database records from all public elementary, middle, and high schools throughout the state (Darity, 2001). The report showed differences in the means by which schools determine placement into the more rigorous courses, according to grade level. While 90% of the students at the elementary level are placed into the AIG program through teacher recommendations or end of grade test scores (Table 2), 80% of high schools use teacher recommendations and 36% use test scores to determine placement (Table 3).

Additionally, 84% of high schools allowed students to place themselves in advanced courses, compared to the 66% of elementary and middle schools that allowed for student and parent requests.

Table 2

Criteria Used for Identification and Placement in AIG Programs

Criteria	Number of Schools	Percent of Schools
Teacher recommendation	775	90%
EOG test scores	770	90%
Cognitive/intelligence test	740	86%
Grades	703	81%
Self-selection (including parent request)	573	66%
Student Work portfolio	540	62%
Standardized achievement test	457	53%
Outside or independent assessment/evaluation	391	45%
Other assessment procedures	309	36%
Domain or skill-specific aptitude tests	113	13%

Table 3

Criteria Used by High Schools for Identification and Placement in Advanced Courses

Criteria	Number of Schools	Percent of Schools
Self-Selection	193	84%
Teacher Recommendation	185	80%
Grades	150	65%
Test Scores	84	36%
Other	50	22%
Total number of schools responding	231	

State officials were involved in initiatives to streamline the criteria for selecting students into upper level classes throughout the elementary and middle school years. Efforts to increase minority participation in rigorous courses at the elementary and middle school level increases the number of minority students prepared for high school level courses, thus increasing the number of minority students enrolled in honors/AP courses (Darity, 2001).

The federal government has assisted these efforts in pursuing excellence and equity through its' AP Initiative Program. Since 2000, the government has provided over $191 million in grants to both states and districts, with the specific goal to increase AP access and scores among underrepresented students (CollegeBoard, 2010). As a direct result of the AP Initiative Program, funds are available for teacher incentives and students from low income families no longer have to pay the $86 exam fee — the program includes provisions for those students to receive a fee waiver (CollegeBoard, 2010; Herr, 1992).

As a result, the past seven years has seen a 72 percent increase in students enrolled in AP courses. While 405,000 seniors took at least one AP exam in 2000, for the class of 2008 that number was 758,000. Despite the overall progress observed over the past years, gaps in equity continue to be an issue with enrollment in AP classes and success on the exams (Eworo-Enfumo, 2004; Ford, 1998). Fifty-one percent of students from high-income families have taken an AP class, while only 16 percent of low-income students have had that same opportunity (CollegeBoard, 2010). Furthermore, while African Americans represent 14 percent of all high school students, they account for only 3.5 percent of the students scoring mastery on AP exams (CollegeBoard, 2010).

Teacher expectations. Another factor linked to the underrepresentation of minority students in honors and advanced courses focuses on teachers' behaviors and practices. Several studies suggest that teachers have specific beliefs about students based on their ethnicity and act according to those beliefs (Ferguson, 1998; Johnson & Kritsonis, 2006). Believing that Black students are less capable than others, teachers might expect less of them and discourage them from pursuing more challenging courses and certain career areas (Johnson & Kritsonis, 2006). Such actions lead students to become uninterested in school and emotionally withdraw, also resulting in these students not taking the courses that will prepare them to more rigorous curriculum (Darity et al., 2001). Klopfenstein suggests that an increase in Black teachers might bring about an increase in expectations for Black students. Stated is that teachers with backgrounds similar to these students may take more interest in working with these students and raising their expectations (Klopfenstein, 2005). Furthermore, she stated that a Black teacher teaching an honors math class may increase the likelihood that black students will continue with additional upper level math courses. Although Burton et al. (2002) state that "good teachers of

minority students are good teachers to all students", Ferguson (2003) concurs with Klopfenstein noting that African American students tend to have less absenteeism and better work habits when taught by an African American teacher.

Well documented is the effect low expectations have on minority students. Because Black students often rely more on their teachers than their White peers, low expectations tend to have a more profound effect on their potential to succeed (Ferguson, 2003; Klopfenstien, 2005; Lubienski, 2002; Taliaferro & DeCuir-Gumby, 2008).

Racialized peer pressure. For nearly two decades racialized peer pressure has served as an explanation for the Black-White achievement gap. Many high achieving African American students struggling with identity and acceptance, and desiring to be accepted by their peer group, don't want others to perceive that they desire academic achievement. Therefore, they choose to act in a manner that is consistent to their peer group, denying their aspirations for achievement, for fear of being accused of "acting White". Because this occurs at such an important developmental stage, if not resolved, these circumstances can have detrimental effects on students' development and their overall academic performance (Tyson et al., 2005).

Over twenty years have passed since Fordham and Ogbu's (1986) article "Coping With the Burden of Acting White"; however, the theory, "acting White" still remains a major factor in the underachievement of Black students. This problem is exacerbated by many Black students not wanting to be seen as a "traitor" by acting in a manner deemed White. Fordham and Ogbu cite this as a major reason Black students do poorly in school, stating they experience alienation and ridicule from other Black students for their academic achievement. To resist the label, these students sometimes act out in class, are disrespectful towards adults, and intentionally fail academic classes they are well able to pass (Fordham & Ogbu, 1986; Tyson et al., 2005), in an

effort to avoid the harassment they may experience from their peers. Fordham and Ogbu (1986) assert that the "Acting White Syndrome" has historical beginnings with White America's perception that African Americans were physically skilled but lacking intellectually. Consequently, African Americans began doubting their own intellectual ability and began defining academic success from White America's perspective which resulted in them not valuing education and refusing to achieve while discouraging other African Americans from emulating what they associated with White America (Fordham & Ogbu, 1986).

Ogbu's (2003) Shaker Heights study was important to the field of education because it provides a plausible cause to the reasons why African American students choose not to be successful academically. Research conducted by Fordham and Ogbu (1986), a qualitative study of a predominately Black public high school, included eight academically successful Black males. Through discussions with the students, he suggests that one reason this group of students rejected academic success is because of their fear of the repercussions of "acting White". The term "acting White" is used to refer to Blacks who through their language or speaking, attitudes, or behaviors, engage in activities associated with White cultural norms (Tyson, Darity, & Castellino, 2005); the most obvious characteristic of acting White is the use of a dialect that is not present in the African American community.

Ogbu explains that the idea of acting White is unique to schools where Black students comprise less than 80% of the student population. Despite the negativity that is attached to student performance for middle-class Black students, no evidence is provided in the literature that substantiates the claim that all of the middle-class Blacks who receive good grades are unpopular and have abandoned their ethnic roots. The "acting White" theory provides one reason why African American students choose to underachieve (Thompson, 2005). Because

some students equate school success with "acting White", many Black students erroneously think that they must reject the mainstream cultural connection in order to succeed academically. These students feel that the cultural connection with African American family and community is deficient and devalued; or they may perceive that his or her family background, experiences, and modes of expression (verbal and nonverbal) are detrimental to academic achievement.

The behavior of acting White contradicts the cultural coolness that some African American males feel is necessary (2005). The facade of being cool and not wanting to achieve academically is normally masked behavior characterized by aloofness, lack of emotion, fearlessness, and detachment of owner and style (2005). Among the positive consequences of these masks are that they serve as protective mechanisms, giving African Americans (especially males) a sense of pride and serving as a form of social competence (2005).

According to Fordhan and Ogbu (1986), behaviors associated with "acting White" can be mentally stressful. In some instances, individuals who are labeled as "acting White" are accused of being disloyal to the Black community. As mentioned earlier, an individual's speech can be labeled as characteristics of acting White. Using standard English and using a distinct dialect used by Whites is viewed by the Black community as "talking White" and is considered to be pretentious because Blacks have a very distinct dialect. Fordham and Ogbu (1986) stated that the choice of being true to self and striving for academic success creates a burden on Black students and contributes to their low academic achievement. Students who enroll in honors and AP courses feel the brunt of harassment from their peers. Fordham and Ogbu's qualitative study consisted of interviews with Black students who reported being teased and ridiculed for taking advanced classes, carrying books home, and spending time studying (1986). Also reported is the social isolation felt by Black students who choose to enroll in honors/AP courses. Because there

are not many Black students in the upper level classes, they are less likely to be with their friends, greatly diminishing their desire to take the more rigorous courses (Bruce, 2009; Ferguson & Kennedy, 2001). This force, in addition to those of teasing, ridicule, and harassment should be considered and addressed by school administration.

As educators attempt to compensate for the effects of racialized peer pressure, Fordham and Ogbu state that the "Acting White Syndrome" is a strong part of the Black culture and may be impossible to eliminate (1986). He sees low school performance as a result of their experience in their community. Because African American communities have historically experienced substandard schooling, government-funded housing, and feelings that attaining an education proved useless when entering the job market, parents of these students have associated negative feelings with educational institutions and communicate those feelings to their students (Fordham & Ogbu, 1986).

A study by Tyson, Darity, and Castellino (2005) tested Fordhan and Ogbu's (1986) assertion that Black students aim to perform low in school because of racialized peer pressure. Stating that Black students take a stance early in their educational career against academic achievement, Tyson et al. (2005) gathered data from 85 interviews conducted with students from various high schools in North Carolina. Results showed that students who performed well academically, regardless of their race, were labeled a "nerd" or "geek" in high school. Nonetheless, several studies support Fordham and Ogbu's theory on "acting White" and the connection to the achievement gap.

With an abundance of factors contributing to the achievement and enrollment gaps, schools are not in a position to combat all forces, bringing about change in all cases. For those home-related factors that are beyond the school's influence, educators can only work with the

students as they present themselves, providing a supportive, nurturing environment. However, for those concerns that originate within the school, educators can take intentional and deliberate steps to bring about positive change in an effort to close the achievement gap and increase enrollment in honors/advanced placement courses. School leaders set the tone for the school and have the capacity to affect the learning environment for all students. Building-level administrators, in their actions, send messages to students, teachers, and parents regarding their vision for the school and what areas are of importance to them.

While there exists a large body of work related to school culture and climate, and their impact on student achievement (Stewart, 2007; Uline & Tschannen-Moran, 2008), this study is proposing the evaluation of schools based on the level to which they are considered inviting from the students' perspective (Wiggan, 2007), based on minority students' enrollment in honors/advanced placement courses. Research supports an Invitational framework as a possible angle to view and assess the school's ability to send encouraging or inviting messages to students (Hunter & Smith, 2007; Schmidt, 2007). In determining how to assess the level to which schools are considered "inviting", several researchers support the need to hear from the students, gathering their perspective.

Invitational Theory is suggested as an appropriate measure to identify characteristics research supports as being desired to promote optimal student growth and development. What follows is an overview of Invitational Theory citing the tenets and beliefs on which it was founded, and the connection to assessing the school environment as it relates to students enrollment in honors and advanced placement courses.

Invitational Theory

Invitational Theory of Practice (ITOP) is based on the premise that schools, in order to help students develop to their maximum capacity, should construct and maintain an ”inviting” environment in which individuals are encouraged and supported to succeed. Its holistic approach involves everybody and everything within the school. ITOP is not intended to replace other approaches that address school culture and climate, but to supplement existing programs by providing a theoretical framework which educators can use to improve the total school environment. ITOP supports the notion that individual programs or policies are not likely to produce sustained change as they tend to address the effects, not the causes (Stanley et al., 2004). ITOP focuses on the importance of overt and covert communication styles present in all environments, addressing the root of the problem and realizing the need to send caring messages to individuals with the goal of encouraging development of students to their fullest potential (Stanley et al., 2004). Invitational Theory has three basic assumptions: individuals are motivated, they choose their behavior, and they make the best decisions possible with the information they have at that time (Hunter & Smith, 2007). Grounded in the principles of respect, trust, optimism, and intentionality, ITOP provides a conceptual framework from which educators can use to promote a welcoming, or inviting, academic environment (Stanley et al., 2004), with the goal of ensuring the educational experience is positive, exciting, and enriching for all students, faculty, and visitors.

Invitational Theory identifies four levels of functioning dimensions involved in all human interactions: intentionally disinviting, unintentionally disinviting, unintentionally inviting, and intentionally inviting (Stanley et al., 2004), as displayed in Figure 5. These patterns are defined along a continuum of negative to positive effects on human development. Individuals that are

intentionally disinviting deliberately hurt and humiliate people with their words. Individuals that are unintentionally disinviting also hurt individuals but usually because of a lack of information or poor judgment. Individuals may behave in this manner because of inadequate training or their unawareness of the harmful effects their daily responses have on students. Unintentionally inviting individuals typically communicate in positive ways, but are not equipped with the skills necessary to effectively interact with others during difficult situations. Educators described as intentionally inviting are knowledgeable regarding the skills required to effectively communicate to promote to student growth (Stanley et al., 2004), thus being the preferred level of functioning.

	Inviting	Disinviting
Intentional	Individuals knowledgeable about skills required to effectively communicate in difficult situations.	Individuals who tend to hurt and humiliate people with their words
Unintentional	Individuals that positively communicate but lack the skills needed to interact in difficult situations	Individuals who hurt people as a result of misinformation or lack of judgment

Figure 5. Invitational Theory's Four Levels of Functioning describing the manner in which individuals communicate with each other and the messages sent to others.

According to Hunter and Smith (2007) "invitational education is a theory of practice for communicating caring and appropriate messages to facilitate individuals to achieve to their full potential as well as for identifying and changing those forces in schools which would defeat and destroy potential" (p. 8). The foundation of invitational education assesses the inequities found

in educational institutions in order to identify barriers that must be overcome so that all students have an equal opportunity to take full advantage of their educational experience. For this study, invitational theory is used to assess the school environment that influences students' decisions on whether to enroll in honors/AP courses. Because literature supports Invitational Theory's foundation that caring messages should be present to support and encourage minority students, Invitational Theory is being used to identify practices schools have in place that might prevent minority students from benefitting from the high rigor of curriculum honors and AP courses offer.

Schmidt's (2007) review of literature found that research on diverse populations from invitational perspectives was virtually nonexistent and that "perhaps what researchers and practitioners of invitational theory require is a schema or method by which to examine behaviors, the Five Ps (people, places, programs, policies, and processes) or other variables within multi-cultural and diverse contexts" (p. 17). Because ITOP requires a holistic approach, each of the five P's, intentionally inviting, should create the total environment where students can fully develop (Stanley et al., 2004). Schmidt (2007) asserted that an environment where educators make deliberately attempts to display behaviors that send caring messages to students, along with the presence of the 5 P's, foster the optimal environment for student growth and development.

People

Being the key component, people focuses on the quality of the relationship, and the degree to which individuals feel a sense of ownership in the overall success of the organization. Those schools described as inviting have an environment in which students feel as if they belong (Stanley et al., 2004). Additional research confirms that students who feel a sense of belonging

are more comfortable in the school environment and are more likely to enroll in honors/AP courses (Taliaferro & Decuir-Gunby, 2008).

Places

Places refer to the physical space in which students learn. The condition of the school building, classrooms, and equipment are all indicators important to the environment. Because school displays send the message of what is important and is focused on, educators should ensure displays and billboards are an accurate representation of the message sent to students and the community (Stanley et al., 2004). The quality of school facilities have also been linked to both teacher attitudes and behaviors, which affects student learning (Uline & Tschannen-Moran, 2008).

Policies

Including both written and unwritten procedures and regulations, policies need to be more inclusive and accommodating for all students (Archbald et al., 2009; Ford, 1998; Herr, 1992; Klopfenstein, 2004; Stanley et al., 2004; Taliaferro & DeCuir-Gunby, 2008). This specifically relates to the participation of minority students in honors/AP programs. Because research acknowledges the number of schools with unintentional barriers that prevent minority students from enrolling into the honors/AP courses (Johnson & Kritsonis, 2006; Taliaferro & DeCuir-Gunby, 2008; Wakelyn, 2009), schools should focus energy on ensuring criteria and policies regarding admission into these programs are fair to all students, and are equitably divided.

Programs

Programs are extremely important in the schools as ITOP programs seek to promote success of all students thorough the various programs offered. In relation to the enrollment gap

in honors/AP programs, programs that group students are not indicative of ITOP schools. Schools including aspects of invitational theory have programs in place that provide additional support and encouragement students need (Stanley et al., 2004). Programs such as advisory teams, after-school tutoring, and activities for at-risk students are proactive measures schools have in place to help facilitate student growth and development.

Processes

Processes describe the manner in which the other P's are present in the school. By examining processes, one can determine the extent to which teachers, administrators and the school environment are seen as caring, collaborative, and nurturing towards students (Stanley et al., 2004). Several researchers stress the importance of assessing students' perspectives on the school environment (Stanley et al., 2004). While limited qualitative studies exist that address the school environment through the eyes of students, large scale quantitative studies are suggested to gain a perspective of areas in need of improvement (Taliaferro & DeCuir-Gunby, 2008).

With the foundation based on ITOP, Schmidt (2007) viewing the importance of the learning environment, proposed six elements of diversity: equity, expectation, enlistment, empowerment, encouragement, and enjoyment. He asserted that researchers can use the elements to examine the quality of relationships found within school and business organizations in terms of diversity. Within this study, these six factors are used to assess the extent to which schools recognize, accept, and embrace diversity, which may impact students' decisions to enroll in honors and advanced placement courses. Acknowledging that these factors are not all inclusive measures of diversity, for the purpose of this research, the six factors are presented as a possible framework to describe the level to which schools are viewed as "inviting", through the eyes of the students. Schmidt (2007) asserted that these 6 Es represent desired characteristics that, when

collectively present, promote the caring, nurturing, and supportive environment needed to develop students to their fullest potential. To further test Schmidt's theory, this researcher suggests that such an environment might result in an increase in minority students enrolling in honors and advanced placement courses.

Equity. Referring to fairness and equality in the treatment of individuals, from an invitational perspective in relation to this study, equity denotes equal access and opportunity for all students (Schmidt, 2007). With education serving as "the great equalizer", it is expected that educators ensure equity in providing opportunities for all students to succeed and increase their capacity for learning. Despite educators' goals to ensure all students have equal access to all programs, schools continue to allow barriers in place that prevent students from participating in honors/AP courses. African American and Hispanic students are less likely than White students with the same test scores to be placed in honors and advanced placement level courses (Lee, 2002). Because a disproportionate number of predominately minority schools have inadequate resources and inequitable distribution of teaching materials (Barton 2004), too many students who come to school behind are falling further behind through no fault of their own. The lack in resources makes it impossible for these students to make up ground for the gaps that already exist or to maintain the same progress as their peers.

The disproportionate number of minority students that are tracked into lower curriculums or placed into classes that focus on basic skills also speaks to equity (Burris & Welner, 2005; Carbonaro, 2005; Clotfelter et al., 2005). These students who are assigned lower level courses in elementary and middle school have very little chance of catching up and succeeding to the level of their peers because of the educational system's placement. Schools continue to have procedures in place where the selection and admission into honors/AP programs unintentionally

ensure that minority students will not have access to college prep or high quality curriculums (DeCuir & Dixson, 2004). Selection processes involving teacher recommendations are unfair for minorities as the teachers responsible for the recommendations are often unaware of minority students and their potential, and therefore do not recommend them for AP classes (Taliaferno & DeCuir, 2008). For those reasons, the concept of equity is directly related to closing the achievement and honors/AP enrollment gap separating minority students from their peers.

Another issue of equity relates to the curriculum received by minority students. Because minority students are more likely to be taught by teachers that are not highly qualified (Borman & Kimball, 2004; Clotfelter et al., 2005; Richardson, 2008), in schools with larger class sizes, and have ineffective and inadequate guidance counselors (Johnson & Kritsonis, 2006), they are more likely to receive education consisting of basic skills — lacking the higher order thinking skills more rigorous courses offer.

In relation to minority students' enrollment in honors and advanced courses, equity promotes fairness in the screening and identification process (Ford, 1998), adequate guidance from school counselors, who are often the gatekeepers of honors/AP programs (Johnson & Kritsonis, 2006; Wakelyn, 2009), and access to programs other students are afforded the opportunity to participate in. Students may have equal rights, but with such barriers in place minority students do not have the opportunity to exercise those rights (Taliaferno & DeCuir-Gunby, 2008). These barriers include those specified in the preceding sections as well as those hidden barriers which include funds to purchase required supplies or transportation to and from school if classes are held at times before or after public transportation is available (Taliaferno & DeCuir-Gunby, 2008). In order to achieve true equity, school administrators must take intentional steps to remove institutional barriers that hinder or discourage minority students from

enrolling in and participating in honors and advanced courses (Taliaferro & De-Cuir-Gunby, 2008).

Expectation. Earlier research laid the foundation for emphasizing the impact teacher expectations had on students' behavior and their desire to learn. Merton (1948), Clark (1965), and Rosenthal and Jacobson (1968) explored the effect teacher expectations had on students. Each of them wrote scholarly articles and books focusing on how teachers' expectations promoted a self-fulfilling prophecy within students (Brophy, 1983). Teachers who have high expectations instill in students a sense of confidence, while those teachers whose actions indicate they have low expectations for students foster self doubt within the students (Brophy, 1983).

Many studies document teacher perceptions and expectations as being related to student achievement (Baron, Tom, & Cooper, 1985; Brattesani, Weinstein, & Marshall, 1984; Cabello & Burstein, 1995; Ferguson, 2003; Kuklinski & Weinstein, 2001). Tenebaum and Ruck (2007) conducted a quantitative study examining whether teachers' expectations differed for minority students, as compared to their White peers. Assessing the extent to which teachers used positive or negative speech and made positive or negative referrals for students, the study found that teachers tended to have higher expectations for Asian American students, and had more positive expectations for White students as opposed to Black or Hispanic students (Tenebaum & Ruck, 2007).

Because teacher expectations influence the goals set for individual students, when a teacher has low expectations for a particular student, they may choose to limit the time, energy and resources spent assisting the particular individual (Ferguson, 2003), further limiting that student's learning potential. These actions lead to students lacking the preparation necessary to progress in their academic classes. Because there is supporting evidence that teachers have

lower expectations for minority students (Darity et al., 2001; Ferguson, 2003; Johnson & Kritsonis 2006), and that Black students feel frustrated and defeated when they feel they have to prove they should be in honors classes (Ferguson, 2003), the gap in the number of minority students enrolled in honors/AP courses at the high school level is supported. In fact, the review of literature regarding teacher expectations clearly indicates that teachers' perceptions, expectations, and behaviors affect students' beliefs and behaviors, and academic performance in ways that perpetuate the Black-White test score gap (Ferguson, 2003), thus impacting the enrollment gap.

Expectation of peers is also an issue that must be recognized. Because friends are more influential with minority students than with White students (Ndura et al., 2003; Taliaferro & DeCuir-Gunby, 2008), and have an impact on student achievement (Taliaferro & DeCuir-Gunby, 2008), acknowledging the role of peer expectations as it relates to course selection and academic achievement is warranted. Several studies reveal a relationship between peer relations and student achievement, particularly with minority students (Bruce, 2009). Research states that minority students are more likely to enroll in honors/AP courses if their friends are in the classes, and are less likely to enroll in the classes if they are teased or bullied for what some Black students refer to as "acting White" (Ferguson & Kennedy, 2001). Although studies exist that show that the "acting White" hypothesis is not prevalent in all schools (Tyson & Castellino, 2005), several studies refer to this as an explanation for the Black-White achievement gap.

Enlistment. The concept behind enlistment is to gather cooperation from individuals in efforts towards a common goal. Schmidt (20007) stated that schools interested in enlistment involve all stakeholders in plans to move the organization forward. In relation to the study, schools would seek to educate minority students and parents about honors/AP courses, allowing

them to make informed decisions about the curriculum they receive. Because African American students desire a sense of belonging, it is imperative that they feel connected to the school and have a voice in their educational decisions (Taliaferro & DeCuir-Gundy, 2008). Schools are responsible with ensuring these students are connected to the school (Taliaferro & DeCuir-Gumby, 2008). Steps schools can take to show aspects of enlistment are ensuring safety nets are in place to help those students who may reluctantly enroll in advanced/honors classes (Rubin, 2003; Taliaferro & DeCuir-Gundy, 2008), ensuring teachers and counselors are in the role of the child's advocate, particularly in instances when the parents are not aware or uninvolved (Taliferro & DeCuir-Gundy, 2008). The fore-mentioned steps would have an individual affect on students, with the intent to increase the likelihood that they will enroll in more challenging classes (Schweinle, Turner, & Meyer, 2008).

Empowerment. According to Schmidt (2007), empowerment allows individuals the authority to make decisions that affect them. It also includes instilling self-confidence in students' ability to succeed. Key to the concept of empowerment is building relationships. Schools that allow students the opportunity to make decisions that affect their academics, fosters a sense of belonging within the student, resulting in increased motivation and improved academic achievement. Teachers and counselors who adequately inform students of the benefits of taking honors and advanced courses are fostering a sense of empowerment by providing them with the information they need to make an informed decision and reach their fullest potential (CollegeBoard, 2002; Klopfenstein, 2004; Taliaferro & DeCuir-Gunby, 2008). Schools that empower students spark motivation within themselves to pursue academic success (Herr, 1992; Klopfenstein, 2004). Students not empowered through school tend to posses low self-efficacy, lack confidence, and have a fear of failure (Klopfenstein, 2004; Schweinle et al., 2008; Tyson et

al, 2005; Whiting, 2009). Research connects minority students' need to be involved in decisions that affect their education, having a voice in school academics (Whiting, 2009; Yonezawa & Jones, 2006).

Encouragement. Many researchers highlight encouragement as a vital component of human relationships (Klopfenstein, 2004; Ndura, Robinson, & Ochs, 2003; Schmidt, 2007; Taliaferro & DeCuir-Gunby, 2008). According to Schmidt (2007), encouragement is an important element in working with diverse populations as it denotes "being with", as the individual is an active participant, as opposed to "doing to". Furthermore, Schmidt distinguished between encouragement and praise, stating that encouragement produces long-term effects while praise tends to have short-lived results (Schmidt, 2007).

Several studies connect minority students receiving encouragement from teachers to students enrolling in honors/AP courses (CollegeBoard, 2002; Darity et al., 2001; Klopfenstein, 2004; Ndura et al., 2003; Taliaferro & DeCuir-Gunby, 2008). Research also connects minority students' desires to please their teachers with the amount of effort put forth in courses, even if the courses are more challenging than their current level of performance (Ferguson, 2003; Ndura et al., 2003). In a study of over 58,000 students representing 8 high schools, over 40% of minority students responded that no one encouraged them to sign up for advanced placement classes (Ndura et al., 2003). A study of North Carolina high schools reveal only 18% of the 231 schools surveyed reported having special programs in place to support and encourage students who might otherwise not be placed in advanced and honors curriculum (Darity et al., 2001). Also, because of the history of unfair practices in the educational system, some African American students have a lack of trust for educators and the educational institution in general.

These students in particular would benefit from and need encouragement and support from teachers, counselors, and administrators.

Students need encouragement to be successful in school. Minority students in particular should receive support and encouragement from teachers who have high expectations for them and communicate those expectations to the students. With such an environment, this study suggests that minority students are more likely to enroll in honors/AP courses, when they feel someone expects them to perform and is available for support as needed.

Enjoyment. Schmidt (2007) stated that enjoyment complements the other elements as a necessary component for schools to address current practices and determine the extent to which they are inviting of diverse cultures. Additional studies concur with Schmidt's assertion that enjoyment is necessary for minority students to feel comfortable at school and take an interest in school activities and programs (Hebert & Reis, 1999). Other research parallel these stating that in schools where minority students felt their achievements or accomplishments were not celebrated or acknowledged, they did not enjoy school and were more likely not to participate in honors/AP courses, regardless of their potential to succeed in the course (Ndura et al., 2003).

Summary

While the previously mentioned research supports the theoretical basis for using Invitational Theory as a framework for assessing the degree to which students perceive their school as inviting, studies assessing such aspects are limited. A number of qualitative studies, previously described here in the literature review capture the perspectives of the students (Bridgeland et al., 2006; Bruce, 2009; Darity et al., 2001; Ferguson & Kennedy, 2001; Fordham & Ogbu, 1986; Gross, 1993; Haycock, 2001; Tyson et al., 2005; Yonezawa & Jones, 2006), yet very few such quantitative studies exist (Casteel, 1997; Ndura et al., 2003). Also, several authors

note the importance of students' voice in school improvement and the need for large scale quantitative studies focused on capturing students' voices (Bridgeland et al., 2006; Darity et al., 2001; Wiggan, 2007).

Chapter 2 provided a summary of the literature on topics related to the achievement and honors/AP enrollment gap that separate minority students from their White peers. Methods used in the study to collect and analyze data will be discussed in the following chapter.

CHAPTER 3. METHODOLOGY

"The real illness of the American city today, and especially of the deprived groups within it, is voicelessness."

— Henry Cox, U.S. Educator

Introduction

This chapter describes the methods that were used to answer the five research questions that guided this study. Using both quantitative and qualitative methods, this study examined the honors/AP enrollment gap of minority students and their White peers in Southeastern High School. This research detailed students' perceptions of characteristics of the school environment that both promote and prevent minority students from achieving success by enrolling in more rigorous classes. The overall purpose of this study was to utilize the Program Access Student Survey (PASS) to describe, from the perspective of the students, the environment which encourages students to enroll in honors/AP courses at the high school level. A second purpose was to determine if students' responses to PASS differed based on ethnicity and socioeconomic status. This chapter begins with a description of the setting where the study was conducted. Next, I describe the design of the study and the participants involved in the study, followed by a discussion of the development of the research instrument and data collection procedures and data analysis.

The research for this study was guided by the following questions:

1. What difference, if any, exists among honors/AP students and non-honors/AP students' perceptions of the school environment?

2. What difference, if any, exists among minority students and non-minority students' perceptions of the school environment?

3. What difference, if any, exists among free/reduced lunch students and non-free/reduced lunch students' perceptions of the school environment?

4. What factors do students report as playing a significant role in their decisions to enroll in honors/advanced placement courses?

5. What factors do students report as playing a significant role in their decisions not to enroll in honors/advanced placement courses?

Description of Setting

Southeastern Public Schools is located in the southeast United States. The district underwent the process of accreditation and each of the fourteen schools within the district received accreditation through Southern Association of Colleges and Schools (SACS). The district serves approximately 11,000 students within the six elementary, four middle/junior high, and four high schools. Demographics for the district reveal the population as 71% Caucasian, 27% African American, and 2% Other. The district is divided into four communities and Southeastern High School is located in one of the two larger communities.

Southeastern High School (SEHS) is located in a city with a population of approximately 17,000 individuals. SEHS has an enrollment of 1,192 students in grades 9–12. Students living in the three neighboring cities attend school at SEHS, as well as some students who live in a neighboring community but are zoned for the school. Student demographics mimic those of the district with 68% Caucasian, 27% African American, and 5% Other (Asian/Pacific Islander, Hispanic, and American Indian). Approximately 42% of the student population receives free or reduced lunch.

SEHS had not made Adequate Yearly Progress (AYP) in 4 years until the current school year (based on 2009–2010 data). In each of the preceding years, the groups failing to meet proficiency standards were Black students and the free/reduced lunch subgroup. Prior to the current year, the school was in school improvement and had a Peer Mentor assigned from the State Department of Education with the goal of intervening to assist the school in ensuring all students achieve proficiency rates. Because SEHS met the AYP proficiency goals for 2010–2011 school year, school officials were looking to expand the AP program, including increasing the number of minority students enrolled in honors/AP courses. The school applied for and received an Advanced Placement and College Ready Initiative program that provided assistance in the preparation of teachers of AP and pre-AP courses, funding for supplies, test preparation materials, and incentives for both students and teachers.

In preparation for implementation of the College Ready Initiative, the school sought to expand the AP courses offered and aggressively recruited students for the various AP courses offered. Prior to program implementation, the school offered standard and advanced level courses in each of the core subjects (English, math, science, and history), and advanced placement and dual enrollment courses in no more than two areas, as determined by the students' requests. Those decisions were made in the Spring of each year when students registered for classes.

For the 2009–10 school year, the mean ACT score was 19.6, with 20.3 being the state average, and 21.0 the national average. Approximately 67% of SEHS students attended a two or four-year college or university upon graduation. Because success in AP courses was considered to be indicative of college acceptance and student performance in college (Wakelyn, 2009), it suggested that there was great potential for expansion of the AP program.

Although previous years' data reflected that some gains had been made in minority students' representation in AP classes (Table 4), a great gap continues to exist when comparing them to White peers. In examining the extent to which minorities are underrepresented in AP and honors classes, the Disparity index was used as a standard to compare the percentage of minority students enrolled in honors or advanced classes to the percentage in the school population (Darity et al., 2001). Based on the assumption that the proportion of students enrolled in honors and advanced classes should match their proportion of representation in the student body, the disparity index is a statistic to assess the depth of the existing gap. The disparity index is the ratio of the percent of students in honors and advanced placement courses that are minority by the percent of minority students in the student body. A value of one indicates parity, meaning minority students' presence in the more rigorous courses is equal to their presence in the population. A value of .25 indicates a significant level of underrepresentation, and .50 indicates a moderate level of underrepresentation. The disparity index for the current school year is .50, indicating a moderate level of underrepresentation of minority students in honors and AP courses.

Using the Disparity index identified by Darity et al. (2001), the number of minority students taking honors/AP courses compared to the number in the school population (Tables 4 and 5) mimics the disparity that exists within the nation. In fact, an even greater disparity exists when considering only AP classes, as displayed in Table 4.

Table 4

Disparity Index — Representation in AP Classes by Ethnicity

	% of All Students			% of AP Students			Disparity Index		
	2009	2010	2011	2009	2010	2011	2008	2009	2010
Subgroups									
White	69%	68%	64%	88%	86%	83%	1.28	1.24	1.30
Minority	30%	32%	36%	11%	14%	17%	.37	.44	.47

Table 5

Disparity Index — Representation in Honors Classes by Ethnicity

	% of All Students			% of honors students			Disparity Index		
	2009	2010	2011	2009	2010	2011	2008	2009	2010
Subgroups									
White	69%	68%	64%	83%	78%	77%	1.20	1.14	1.18
Minority	30%	32%	36%	17%	22%	23%	.57	.69	.64

Schools are interested in increasing the enrollment in honors and advanced placement course as the courses offered appear to be the main factor between this school and others of similar size and demographic population, yet higher ACT scores and more students receiving scholarships. Comparing this school to three others in the southeast U.S., this schools' average ACT score is 19.6 while others have scores of 21.3, 21.4, and 22.0. The primary difference noted was the number of advanced placement courses offered. While Southeastern High School offered a total of six AP courses, beginning in the 11th grade, the other schools offered 11, 12,

and 15 AP courses, respectively, with students being able to enroll in courses as early as their 10th grade year.

With the goal of increasing the number of all students participating in honors and advanced placement classes, several barriers were present that hindered the growth of the AP program, specifically finances, both for the school and individual students, and a shift in the school's focus. Finances consistently impacted the number of students who enrolled in AP courses. Because the school was allotted a certain number of teaching units each year, officials often found themselves deciding whether to offer an AP Physics class with eight students, or fill the slot with an additional anatomy class to reduce the teacher-student ratio in the standard classes. Finances also had an impact on the individual students enrolled in AP courses. Although low-income students have a portion of the testing fee waived, there are other unintended costs that prevent them from enrolling in the courses. Students without adequate transportation to attend Saturday study sessions, or those who cannot afford to purchase materials that are desirable but not required for the class, find themselves at an unfair disadvantage because of their financial status.

With the Advanced Placement Initiative, finances were no longer an issue for students or the school. The initiative included funding for teacher and student materials, professional development, transportation, and other items deemed necessary for students to be successful in the program. The program also provided afternoon and weekend sessions to ensure students were adequately prepared for class and the AP exam they would take at the end of the course.

The academic focus also hindered the growth of the AP program. Because the school had not made AYP in four years, all efforts focused on improving the academic standing towards school improvement. Because school improvement goals focused on a test based on the

minimum standards, SEHS officials spent much time and energy focused on making AYP; with the AP program being secondary. Because the school made great academic strides, AYP status was no longer a concern and the shift moved towards improving the AP program, increasing the number of students enrolled and the number of students making qualifying scores.

Another barrier to students' enrolling in more rigorous courses was the manner in which identification and selection of students occurs. The AP initiative also focuses on improving the identification process and ensuring all students are supported and encouraged to participate in AP courses. The school was also working to include the parents in the move to increase AP enrollment. Because of the school-home connection, it is imperative that educators involve parents in order for the program to succeed. As in all communities, the school is but a mere microcosm of the larger community. While teachers and administrators have some influence on students' decisions regarding course selection, the larger community, including friends, parents, and other outside forces, has a great impact on student decisions as displayed in Figure 6. Thus, the study not only addressed the school environment but also friends and family that contributed to students' decisions regarding the level of courses in which to enroll.

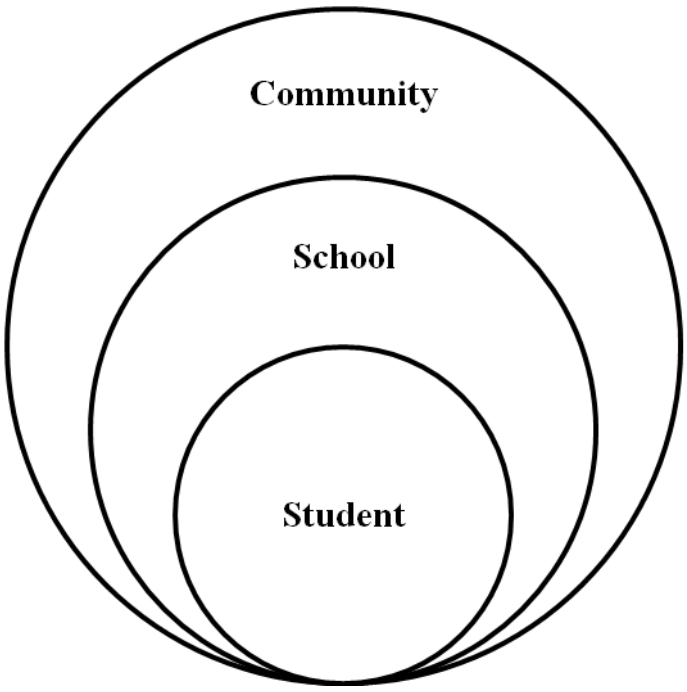

Figure 6. Sphere of Influence depicting the school's position in the lives of students with respect to the larger community which has a great impact on the cultural lives of students.

Quantitative Study

The Researcher's Role

The school's Continuous Improvement Plan (CIP) called for increasing the number of minority students enrolled in honors and advanced placement courses as well as increasing achievement for all students. As part of the effort, the school used the PASS to explore factors related to students' enrollment (or lack of enrollment) in honors/AP courses. After the study was conducted and results analyzed the superintendent provided a letter of support for using my pre-existing data, and IRB approved my request (Appendix A).

My role in this study was to focus on students' perceptions of the school environment at Southeastern High School. During the time when the survey was administered, I held the role of Assistant Principal at the school where the study was conducted. Because a significant part of

my administrative duties included curriculum and instruction as well as student assessment and accountability, I was solely responsible for implementation of the study. This study provided me, and other school officials, with an opportunity to analyze data collected from students' responses for the purpose of determining their perceptions of the school environment as it related to their decisions to enroll or not enroll in honors/AP courses, with implications to influence practices and procedures. The school's overall goal was to explore the honors/AP enrollment gap through the eyes of the students, and develop an action plan towards improvement.

Research Design

This study grew out of a direct need of the school and district as part of the school's improvement plan. A mixed-methods evaluative approach was used to measure the extent to which students at Southeastern High School viewed their school as "inviting", and how those perceptions impacted students' participation in honors and advanced placement courses. This correlational study, which began with a direct need of the school and district, sought to explore the extent to which students' responses to Program Access Student Survey (PASS) correlated with their enrollment in honors/AP courses. As stated by Fink (2003), the purpose of survey research, a form of non-experimental research, is to collect and analyze data and information from individuals to describe or compare their thoughts, attitudes, and behaviors. I sought to understand factors contributing to students determining whether to enroll in honors/AP courses, and used a mixed-method approach to gather said data.

The qualitative component added to the study by exploring trends observed through the quantitative data analysis. Through semi-structured interviews, students were allowed to respond in their own words, explaining their perception of the school and factors that influenced their decisions as they relate to the level of curriculum they chose to take. Both quantitative and

qualitative methods were used as the mixed-method design has the potential to produce a more insightful understanding of certain phenomenon, than if using either approach alone (Bogdan & Biklen, 2007).

The literature review on the 6 Es of Invitational Theory presented the theoretical framework that supported the model as an appropriate measure of the school atmosphere. Substantial literature exists stating the importance of educators gathering students' perspectives in relation to the school environment; however, while some qualitative studies are present that evaluate the student's point of view, very few quantitative studies exist exploring the school environment from the perspective of the students. A qualitative study followed the survey consisting of individual interviews with specific students as guided by student responses on the survey.

Three statistical procedures were performed on the quantitative data set. A frequency count was used to describe the demographic characteristics, a reliability analysis was performed to measure the internal consistency of the scores from the PASS, and an Analysis of Variance (ANOVA) was employed to assess the difference in the mean scores of the PASS between specific groups. Also, I conducted student interviews to gather qualitative data that further explained the trends observed within the data analysis, and answered research questions four and five. Because interviewing is used to gather descriptive data (Bogdan & Bicklen, 2007), I felt this method of gathering data was appropriate to hear, in their own words, the students' perception of the school environment.

Population

It was my intent to ensure that the entire school population, 1,053 students, had the opportunity to participate in the survey. The exception was 13 special needs students who make

up the multi-needs unit, receiving their core instruction in the special education classroom. Because of the severity of their disability (mental retardation), these students receive instruction on their grade level (ranging from 1.2-3.0), and would be unable to read and understand the survey questions. All other students were afforded the opportunity and encouraged to participate in the study.

A total of 908 students participated in the study; however, only 855 surveys comprised the useable sample because incomplete surveys were disregarded. The ethnicity of participants consisted of 1.4% Asian/Pacific Islander, 34.2 Black, 2.9% Hispanic, 1.3% American Indian/Alaskan Native, 4.6% Multiracial, and 55.6% White students. There were 446 males (52.2%) and 409 females (47.8%).

Instrumentation

This exploratory study used a survey to determine students' perspectives of the school environment. It was the desired method of instrumentation as surveys are used to gather information about individuals' attitudes and behaviors, with the purpose of comparing, describing, or explaining certain phenomena (Fink, 2007). In response to a direct need of the school district, I developed the objectives of the survey, with the goal of exploring the disparity that existed with minority students' enrollment in honors and advanced placement courses. By exploring factors influencing students' decisions to enroll in honors/AP courses, particularly those that related to the school environment, the school district determined specific actions they can take to improve students' perceptions of the school to increase the number of minority students enrolled in honors/AP courses at the high school level.

The Program Access Student Survey (PASS), developed by Molly Killingsworth and Christy Cabezas (2010), is a 36-item measure of students' perspectives of the extent to which

they perceive the school environment as "inviting". Invitational theory, the framework for inviting messages (Schmidt, 2007), and research on the enrollment gap for Black and economically disadvantaged students guided construction of the PASS. Killingsworth and Cabezas (2010) conducted a comprehensive review of the literature (Archbald, Glutting & Qian, 2009; Carbonaro, 2005; CollegeBoard, 2002; Darrity, Castellino, Tyson, Cobb & McMillen, 2001; Ferguson, 2003; Ferguson & Kennedy, 2001; Ford, 1998; Herr, 1992; Johnson & Kritsonis, 2006; Klopfenstein, 2004a; Lubienski, 2002; Ndura, Robinson & Ochs, 2003; Rubin, 2003; Schweinle, Turner, & Meyer, 2008; Taliaferro & Decuir-Gunby, 2008; Wakely, 2009; Yonezawa, Wells, & Serna, 2002) before constructing survey items, which were grouped according to the six elements (equity, expectation, enlistment, empowerment, encouragement, and enjoyment) that describe an "inviting" school environment as based on Invitational Theory.

The survey consisted of three sections. Section one consisted of the 36 questions with six subsections based on the following components deemed important aspects of an "inviting" school environment: subsection one consisted of the component Equity and contained seven items; the next subsection, Expectation, contained five items; Enlistment contained nine items; Empowerment contained three items; Encouragement contained seven items; and the subsection Enjoyment, contained five items. The survey used a Likert-type scale for students' responses and recorded on a five-point rating scale: 1– strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, and 5 – strongly agree.

Section two contained various demographic items to compare respondents: ethnicity, socioeconomic status, and the level of curriculum they have received (standard, honors, or advanced placement). Other items in section two gathered information on students' grade level, age, mothers' educational level, math class enrolled in, and whether students had taken a foreign

language course. The purpose of this section was to gather information to help in differentiating among student participants when comparing student responses.

The third section of the survey consisted of an open-ended question used to assess the respondents' perspectives of actions the school can take to encourage students to enroll in honors/AP courses. The open-ended approach was chosen because it allows for respondents to use their personal frame of reference as opposed to one devised through structured questions and preselected answers (Bogdan & Biklin, 2007; Fink, 2003), and also allows for responses the researcher had not anticipated (Fink, 2003).

Content validity. Content validity refers to the extent to which the survey appropriately measures characteristics it was intended to measure (Fink, 2003). To ensure the contents of the PASS were valid, researchers Killingsworth and Cabezas (2010) first defined the concept of "inviting', then developed items that include all aspects of the term "inviting". Invitational theory, specifically the 6 Es, served as the theoretical foundation for the study. Thus, a detailed review of literature related each element (equity, expectation, enlistment, encouragement, empowerment, and enjoyment) to students' growth and development and minority student success. Thus, the 6 Es served as the foundation for the development of the survey, with the six elements used together as one scale exhibiting characteristics of an "inviting" school environment.

The review of literature focused on minority students' underrepresentation in honors/AP courses, optimal learning environments for student success, and strategies to help increase minority student achievement. The literature review confirmed the importance of the elements addressed through Invitational Theory, as displayed in Table 6. The PASS was also reviewed by an expert in Invitational Theory and an expert in survey development. John Schmidt, founder of

the Journal of Invitational Theory, is considered an expert as he conceptualized the six elements as a framework to assess the level to which schools and other organizations accept, acknowledge, and celebrate diversity (Fink, 2003). Survey items were adjusted based on feedback from the experts.

Table 6

Research Correlating with the Six Elements Inviting Diversity

Elements	Correlating Literature
Equity	Black students frustrated when they feel like they have to prove they should be in honors classes (Ferguson, 2003)
	Screening and identification process (Ford, 1998)
	Lack of teacher training to make referrals (Ford, 1998)
	Access Policy: Application process or open enrollment (Herr, 1992; Klopfenstein, 2004)
	Inadequate guidance from middle and high school counselors, counselors as gate-keepers of AP (Johnson & Kritsonis, 2006; Wakelyn, 2009)
	System of continuous assessment to move students to advanced courses when they are prepared (Taliaferro & Decuir-Gunby, 2008)
	Early tracking - Enrolled in gifted courses in middle or elementary school (Archbald, Glutting, & Qian, 2009; Darity Jr., Castellino, Tyson, Cobb, & McMillen, 2001; Herr, 1992; Johnson & Kritsonis, 2006; Klopfenstein, 2004; Lubienski, 2002; Taliaferro & Decuir-Gunby, 2008)
	Enrollment based on prior academic achievement (Archbald, Glutting, & Qian, 2009; Hallinan, 1992; Herr, 1992)
	Policies involving teacher recommendations unfair. White teachers often unaware of minority students and their potential, and therefore do not recommend them for AP classes (Taliaferro & DeCuir, 2008)

(table continues)

Table 6 (continued)

Elements	Correlating Literature
	Students must have the ability to exercise their rights, not simply have them. Covert barriers include students who don't have funds to purchase the supplies needed for the class, or don't have transportation to attend the classes that begin prior to school bus pick up (Taliaferno & DeCuir, 2008)
Expectation	Peer influence/ negative peer pressure (Archbald, Glutting, & Qian, 2009; Ferguson, & Kennedy, 2001; Ford, 1998; Lubienski, 2002; Ndura, Robinson, & Ochs, 2003; Taliaferro & Decuir-Gunby, 2008)
	Teacher's opinion/ hold to high standards/lower expectations (CollegeBoard, 2002; Ferguson, 2003; Johnson, 2006; Lubienski, 2002; Klopfenstein, 2004; Taliaferro & DeCuir-Gumby, 2008)
Enlistment	Support classes during the day/ safety nets for support (Rubin, 2003; Taliaferro & Decuir-Gunby, 2008)
	Individual affect - Engaged in challenging classes (Schweinle, Turner, & Meyer, 2008)
	Incentives for students such as weighted grades (Klopfenstein, 2004). Because African American parents are not aware or involved in the availability of courses, teachers and counselors must fill the role of students' advocates (Taliaferro & DeCuir, 2008).
	African American students must feel a sense of belonging (Taliaferro & Decuir-Gunby, 2008)
	Students must have a voice in their education (Taliaferro & DeCuir-Gumby, 2008)
	Because educational institutions have a history of racial discrimination, schools are charged with ensuring these students are connected to the school (Taliaferro & DeCuir-Gumby, 2008)
Empowerment	Schools relationship with students and parents to better understand benefits of taking advanced courses (CollegeBoard 2002; Klopfenstein, 2004; Taliaferro, & Decuir-Gunby, 2008)

(table continues)

Table 6 (continued)

Elements	Correlating Literature
	Motivation (Herr, 1992; Klopfenstein, 2004)
	Social affect — Low self-efficacy, lack of confidence, fear of not doing well and perceived skills (Klopfenstein, 2004; Schweinle, Turner, & Meyer, 2008; Taliaferro & Decuir-Gunby, 2008; Tyson, Darity, & Castellino, 2005; Whiting, 2009)
	Innate ability (Herr, 1992)
	Schools should empower students to reach their fullest potential (Taliaferro & DeCuir, 2008).
Encouragement	Student encouragement (Klopfenstein, 2004; Ndura, Robinson, & Ochs, 2003; Taliaferro & Decuir-Gunby, 2008)
	Pleasing teachers — influence on students (Ferguson, 2003; Ndura, Robinson, & Ochs, 2003)
	Pleasing parents — influence on students (Ferguson, 2003; Ndura, Robinson, & Ochs, 2003
Enjoyment	Social isolation from peers (Ferguson & Kennedy, 2001; Ford, 1998; Tyson, Darity, & Castellino, 2005; Wakelyn, 2009)
	Student interest (Klopfenstein, 2004)

Although survey development was a collaborative effort, after ensuring content validity, we worked independently, using separate focus groups and surveying different populations.

Face validity. To ensure the language used was appropriate for the population surveyed (Fink, 2003) the researcher administered the survey to a test group of respondents similar to those who will be taking the actual survey. The respondents were instructed to give feedback based on the clarity of the instructions and the ease in reading the individual items.

After receiving feedback from the respondents, two recommendations were made for improvement. Several respondents were confused by the use of honors and advanced, and asked for clarification between the terms. Although the terms are used interchangeably, because students' courses are titled "honors", I changed the term "advanced" to honors. Thus, the term "advanced" was only used to refer to advanced placement courses. Another suggestion made was to have the computers ready to begin prior to the students entering the library or computer lab. However, because of district policies, this suggestion cannot be implemented. Students are required to sign in using their username and password before they are allowed to access the internet, as a measure of accountability. However, accommodations were made to address the other recommendations prior to survey administration.

Reliability. Reliability pertains to the accuracy or precision of an instrument to measure what it was intended to measure and internal consistency measures the degree to which items on an instrument or scale measure a similar construct (Ross & Shannon, 2008). Assessing the reliability of an instrument is an important aspect of survey development and administration as it confirms the extent to which similar results will be attained if the study is repeated (Fink, 2003). Cronbach's alpha assessed the reliability of the scores obtained from the PASS that represent the level to which students viewed their school as "inviting". According to Ross and Shannon (2008), coefficient alpha is the best measure of internal consistency because it "provides a good estimate of the major source of measurement error, sets the upper limits of reliability, and provides the most stable estimate of reliability" (p.175). It is also the most often used calculation to determine reliability (Fink, 2003).

Cronbach's alpha values range from 0 to 1 with higher scores indicating a greater degree of reliability. A commonly accepted practice is that alpha should be .70 or higher. Using the

students in this study, the reliability analysis yielded a very high alpha of .904, indicating strong internal consistency, thus the items assess the same characteristics. Once the instrument deemed a reliable measure, I was able to proceed.

Data Collection

The district collected initial survey data through an on-line site (www.zoomerang.com) where students completed the survey at school. Three days prior to survey administration, an announcement informed students of the upcoming survey and requested that they answer questions honestly. School officials presented the survey as and effort for students to voice their opinions and concerns to the faculty and administration. I gave each teacher a letter explaining the purpose of the survey and procedures for survey administration one week prior, as well as schedule with a specific day and time when classes were to rotate through the library (see Appendix C) to ensure all students had the opportunity to take the online survey.

Immediately prior to taking the survey, I encouraged students to give much thought to survey questions before answering, as their feedback was needed for school improvement. I informed them that the survey should take no more than 15 minutes to complete. I then instructed students to log on to the internet and gave them directions to navigate to the school's website, gaining access to the survey link.

I remained in the vicinity where students were taking the survey to provide clarification for any questions students found difficult to answer, yet was careful to provide students with the privacy needed to answer honestly. As students completed the test I solicited feedback, asking if there were any questions that lacked clarity.

Data Analysis

The mean score of all items on the PASS was used for analysis. After the data was collected from the questionnaire, I was responsible for effectively analyzing the data and used the computer software program, Statistical Package for the Social Sciences (SPSS) 11.0 to determine the level to which students perceived the school environment as "inviting". This type of approach allowed me to describe the perceptions of the population.

I conducted statistical analysis using ANOVA to learn if there was a statistically significant difference in students' perceptions of their school environment based on their participation in honors or advanced placement courses compared to those who were not enrolled in honors or advanced placement courses. ANOVA was also used to learn if there was a statistically significant difference between students' perception of their school environment based on their ethnicity. Finally, ANOVA was used to determine if students' perception of the school environment varied based on socioeconomic status, as determined by their lunch status of free, reduced, or full pay.

According to Ross and Shannon (2008), analysis of variance (ANOVA) procedures are used "to assess differences across groups based on means" (p. 57). The one-way ANOVA determined if there was a statistically significant difference on the responses to the PASS based upon ethnicity and students' socioeconomic status. An alpha rate of .05 was selected since this is the standard for educational research (Gay, Mills & Airasian, 2006; Ross & Shannon, 2008). The one-way ANOVA produces an F ratio and a p value to determine if there is a statistically significant difference between the means (Ross & Shannon, 2008). If the F ratio is larger than the F critical value and the p-value is smaller than .05, then the null hypothesis will be rejected.

That would indicate that there was a significant difference between the mean scores based on ethnicity, SES, and the level of curriculum received.

Prior to the ANOVA procedure, statistical tests were run to determine the degree to which the assumptions of ANOVA have been met. Table 7 presents a list of ANOVA assumptions, an explanation of each assumption, and my strategy for addressing each assumption.

Table 7

ANOVA Assumptions

Assumption	Explanation	Tested by:
1. Independence	Participants' scores are not influenced by the scores of other participants in the groups.	Researcher assures at outset of participant selection
2. Interval or ratio measurement for the dependent variable	Data must be a specific level	Researcher assures at outset of research design
3. Normality	Each groups' patterns of scores should reflect the shape of the normal distribution	D'Agostino-Pearson Omnibus Test for skewness and kurtosis
4. Homogeneity	Equal variance between groups	Levene Test Statistic

Qualitative Study

The Researcher's Role

My primary role was to interview students to gain insight into factors that impacted their decisions to enroll (or not enroll) in honors/AP courses at Southeastern High School. As part of the CIP, I was interested in gaining a deeper understanding of our students' thought processes as they chose the level of curriculum they would participate in. Information gathered through the student interviews was reported while ensuring students' confidentiality would be maintained. It was clear from the onset that the purpose of the study was strictly for school improvement efforts and information gathered would be reported without using the names of the students interviewed. Because I previously served as a School Counselor and often handled concerns with confidentiality and anonymity, conducting this study and ensuring anonymity was not a concern.

Research Design

The qualitative component consisted of student interviews with semi-structured questions, as this method is most effective for encouraging respondents to talk about the subject matter in a way that is meaningful to them (Bogdan & Bicklen, 2007). The school's goal in conducting student interviews was to further explore students' reasons for not enrolling in honors and advanced placement courses, thus, clarifying responses given on the survey. Our hope was that, by gathering students' perceptions, we could identify areas in need of improvement and work towards a more "inviting" school environment. Taking intentional steps to change those areas in need of improvement would hopefully result in an increase in minority students enrolled in honors and AP courses.

Sample

Following the quantitative data analysis, purposive sampling of participants occurred for the follow-up interviews. Because I am employed at the site where the study took place, knowledge of students was beneficial in selecting specific individuals with which to conduct follow up interviews. The students selected were minorities who were categorized in one of two groups. The first group was comprised of minority students who were enrolled in honors/AP courses, and the second group was comprised of minority students who were enrolled in standard classes yet had a performance record that suggessted they qualified for honors or advanced placement classes (as evidenced by receiving an "A" in the class that serves as a prerequisite to the honors/AP course). This group of students served as the sample to address the questions relating to factors that contributed to their decisions to enroll (or not to enroll) in honors/AP courses.

Instrumentation

The student interviews were conducted in the library's conference room to allow for privacy without the intimidation that sometimes accompanies meeting in the administrator's office. I began each interview with a statement instructing students to tell me about their decisions to take (or not take) honors or advanced placement courses. Although subsequent questions varied based on students' responses, I listened for the direction in which the respondent focused and asked follow-up questions to further clarify their statements (Bogdan & Bicklen, 2007) and gain an understanding of factors that influenced their decisions.

Data Collection

I used an audio recorder to assist in data collection. Recording each interview allowed me to engage in natural conversations with participants, reviewing tapes at a later time (Bogdan & Bicklen, 2007).

Data Analysis

Recognizing the great potential for biased reporting in qualitative studies, I considered any concerns that could impact the true analysis of the study. As stated in Bogdan and Biklen (2007), qualitative research has great potential to be, and often is, affected by researchers' subjectivity. I was careful not to make comments about the school resulting from my role as a school administrator, to ensure students' responses were not influenced by statements made.

In analyzing data from the student interviews, I listened for factors the respondents reported as impacting their decisions to enroll or not enroll in honors and advanced placement courses. I listened to the audiotapes several times while making notes, in an attempt to identify common themes that address the research question. I then developed categories to organize student information. In developing coding categories, I coded students' information based on the perception of the school, the level to which they reported their parents were involved in their academics, and individuals they reported as being influential in the selection of their courses.

Summary

The purpose of this study was to assess the level to which students view their school environment as "inviting" as it relates to their decisions to enroll in honors/AP courses. Chapter 3 provided a detailed description of the research methods employed (quantitative and qualitative) to collect and analyze data that answered the research questions for this study. Details regarding the setting, participants, researcher's role, data collection, and data analysis were discussed. The

results of the information presented in Chapter 3 will be analyzed and presented in Chapter 4. Quantitative findings will be presented first, with qualitative results to follow. Information from both quantitative and qualitative data will provide insights for school and district officials to consider in looking at the current practices and procedures in place. The summary, conclusions, and recommendations of this study are provided in Chapter 5.

CHAPTER 4. ANALYSIS AND RESULTS

> *"Good schools, like good societies and good families, celebrate and cherish diversity."*
>
> — Deborah Meier, Educational Reformer

The purpose of this study was to explore various factors that might explain the disparity that exists in minority students' enrollment and participation in the honors/AP curriculum when compared to their White peers. The study used Invitational Theory as a framework for exploring minority students' lack of participation in honors/AP courses.

This study sought to contribute to the existing research regarding the disparities in enrollment that exist between minority students and their White peers in honors and advanced placement courses. While the concern is consistent throughout the United States, with research spanning various states throughout the country, this research is significant in that it focuses specifically on low honors/AP enrollment rates among minorities in the state of Alabama, with implications for policy revision at the school and district level.

This chapter will present the results of the study beginning first with demographic information, followed by testing the assumptions of ANOVA, and finally presenting results of each research question.

Descriptive Statistics

Tables 8–10 provide a summary of descriptive statistics for the respondents of the PASS. Seventy-nine percent of the student body (908 students) participated in the study with 855 responses being complete, indicating 74% of the school population. Approximately 56% of the

participants identified their racial/ethnic group as White/Caucasian, 34.3% Black, 4.6% Multiracial, 2.9% Hispanic, and 1.4% and 1.3% Asian and American Indian/Alaskan Native, respectively. When compared to the school population, more minority students were represented in the survey (44.5%) when compared to their presence in the student body (32%). With regard to students/families' socioeconomic status, 361 reported receiving free or reduced lunch, accounting for 42.2% of the respondents; with the remaining 57.8% (494 students) paying full price for meals, consistent with the percentage of students in the school population receiving free or reduced lunch (42%). The majority of the respondents were female at 56%, with males representing 44% of the respondents.

With regard to the level of curriculum received, 502 had taken an advanced or honors class, representing 58.7% of the respondents, and 353 (41.2%) had not taken either advanced or honors courses. Because the current database system only provides cumulative records on students' diploma types (standard vs. honors), not individual classes, it does not allow for comparison with the student population. Also, 14.7% (126 respondents) had taken an advanced placement course whereas the vast majority, 729 had not been exposed to the AP curriculum, representing 85.2% of student respondents. Again, the current database system only tracks diploma types, not individual classes; therefore, it does not allow for comparison with the student population.

Table 8

Descriptive Statistics by Respondents' Ethnicity

	N	Percent
Ethnicity		
Asian	12	1.4
Black	293	34.3
Hispanic	25	2.9
American Indian/Alaskan Native	11	1.3
Multiracial	39	4.6
White	475	55.6

Table 9

Descriptive Statistics by Respondents' Socioeconomic Status

	N	Percent
Socioeconomic Status		
Free lunch	276	32.3
Reduced price	85	9.9
Full price	494	57.8

Table 10

Descriptive Statistics by Respondents' Curriculum Received

	N	Percent
Curriculum		
Advanced Placement	126	14.7
Non-Advanced Placement	729	85.2
Honors/Advanced	502	58.7
Non-Honors/Advanced	353	41.3

ANOVA

ANOVA statistical procedures were used to answer the research questions. Before employing ANOVA, I addressed the assumptions associated with ANOVA. Independence of scores was assured. Because of the physical structure of the library, students' seating arrangements were not conducive to working collaboratively. Also my presence as a school administrator further encouraged students to follow instructions given and work independently. The ANOVA assumptions of normality in distribution and homogeneity of variances were tested on each of the survey items. Of the 36 items, one did not meet the assumption of normality. Item #10 on the PASS, "Parents expect good grades" violated the assumption of normality. With a value of 9.50, it falls beyond the acceptable values indicating a level of skewness was present. However, it is not a critical finding as ANOVA is robust to violations of the normality assumption (Cardinal & Aitken, 2006). An effect of the central limit theorem, as *n* increases the distribution of means and differences tend to be normal, even when observations from the population may not be (Cardinal & Aitken, 2006). Thus, the Type I error rate is not affected

because of the large sample size. The remaining data met the assumption of normality as values for the remaining PASS items ranged between -2 to 2 (see Appendix E), indicating no skewness or kurtosis.

In testing the assumption of homogeneity of variances, I employed Levene's test with each of the independent variables (ethnicity, socioeconomic status, advanced/honors curriculum, and AP curriculum). Table 11 displays results of the Levene's test for ethnicity.

Table 11

Levene's Test of Equality of Error Variance—Ethnicity

F	df1	df2	Sig.
.808	5	849	.544

Levene's Test of Equality of Error Variances is not statistically significant indicating that the two variances are not significantly different, thus the assumption of equal variance across population groups has been met based on students' ethnicity. Table 12 displays results of the Levene's test for socioeconomic status.

Table 12

Levene's Test of Equality of Error Variance—Socioeconomic Status

F	df1	df2	Sig.
1.278	2	852	.279

Levene's Test of Equality of Error Variances is not significant indicating that the two variances are not statistically significantly different, thus the assumption of equal variance across population groups has been met for respondents' socioeconomic status. Table 13 displays results of the Levene's test for advanced placement courses.

Table 13

Levene's Test of Equality of Error Variance—Taken Advanced Placement (AP) Courses

F	df1	df2	Sig.
4.340	1	853	.308

Levene's Test of Equality of Error Variances is not statistically significant indicating that the two variances are not significantly different, thus the assumption of equal variance across population groups has been met. Table 14 displays results of the Levene's test for advanced/honors courses.

Table 14

Levene's Test of Equality of Error Variance—Taken Advanced/Honors Courses

F	df1	df2	Sig.
2.656	1	853	.104

Levene's Test of Equality of Error Variances is not statistically significant indicating that the two variances are not significantly different, thus the assumption of equal variance across population groups has been met.

Results of Quantitative Data

Having addressed the assumptions of ANOVA, the results associated with each research question follows.

Research question one. *What difference, if any, exists among honors/AP students and non-honors/AP students' perceptions of the level to which their school is inviting?* A one-ANOVA was conducted to answer this research question, testing for differences in responses to PASS, based on the curriculum students received (advanced placement versus non-advanced placement). The independent variable was the level of curriculum students received, and the dependent variable was the level to which students viewed the school as "inviting" (as determined by the mean of all items on the PASS). The dependent variable was operationalized using the PASS. As presented in Table 15, the mean score for students who have taken an advanced placement class is 3.5337 with a standard deviation of .58373, while those who have not taken an advanced placement class have a mean of 3.3378 with a standard deviation of .54315, indicating that a difference exists in the level to which students perceive the school as "inviting", with respect to the level of curriculum students received. Students who have taken an advanced placement course perceive the school as more inviting than those who have not taken an advanced placement course. The ANOVA tests were statistically significant, $F(1, 853) = 13.670$, $p < .001$ as it related to students receiving AP courses, suggesting students responses to the PASS differed based on their enrollment in AP courses; therefore, I could reject the null hypothesis. The effect size, determined by eta square, was small (.02), indicating the strength of the association between the type of curriculum received and the level to which respondents perceive the school as "inviting" was relatively small, and the correlation might be due more to the large sample size (Cohen, 1988).

Table 15

Independent Variable: Level of Curriculum Received

Curriculum	Mean	Standard Deviation	N
Advanced Placement	3.5337	.58373	126
Non-AP	3.3378	.54315	729
Total	3.3667	.55334	855

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	F	Sig	Partial Eta Squared
Corrected Model	4.125	1	13.670	<.001	.02

Students' comparison of honors curriculum yielded results somewhat similar to those comparing students exposed to AP curriculum and those who haven't taken an AP course. As presented in Table 16, the mean score for students who have taken an honors class is 3.4513 with a standard deviation of .50960, while those who have not been exposed to honors curriculum classes have a mean of 3.2463 with a standard deviation of .59032, indicating that a difference exists in the level to which students perceive the school as "inviting", with respect to the level of curriculum students received. Students who have taken an honors course perceive the school as more inviting than those who have taken only standard courses. The ANOVA tests were statistically significant, $F(1, 853) = 29.394$ at an obtained $p < .01$ as it related to students who received honors courses, suggesting students' responses to the PASS differed based on their enrollment in honors courses; therefore, I could reject the null hypothesis. The effect size was

small, indicating the strength of the association between the type of curriculum received and the level to which respondents perceived the school as "inviting" was relatively small and that the correlation might be due more to the large sample size.

Table 16

Independent Variable: Level of Curriculum Received

Curriculum	Mean	Standard Deviation	N
Advanced/Honors	3.4513	.50960	502
Standard	3.2463	.59032	353
Total	3.3667	.55334	855

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	F	Sig	Partial Eta Squared
Corrected Model	8.710	1	29.394	<.001	.004

Research question two. *What difference, if any, exists among minority students and non-minority students' perceptions of the level to which their school is inviting?* Results from a one-way ANOVA was conducted to answer this research question, testing for differences in responses to PASS based on students' ethnicity. The independent variable was students' ethnicity, and the dependent variable was the level to which students viewed the school as "inviting" (as determined by the mean of all items on the PASS). The dependent variable was operationalized using the PASS.

Table 17 shows a summary of the descriptive statistics for ethnicity. The mean score for minority responses was 3.4874 with a standard deviation of .61016, while Caucasian respondents had a mean of 3.4467 with a standard deviation of .57214, indicating that there was not a significant difference in their responses. However, when looking at each group individually, there are significant differences among the various ethnicities. Asian respondents had a mean of 3.1690 with a standard deviation of .51771; Black respondents had a mean of 3.1493, with a standard deviation of .57383; Hispanic students had a mean of 3.4956 with a standard deviation of .61690; American Indian respondents had a mean of 3.2348 with a standard deviation of .64709; Multiracial respondents had a mean of 3.4930 with a standard deviation of .59957; and White students had a mean of 3.4470 and a standard deviation of .52501.

Table 17

Independent Variable: Ethnicity

Ethnicity	Mean	Standard Deviation	N
Asian/Pacific Islander	3.1690	.51771	12
Black	3.1493	.57383	293
Hispanic	3.4956	.61690	25
American Indian	3.2348	.64709	11
Multiracial	3.4930	.59957	39
White	3.4470	.52501	475
Total	3.3667	.55334	855

(table continues)

Table 17 (continued)

Test of Between-Subjects Effects					
Source	Type III Sum of Squares	df	F	Sig	Partial Eta Squared
Corrected Model	4.751	5	3.142	.008	.018

The ANOVA tests were statistically significant, $F(5, 849) = 3.142$, $p < .001$ as it related to students' ethnicity, suggesting students responses to the PASS differed based on their ethnicity; therefore, I rejected the null hypothesis. The effect size was small, indicating the strength of the association between respondents' ethnicity and the level to which they perceive the school as "inviting" is relatively small and that the correlation might be due more to the large sample size.

Fisher's Least Significant Difference (LSD) post hoc was used to determine the differences among the ethnic groups. Black students differ significantly with Hispanic ($p = .027$), Multiracial ($p = .016$), and White ($p = .012$) students, having a significantly lower mean than each of those groups, indicating that they perceive the school as less inviting than the other groups.

Research question three. *What difference, if any, exists among free/reduced lunch students and non-free/reduced lunch students' perceptions of the level to which their school is inviting?* A one-way ANOVA was conducted to answer this research question, testing for differences in the level to which students perceive the school as "inviting", based on socioeconomic status. As presented in Table 18, there were no statistically significant differences in student responses based on socioeconomic status. The mean score for students

who received free lunch was 3.3608 with a standard deviation of .59052, while reduced lunch respondents had a mean of 3.3608 with a standard deviation of .56954, and those who paid full price had a mean score of 3.3714 with a standard deviation of .52967. The ANOVA tests were not statistically significant, F (2, 852) = .043, $p < .958$ as it related to students' socioeconomic status, suggesting students responses to the PASS did not differ based on their socioeconomic status; therefore, I could not reject the null hypothesis.

Table 18

Independent Variable: Socioeconomic Status

Socioeconomic Status	Mean	Standard Deviation	N
Free Lunch	3.3600	.59052	276
Reduced Lunch	3.3608	.56954	85
Full Pay	3.3714	.52967	494
Total	3.3667	.55334	855

Test of Between-Subjects Effects

Source	Type III Sum of Squares	df	F	Sig	Partial Eta Squared
Corrected Model	.026	2	.043	.958	.000

Research question four. *What factors do students report as playing a significant role in their decisions to enroll in honors/advanced placement courses?* To answer this question, I conducted interviews with five African American students (Andrea, Alva, Nathan, Christy, and

Tia) that were enrolled in either honors or advanced placement courses at the time of the study. Students' names have been changed to protect their identity and right to confidentiality.

Andrea. Andrea is a senior living with both parents. Her mother is a nurse at a local hospital, and her father is in the military- both parents work less than twenty minutes from their home. She does not qualify for free/reduced lunch. She is one of only 3 minority students graduating in the top 10%, from a class of 221 students. She has taken all AP courses offered throughout her high school career, and is currently enrolled in AP Calculus, AP English 12, and AP Chemistry. She maintains a 4.38 grade point average, and is involved in many school organizations including various honors societies and the school cheerleading squad. When asked about her enrollment in AP courses, Andrea said,

> My brother really told me what classes I need to take to make sure I know what I need for college. Mark, Mandisa, and Jerome all went here and went on to college so it was like, expected that I go. Don't get me wrong, I want to go to college because I know I need to, but even if I didn't want to, I wouldn't have a choice. My mother made that clear to me a long time ago.

Andrea said that her parents were not involved in selecting her courses for the school year, but rather trusted her to make the decisions. "They don't really know the difference between honors and AP, all they know is that it's hard and I need it for college".

She also gave the names of two teachers she felt encouraged her to do her best in the more rigorous classes, teachers who were proud of her when she succeeded and celebrated successes with her. She mentioned one particular teacher whose home number she has and calls when she needs additional help outside of school. Andrea stated, "If it weren't for her, I wouldn't be able to make it through the class". She continued, stating, "In the AP classes, the

teachers just go so fast and it's like they expect you to pick it up on your own. There are other students that can do this advanced work, but they just need time to think about it and not be rushed".

When asked if her friends influenced the classes she enrolled in, Andrea spoke of not being in classes with her friends and being the only African American student in many of her classes.

> It's really boring sometimes. I have some White friends, and I talk to them too, but it's not the same. It's like, I miss out on stuff. Everybody else knows what's going on and I miss it because of the classes I'm in. I hardly ever get to see my friends. And not just that, but I don't have time after school or on the weekends to do anything but study." Football season will be over next week...so that's more time I'll have, but then AP Cal is getting so hard, I'm struggling to keep a B right now. It's just, man, I don't know. It's just hard. Ya'll say it will benefit me in the long run so we'll see. Yeah, ok, we'll see.

Alva. Alva is an 11th grade African American student currently enrolled in honors English, History, and Science. She has taken honors level classes each year since 9th grade and has maintained a 2.68 grade point average. Alva's future plans include going to college to major in Education; she stated she's always wanted to become a teacher. Although she has identified plans for the future, she is unsure about procedures for applying to colleges and registering to take the ACT. Alva is not the traditional student receiving advanced level curriculum, because she has had a number of discipline referrals resulting in her being assigned afterschool detention, being suspended, and being placed in alternative school for a period of time. She is currently on probation and has regular visits by the local juvenile probation officer due to her most recent offense of inciting student disorder. When asked to speak about her enrollment in honors

classes, Alva stated that she initially signed up for honors level classes to prove to friends she could do it. "Mary Catherine called me dumb one day", she said. "She was just playing with me and I knew it, but I still felt like I needed to prove to her and everybody else that I could do it. I know the teachers didn't think I could do it either". Alva continued stating the following:

> After the first year I took advanced classes, I was like, 'I can do this', so I took them that next year and every year after that. It's not that hard, you know, I could be making A's in there if I really wanted to. But naw, I don't wanna do all that, but I do like being in there with all the White people. Most of the time, I'm the only Black one in there, but I don't mind. I think it's fun. I get all the attention. Yeah, I know I can do better if I wanted to, but I'm alright, I'm good, I'm straight. Plus all the teachers like me.

Alva went on to speak of a particular teacher who discouraged her from taking upper level classes. According to Alva, "she told me I had too many problems to be in advanced classes. She didn't know what happened or how it happened. All she knew was that I was on probation". That comment obviously hurt Alva as she again referred to it stating, "that's why (teacher's name) don't need to say stuff like that; you never know what somebody is going through". Alva stated that she felt like this particular teacher expected her to be disruptive and disobedient. She also admitted to sometimes "acting out" just to aggravate the teacher.

Alva also discussed her desire to have more African American teachers teaching upper level courses. She stated, "You know, (teacher's name) understands me. She needs to teach more of the hard classes". She continued, stating,

> I bet you more Black kids would get in those classes if the Black teachers taught them. I can't explain why, but it's just different. A White teacher can say something and a Black teacher can say something and it's like we believe what she would say more because

she's Black. It might not sound right, but I'm telling you, that's how it is. Ask any other Black kids. Well, they might not want to tell you the truth, but I'm telling you, that's just how it is.

When asked about her mother's involvement in selecting her classes for the current school year, Alva chuckled then reminded me, "My momma locked up, remember?" According to her, she and her older sister (12th grader at the same school) are the primary caretakers for a younger sibling, despite living with an elderly grandmother. "We take care of everything because grandma can't do it. She too old." Alva continued, "the only time she come up here is when I get in trouble and somebody calls her. Other than that, she don't come up here."

Nathan. Nathan is a senior who is enrolled in all honors courses and has a 3.13 grade point average. He is a member of the football team and appears to be very popular among the students, and well-liked by teachers, based on my observations. He lives with his father, as his mother passed away when he was much younger. Nathan's father is employed as a law enforcement officer; he is ineligible for free/reduced lunch. Nathan stated he often wonders how his life would be different if his mother was still alive; but followed up with, "my dad does all he can to support me." His father is a very active member of the Quarterback Club, boosters for the football team, and often takes the lead with various fundraisers. When asked about his enrollment in honors courses, Nathan said the following:

People use to think I was stupid but I have plenty of sense. I just act crazy sometime so people don't take me serious. I got in advanced classes because I know I needed it for college. I try to tell them, I'm smart, I just don't apply myself sometimes. Some days, I just won't want to do nothing. When I made a 28 on the ACT last month, teachers was asking me if I cheated. I'm like, how you goin' cheat on the ACT? It kind of made me

mad that people would say stuff like that. It's like they didn't expect me to do that well on it. And to be honest with you, I got tired on the reading and science part and stopped working. I could've made higher than that. I told my dad and he said not to worry about what people say.

Christy. Christy is an 11th grade African American student who is currently enrolled in an advanced history class with a 2.88 grade point average. She lives with her mother and grandmother, and received free lunch. Christy took all advanced and honors classes throughout her 9th and 10th grade years, but is now taking only one advanced class. When asked about her enrollment in honors level courses, she admitted to not seeing the benefit of being in advanced classes.

Why stay in an advanced class and end up with a B or C, when I can get an A in a standard class? Nobody ever told me, so I don't really know, but what's the real difference? Is it the same work and more of it or is it different stuff they're doing? Everybody talks about keeping your GPA up and I figure the best way to do that is to get in easier classes. The only reason why I'm still in advanced class for history is because of (teacher's name). It's not that she's easy, but she gets me. You know what I mean? It's like she understands how I feel and if I have bad days she don't bother me. She know I'm gonna do the work but she don't hassle me. She don't hassle nobody. She just teach us and let us know that she care about us. That's why everybody always want to get in her class, she just nice like that. You know, if ya'll want to get more students in those classes, have her teach more of them. Everybody likes her. Well everybody who has sense.

When asked about her parents' involvement in selecting her courses each year, Christy stated that while her mother wanted her to remain in all honors level courses, she understood how Christy felt once her grades began to drop. "When my mother saw that my GPA was below a 3.0, she let me get out of the classes I wanted to get out of." Christy continued saying,

> You know we don't really understand what colleges are looking for. Is it more important to have a high GPA or to be enrolled in the advanced classes? If I knew that from the beginning, I would've been able to prepare myself. And I had to drop math because it was so hard. I probably could have stayed with it but with (teacher's name), it's like he made it harder than it had to be. When somebody has a bad attitude like they don't want to be there, it makes us not want to be there either.

Tia. An 11th grade student, Tia is enrolled in honors Precalculus and AP Physics, and standard history and English. She has a 3.52 GPA and has future ambitions of going to college to become a fashion designer. When asked how she came to the decision of which classes to enroll in, she attributed it to her mother as well as her older sister who was in her second year of college. Her mother decided to go back to college at the age of 42, graduated last year, and is currently employed as a registered nurse. Her sister is a Business major at Troy University. Tia stated that her main reason for enrolling in honors courses was because "colleges like to see that on transcripts." She seemed proud of being one of only three African American students in AP Physics, stating the other 2 dropped the class at the start of the term.

She discussed some of her friends who possessed academic abilities for honors and AP courses but chose not to take the courses because others weren't taking higher level courses. She stated, "Some of the kids don't want to be smart but you know they know more. They just act stupid, like they don't want no one to know they're smart." When asked how she responds to

that form of peer pressure, she stated, “If they want to act dumb, that’s just them. I do what I have to do.”

Tia felt the school allowed for students to freely move throughout standard and honors classes, stating, “If you ask, they’ll let you.” She also felt that teachers encourage students to do their best. She mentioned her honors Geometry teacher from the previous year that helped her bring her grade up from a low B to high B. She also admitted to putting forth more effort when she liked her teacher. The specific teacher Tia referred to assisted her in the morning with homework from previous evening and at break time when she had a quiz during the next class period. “She put in a lot of time with me, a lot of extra time,” she stated.

When asked what measures the school could take to encourage more students to enroll in honors and AP courses, Tia said teachers should find students who have the potential to be successful and encourage them to try the more rigorous classes. She said if her mother had not mentioned it to her, she wouldn’t have known. When asked about the counselors assisting students enroll in courses, Tia stated, “I never talked to the counselor because I never had a problem.” She went on to state, “People who get in trouble go see her and I never get in trouble.”

Tia also stated that if the classes were more interesting then perhaps more students would like them and continue taking them.

> Sitting in class all day is boring, and some teachers teach straight out of the book and some freehand it. I do better in classes when teachers just kind of teach you without using the book. I learn better like that. When teachers teach out of the book, it’s like they don’t know it, they’re just reading it. I mean, I can read the book by myself and teach myself. We want to have activities and fun stuff to make the classes more

interesting. Kind of like (teacher's name). Her class is fun. She plays music while we test. She said it helps get us thinking, and I believe it. It's always something new. When we walk in there everyday, we never know what she'll be up to.

Because she has the courses and grade point average needed for admission into the college of her choice, she plans to take standard classes her senior year in an effort to increase her grade point average. "I already have what I need to get into the college so now I want to make sure I'm in the top 10 [10% of graduating class]."

When asked if there were any other comments she wanted to add, Tia stated, "Yeah, my mother still makes me go to bed at 10:00. I'm the only one of my friends who has a bedtime. She said it helps me to do better in my schoolwork."

Research question five. *What factors do students report as playing a significant role in their decisions not to enroll in honors/advanced placement courses?* To answer this question, interviews were conducted with four African American students (Keisha, O'Brian, Tonya, and Christy) who were not enrolled in honors/AP courses, yet possessed the potential to achieve at a higher level as evidence by their academic standing (receiving A's in core classes). Students' names were changed to protect their identity and right to confidentiality.

Keisha. Keisha is an 11th grade student with a 3.75 grade point average. She lives with her mother, older sister, and niece, and has a large extended family living within the same community. She has two older siblings, Roderick and Jamela, both of whom attended the same school. Roderick went into the military after graduation, and Jamela became pregnant her 11th grade year, and did not finish school. She has since received her GED, but has yet to pursue postsecondary education.

Keisha's currently enrolled in standard classes, and has been throughout her high school career, although her academic records show that she would be successful in classes with more rigorous curriculum. She earned an A in each of the 8 core classes taken her 9th and 10th grade years, and has an A in the core classes currently enrolled in. When asked why she has not enrolled in honors/AP courses, Keisha said the following:

> Right now I make good grades and I really don't have to study. Why would I get in harder classes and have to study all the time? Then I wouldn't have time for friends and stuff. I mean, I'm going to college and I'm going to do good, but I ain't trying to be no nerd or nothing. I like the classes I'm taking now. Plus, if I take those other classes, I won't see none of my friends. I like my friends and I like making good grades so I don't want to take harder classes. School is already boring, you know. If I couldn't be in classes with my friends, I would go crazy.

When asked about her parents' involvement in selecting classes, Keisha said, "My mother just wants to see my A's and B's. As long as I keep making good grades, she's fine." Being the first one in her family with the opportunity to attend college, Keisha said "everyone wants me to do well." She continued, "They all want to support me but sometimes it's like they don't know how to support me." Keisha also stated that she might have considered taking more rigorous classes if she knew she could transfer out, if the course proved to be too difficult for her.

> No offense but ya'll are so crazy about rules and stuff. I mean everything has a deadline and rules and stuff. We usually get three or four days to change our schedule at the beginning of the year. After that we're locked in. A friend of mine was in the wrong Science class last semester but stayed in there because the announcement said "no more schedule changes." Even though it wasn't her fault that she was in the wrong class, she

> was too scared to say something. So why would I get in a honors or AP class knowing that I only have three or four days to try it out. After three or four days, most teachers are just going over the rules and stuff. We need enough time to see how fast the teacher goes. Plus, I think all teachers should say, at the beginning of the class, "If you're in this class you need…" and then tell us what we should already know. That way we will know if we should stay in there or not.

She also discussed the importance of the role of the teacher teaching the more rigorous classes, stating, "a lot of students won't get in a class because (teacher's name) or (teacher's name) are teaching it. It's not that we want a easy class, we just want a fair teacher and they're not always fair." She went on to state, "you know, one of the computer questions asked how the school can get more kids in advanced classes. You need to look at who's teaching the classes."

O'Brian. O'Brian is a senior currently enrolled in all standard courses with a 3.24 grade point average. He has not taken any honors or AP courses in high school although his grades indicate that he possesses the potential to be successful in advanced classes. The vast majority of grades earned in core classes were A's, with an occasional B and C. When asked about his decision not to take advanced classes, O'Brian indicated that he has no interest in taking other courses, stating, "I'm just trying to maintain." He further explained, "I do just enough to get by. I'm not trying to take all them hard classes." When asked about his future plans, particularly if he plans to go to college, he indicated that he would like to attend college, although he has yet to take the ACT. He responded, "I started working on it" when asked if he's completed any college applications or applied for financial aid.

O'Brian lives with both parents and a younger sibling. His father is employed in law enforcement and his mother works at a local grocery store. They are fairly active in the

community, and attend school functions periodically. When asked about individuals helping to guide his educational and career decisions, O'Brian stated that a friend, and former student, advises him on preparing for college, taking the entrance exam, and seeking financial aid. He stated that his parents are vey much interested but unaware of the process; therefore, unable to provide much assistance.

> They don't know about the college stuff because they didn't go to college, and things were different back when they were in school. In fact, my mother told me the other day, when they were in school they didn't have to pass a graduation exam to get out of school. Things were different back then. I know they love me and want to help me, but they just don't know. And the counselors act like they're too busy for you. I mean, I know I can keep going over there until she they take time out and talk to me, but who wants to do that? I don't want to feel like I'm bothering people. I'll just figure it out on my own, with my friends.

Tonya. Tonya is an 11th grade student who was in all honors courses her 9th grade year and two honors courses her 10th grade year. She's currently enrolled in all standard classes, and has a 3.08 grade point average. When asked why she was no longer enrolled in the honors curriculum, she stated,

> Since I had the baby everything changed. I don't have time to study, I don't have time to go out, I don't have time for anything other than the baby. I want to be a good mother, and it's so hard, but I know she has to come first with everything I do. I know they say a baby is a blessing and I shouldn't regret it, but sometimes I do. I feel like I'm missing out on so much. Plus the teachers make everything so hard. It doesn't have to be that hard. It's like they want to keep people from doing it. It was just frustrating trying to

keep up with everything, and I couldn't do it all. Not just that but also the way other people look at me like I shouldn't be in advanced class because I have a baby. They don't say it but you know it's what they're thinking. Now that I'm in standard classes, everything's different. Other kids come to me for help with stuff and they're like 'How do you know all this?' Plus nobody's judging me in the classes I'm in now. Nobody's better than anybody. We're all in there learning together. I like it better—much better.

Christy. Christy is a 10th grade student that recently enrolled at Southeastern High School. She transferred from a school in Atlanta, Georgia, because of her father's employment, and has had somewhat of a difficult time adjusting. The school from which she transferred had a high minority student population, and is often showcased as one of the high-performing, high-poverty schools in the United States. Christy is currently enrolled in an honors English class, yet possesses the potential for advanced math as well, but chose to remain in a standard math course. Her previous math grades were a 98 average in Algebra and a 94 in Geometry in her 8th and 9th grade years, respectively. When asked about her decision not to enroll in Algebra II with Trigonometry, an advanced math class, she stated that although she does well in other advanced classes, math is difficult for her and would require more time and work than she's willing to put forth. She also admitted to enjoying the less rigorous curriculum.

This class is easy, and I like it. In the standard classes I feel like I'm the smartest one in the class because everyone looks to me for stuff and I like it. It kind of reminds me of my old school. Everyone looked up to me there. When I first came here and started in all of those advanced classes, I had to study hard and go home and read every night. If I didn't do that, I would end up failing the class. I just feel dumb in those classes, so I would rather stay in standard classes."

When asked about her educational plans and career goals, Christy stated that she still has the four-year plan she developed with the counselor at her previous school, and refers to it when deciding which classes to take. She stated that her mother remains in contact with her former Guidance Counselor and is very knowledgeable regarding college admissions. She expressed being concerned that her 2.98 GPA may prevent her from getting into the college of her choice and earning a scholarship, yet is relying on her former counselor's recommendation letter to help gain admittance in the college of her choice and acquire scholarships.

Qualitative Survey Question

Section three of the PASS survey sought to provide clarification for research questions four and five. The open-ended question, "What can we do at this school to support and encourage more students to take honors/AP courses," allowed students the opportunity to express, in their own words, actions school officials can employ to increase student participation in honors and AP courses. The open-ended question also provided student respondents the opportunity to bring forth additional factors that had not been addressed in the first two sections of the survey (Bogdan & Biklin, 2007).

In organizing the data, I first read through all student responses, as it is appropriate to do so before deciding on a method of coding (Bogdan & Biklen, 2007). While reading through responses, I looked for patterns, attempting to determine potential themes to represent data. I then reread each response, coding them into what appeared to be common themes and documenting those responses that did not easily fit into one of the categories. Initially, I sought to categorize student responses according to the six elements that describe an "inviting" school environment. However, after reading students' responses several times, it appeared more logical to group students' responses according to their actual words. Grouping student responses based

on the six E's would have required interpretation of their responses to determine which element best represented spoken words. Instead, I decided to group students' responses based on the terms the used since students' responses clearly fell into one category, exclusive of others. Also, because several of the E's appeared similar, many of the responses appeared to fit into more than one element, particularly enlistment, empowerment, and encouragement. Without being able to clearly differentiate among them, and to avoid the risk of misinterpreting students' responses, it appeared that grouping their responses based on the six E's was not best for this study. Therefore, I chose to represent the over 700 student responses into the following categories: teachers, classes, and environment, with each having positive and negative comments.

As displayed in Figure 7, over one-third of students' responses (35.3%) were related to the school environment, 17.1% referred to changes in the individual classes, and 16.5% of responses indicated changes related to individual teachers. Additionally, 18.3% of responses were categorized as miscellaneous. Table 19 displays representative samples of student responses as they relate to teachers, classes, and the environment.

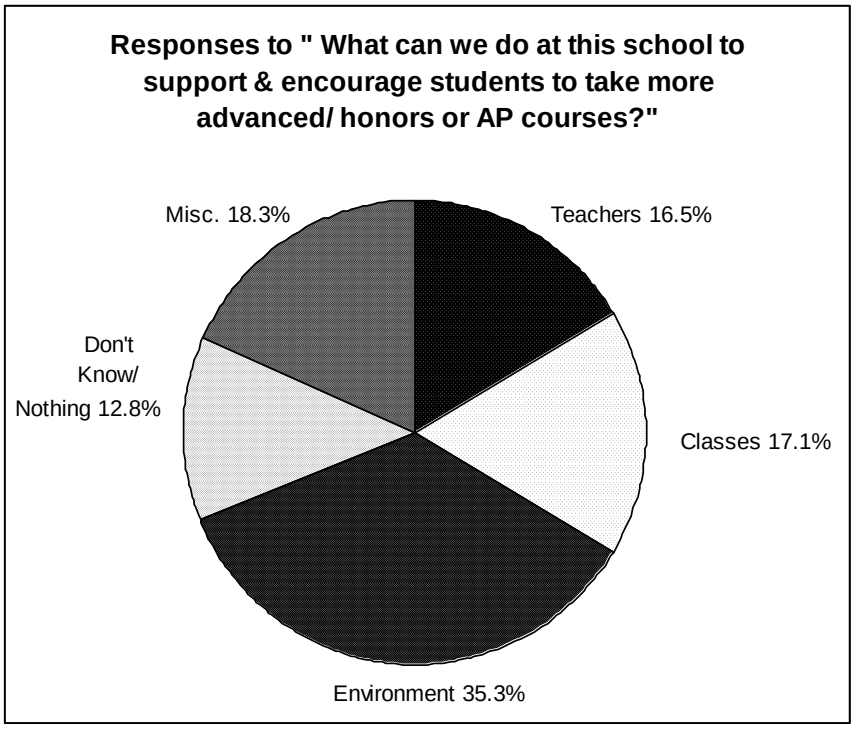

Figure 7. Classification of students' responses to open-ended question, "What can we do at this school to support and encourage students to take more advanced, honors, or AP courses?"

Table 19

Representative Student Responses to Open-Ended Question

Teachers
"Keep the same teachers that you have because they are doing a really good job."
"You should fire all the teachers that act like they don't want to be here like (teacher's name)."
"Teachers should be more friendly."
"Let (teacher's name) teach advance classes. Her class is fun and we learn."

(table continues)

Table 19 (continued)

	"Well, (teacher's name) needs to have realistic expectations. Because his class is so hard, students are scared to get in other honors classes."
	"Teachers should want to help us more."
	"Fire (teacher's name)."
Classes	
	"Make the classes where kids enjoy them."
	"Have more hands-on activities. Teenagers don't enjoy just sitting in a desk for two hours, our minds wander off."
	"Add more electives to choose from."
	"Ask what classes we like, don't just give us what you want to teach."
	"Let me understand the difference in the regular and advance class."
	"Listen to other kids talk; the classes are boring and unrewarding. Why would I want to get in there? None of my friends are in there."
Environment	
	"If you all would tell us how this stuff matters, we would try and take harder classes."
	"You need to actually sit down and talk with students and tell them the benefits of taking those classes."
	"Have tutoring for the students who may not do well in the class."
	"I'm a junior and I haven't heard anything about it. No one talked to me about picking my classes. And don't bother putting it on the announcements. Nobody listens to them."
	"Tell them you believe in them and think they can do it."

(table continues)

Table 19 (continued)

"Make the counselors be nice to us and explain why we should get in an advanced class."
"Reward us when we make good grades."
"Tell the students that they have a better chance of higher education than in regular classes."
"Talk to my parents. I can't remember every thing told to me when we meet to pick our classes. My parents want to be involved and know what's going on."
Miscellaneous
"We want better lunch."
"Give more privileges; make us not tuck in our shirts anymore."
"More break time."
"Let us use our cell phones in class."
"I don't like this school, I come to buy weed."
"Give us 5 free 100 test grades, a scholarship to Auburn and NFL tickets to the Superbowl."

The overwhelming majority of student responses (68.9%) fell within the categories of classes, teachers, or school environment — all aspects that school officials have the capacity to affect.

Summary

The purpose of this study was to explore the level to which students viewed their school environment as inviting as it related to their decisions to enroll in honors/AP courses. Chapter 4 provided the results of both quantitative and qualitative research questions. Descriptive statistics

were provided as well as ANOVA results, and results from student interviews and the open-ended survey question.

ANOVA results confirmed that students enrolled in honors and advanced placement courses viewed the school as more inviting than those not enrolled in honors and advanced placement courses. The study also revealed that while there was no statistically significant difference between minority and non-minority students' perceptions of their school environment, there was a difference when data was disaggregated among minority groups. Black students perceived the school as less inviting than Hispanic students, Multiracial students, and White students. With respect to socioeconomic status, there was no statistically significant difference between students who received free/reduced lunch compared to those who did not receive free/reduced lunch.

Qualitative results support data from the quantitative study as students discussed various steps the school can take to increase the number of students enrolled in honors/AP courses. The suggestions are consistent with the review of literature as 70% of the responses to the open-ended question pertained to specific teachers, classes, or the school environment, in general- all factors Invitational Theory states as crucial in increasing the level to which students view the school as inviting, and increasing the possibility of their enrollment in honors/AP courses. Chapter 5 will present a summary of the study, conclusions, and recommendations for further research.

CHAPTER 5. DISCUSSION

> *"People who are aware of, and ashamed of, inequities are well on the road to eliminating them."*
>
> — Gordon Allport, U.S. Psychology Professor

In the preceding chapter, the presentation and analysis of data were reported. This chapter consists of a summary of the purpose and structure of the study, and is followed by the major findings related to Invitational Theory. Conclusions from the findings of the study are discussed in relation to the definition, function, and characteristics of an "inviting" school, and the impact on minority students' enrollment in honors/AP programs. Finally, Invitational Theory's possible influence on leadership practice and suggestions for further research targeting the school environment and its impact on minority students' participation in honors/AP programs are discussed.

Summary of the Study

Minority students' enrollment in honors and advanced placement courses is largely contingent upon the school environment (Archbald et al., 2009; Burton et al., 2002; Collegeboard, 2002, 2003; Darity et al., 2001; Ford, 1998; Herbert & Reis, 1999; Johnson, 2006; Klopfenstein, 2004; Ndura et al., 2003; Taliaferro & Decuir-Gunby, 2008; Temple, 2006; Tyson et al., 2005; Wakelyn, 2009). This study suggested Invitational Theory as a possible framework to assess the level to which the school environment is considered "inviting" from the students' perspectives, with the six elements of Invitational Theory (equity, expectation, enlistment,

encouragement, empowerment, and enjoyment) defining the school environment as "inviting" (Schmidt, 2004, 2007). An extensive literature review validated the six elements as an accurate measure to promote optimal student learning, increase minority student achievement, and increase minority students' participation in honors/AP programs (see Appendix A).

Overview of the Problem

Equity in education is a goal all schools and districts strive to attain. However, while there has been some success at decreasing the achievement gap and the honors/AP enrollment gap, the disparity continues to exist. Minority students enroll in honors and advanced placement courses at a rate disproportionately to their presence in the school population (CollegeBoard, 2003; Darity et al., 2001; Herr, 1992; Johnson & Kritonis, 2006; Klopfenstein, 2004; Ndura et al., 2003). With such courses being the gateway for college admission and opportunities for scholarships, the disparity warrants researchers' attention. A number of studies explore the honors/AP enrollment gap (Archbald et al., 2009; Burton et al., 2002; Darity et al., 2001; Taliaferro & Decuir-Gunby, 2008); yet very few present the students' perspectives in exploring this phenomenon (Ndura, et al., 2003; Tyson et al., 2005).

Southeastern High School is not exempt from this problem as a disparity exists when comparing the percentage of minority students in the school population with the percentage represented in honors/AP courses (Table 4). As part of the continuous improvement plan, the school sought to take on the study to examine students' perceptions of the school environment and steps the school administration could take to improve the students' experience and quality of education.

Purpose Statement and Research Questions

The purpose of this study was multi-faceted. The study sought to explore the honors/AP enrollment gap that existed between minority students' and their White peers. Developed from the six elements of Invitational Theory, the PASS assessed the level to which students perceived the school environment as "inviting." First, the study explored the level to which students viewed their school as "inviting," determined by their responses to the Program Access Student Survey (PASS). This study also assessed whether students' responses differed based on ethnicity, socioeconomic status, or the level of curriculum they were exposed to (standard versus honors/advanced placement). Finally, the study explored factors that contributed to students' decisions to enroll (or not enroll) in honors and advanced placement courses.

The study included five research questions:

Quantitative Research Questions

1. What difference, if any, exists among honors/AP students and non-honors/AP students' perceptions of the school environment?

2. What difference, if any, exists among minority students and non-minority students' perceptions of the school environment?

3. What difference, if any, exists among free/reduced lunch students and non-free reduced lunch students' perceptions of the school environment?

Qualitative Research Questions

4. What factors do students report as playing a significant role in their decisions to enroll in honors/advanced placement courses?

5. What factors do students report as playing a significant role in their decision not to enroll in honors/advanced placement courses?

Review of the Methodology

This study, which began as a part of the school's efforts toward continuous improvement, used both quantitative and qualitative methods to examine the honors/AP enrollment gap of minority students and their White peers. With the goal of gathering students' perspectives of the school environment, the Program Access Student Survey (PASS) was administered to 855 high school students. The survey consisted of three sections. The first section was comprised of a 36-item questionnaire. The second section gathered demographic data from respondents, and the third section requested that students respond to an open-ended question. Reliability was established for the six elements at with an alpha of .904. ANOVA was then used to determine if students' responses to the survey differed based on ethnicity, socioeconomic status, and the level of curriculum received. Respondents also wrote comments to an open-ended question of the PASS, which were included in the qualitative analysis.

The qualitative component of this study consisted of student interviews to further clarify information gathered through the survey. Specific students were targeted to interview based on their ethnicity and the level of curriculum they received. Students interviewed were asked to discuss the decision-making process when determining which course to enroll, and other issue related to participation in honors and advanced placement courses.

Major Findings

Previous researchers (Archbald et al., 2009; Burton et al., 2002; Darity, 2002; Ferguson & Kennedy, 2001; Ndura et al., 2003; Noguera, 2003; Stanley et al., 2004; Taliaferro & DeCuir-Gunby, 2008; Tenenbaum & Ruck, 2007; Tyson et al., 2005; Wakelyn, 2009) studied extensively what phenomena affect and ultimately predict minority students' achievement and their decisions to enroll in honors and advanced placement courses. Stated were the impact of institutional

policies and practices including tracking and the selection and identification procedures for honors/AP courses. Also discussed was the enormous impact teachers and counselors have on minority students' decisions to enroll in more rigorous courses; their influence being much higher than with Caucasian students. The goal of this study was to determine whether differences exist in students' perceptions of the school environment as determined by ethnicity, socioeconomic status, and the level of curriculum received. I also sought to explore factors influencing students' decisions to enroll (or not enroll) in honors/AP courses. This section discusses the implications for the findings for each of the five research questions.

Research Question One

What difference, if any, exists among honors/AP students and non-honors/AP students' perceptions of the school environment? ANOVA produced results showing that students enrolled in honors and advanced placement courses viewed the school as more "inviting" than those who received standard curriculum. The results for both groups (honors and advanced placement) were significant; however, the gap in students' perceptions was much larger for students enrolled in advanced placement courses. Those findings were consistent with research citing that students receiving lower level curriculum also tend to receive substandard teaching and have lower teacher expectations (Archbald et al., 2009; Borman & Kimball, 2004; Haycock, 1998; Johnson, 2006; Ndura et al., 2003; Taliaferro & DeCuir-Gunby, 2008).

Student interviews also confirmed results from quantitative methods as Andrea, Alva, Christy, and Tia (all enrolled in honors or AP courses) made positive statements regarding individual teachers providing additional help or the school's procedures that allow flexibility for those whose honors/AP courses proved too difficult to continue. Thus, those students'

experiences influence their perception of the school environment which tended to be more inviting than students who had not received honors/AP curriculum.

The students who were not receiving honors/AP level courses had a different view of the school environment than those previously mentioned. The majority of their comments were negative. Keisha spoke of not fully understanding the benefits of enrolling in such classes and the strict policy for schedule changes as barriers that prevented her from enrolling in the more rigorous courses. While O'Brian has aspirations of attending college, he has not yet taken the ACT, completed a college application, or applied for financial aid. This suggests that perhaps he has not received the proper guidance informing him of deadlines and the need to take entrance exams prior to the senior year. O'Brian also spoke of a negative experience with the guidance counselor that prevented him from seeking her assistance again.

While Christy did not report a negative experience with the school, her reliance on her former Guidance Counselor suggests that perhaps she has not yet formed a relationship with her current school counselor, or perhaps she doesn't feel comfortable doing so. Tonya's circumstances were different than the others in this group, yet her comments were also related to the school environment. Acknowledging that she chose not to continue in the honors curriculum, she indicated that no one advised her of any options available that would allow her to remain on the honors diploma without sacrificing the care of her child. While she took full responsibility for her decision to enroll in less rigorous courses, not blaming the school, she did appear to be frustrated with the school environment as she discussed being treated differently by teachers and feeling ostracized by students after having the baby.

There were some negative comments among those students enrolled in honors/AP courses, and a limited number of positive comments among those who had not received more

rigorous curriculum. However, the majority of the comments from honors/AP students were positive and the vast majority of comments from non-honors/AP students were negative, indicating that students enrolled in honors/AP curriculum perceived the school environment as more "inviting" than those students who were not receiving curriculum on the honors/AP level.

Research Question Two

What difference, if any, exists among minority students and non-minority students' perceptions of the school environment? The findings resulting from research question two indicated a statistically significant difference among ethnicity in students' responses to the survey. Although there was not a statistically significant difference when comparing minority students with non-minority students, after disaggregating the minority group into individual ethnicities, there was a statistically significant difference among groups. Hispanic, Multiracial, and White students all viewed the school as more inviting than Asian, Black, and American Indian students.

Based on literature supporting factors important for minority students' success, it was expected that minority students as a whole would perceive the school as less inviting than White students; however, that was not the case. While some studies refer to ethnic students specifically, the majority of research included in the literature review addressed minority students collectively, assigning them similar thoughts, attitudes and experiences in terms of the school environment. Thus the same outcome was expected for all minority groups.

Quite surprising was the statistically significant difference between Black and Hispanic students' perceptions of the school environment. Because the preponderance of literature on minority students' achievement speaks collectively of the groups when discussing characteristics needed to promote students' growth and encouraging their participation in honors/AP courses, it

is surprising that Black and Hispanic students' perceptions differ significantly in the level to which the school environment is "inviting."

In an attempt to account for the differences in Black and Hispanic students' perceptions of the school environment, an explanation is offered that might explain the discrepancy. Because of recent efforts to increase the academic achievement of English language Learners (ELL), the school has a teacher dedicated to overseeing the process of enrollment, testing, and providing accommodations for students who are identified as ELL. In past years, guidance counselors held the responsibility of navigating the educational system for ELL students; however, for the past three years, non-English speaking students have had a teacher who is allotted release time to address their educational needs including creating educational plans for each student and monitoring them throughout the school year, making changes as needed. It is plausible that Hispanic students' perceptions of the school environment can be largely attributed to the changes addressed.

Also surprising was the difference between bi-racial and Black students' responses to the survey, indicating their perception of the school environment. Again, with the literature grouping minority students together as having similar thoughts, experiences, and beliefs as it relates to the educational system, it was expected that Bi-racial students' perceptions would be similar to minority students' perceptions. A reason in these results might be explained by the survey instrument itself. The district in which SEHS is located does not regularly use "Biracial" as a category for students to select. The district usually uses the following categories for students to select their ethnicity: American Indian, Asian, Black, Hispanic, and White. Students who prefer not to report their ethnicity are allowed to choose "Other" as a category.

Because the survey was used at more than one location, it encompassed several aspects that would be inclusive of both sites. However, in this case, the ethnic categories provided a number of students an option that had not existed prior to survey administration, which may have affected the results for that group of respondents.

Research Question Three

What difference, if any, exists among free/reduced lunch students and non-free/reduced lunch students' perceptions of the school environment? With respect to socioeconomic status, there was no difference in students' perceptions when comparing students who received free or reduced lunch with those who paid full price for lunch. This was inconsistent with the literature stating socioeconomics is a major factor in the quality of education students receive (Card & Rothstein, 2007; Klopfenstein, 2004; Lee, 2002; Rubin, 2003) which influences their perception of the school environment. Research states that low income students often receive substandard curriculum, more inexperienced teachers (Barton, 2004; Borman & Kimball, 2004), and less access to technology (Barton, 2004). Additionally, because parents of low-income students may experience a greater amount of stress related to their financial status, they are less likely to be involved in the school system and therefore unaware of the educational system's policies and procedures.

The findings also conflicted literature that states students from low income families have less access to honors/AP courses and suffer as a result of barriers schools intentionally or unintentionally have in place that prevent them from experiencing success at the same pace as their peers (Klopfenstein, 2004; Lubienski, 2006). Several studies suggest that perhaps it is socioeconomic status, not ethnicity that separates the privileged from other students who have

limited access to programs (Dee, 2004; Elliot, 1994; Jonson & Kritsonis, 2006; Lubienski, 2002; McLoyd, 1998).

ANOVA results were not consistent with research on the relationship between socioeconomic status, student achievement, and students' perceptions as students categorized as free, reduced, or full pay all perceived the school environment similarly, with no statistically significant differences noted. The results observed through ANOVA data analysis might be explained by the distribution of wealth within the community that surrounds the school. Because low, middle and high socioeconomic status families are represented throughout the student body encompassing all ethnicities, this might account for the ANOVA results that showed no difference in students' perceptions based on their socioeconomic status.

Research Question Four

What factors do students report as playing a significant role in their decisions to enroll in honors/advanced placement courses? While student responses varied, the major themes were consistent with research on the various elements (equity, expectation, enlistment, empowerment, encouragement, and enjoyment) from Invitational Theory describing the ideal environment conducive to minority student achievement and promoting their participation in honors/AP courses. Several students interviewed described their parents as either uninterested or uninvolved in the process of selecting their classes, leaving the students freedom to choose which classes to enroll in, supporting literature detailing the need for teachers and counselors to serve as students' advocates because many African American parents are not aware of the availability and benefits of honors/AP courses or uninvolved in the process (Taliaferro & DeCuir-Gunby, 2008).

The elements of enlistment and empowerment encompass school officials building relationships with students and parents, giving them the necessary information to make an informed decision regarding the appropriate academic program to pursue (CollegeBoard, 2002; Schweinle et al., 2008; Taliaferro & DeCuir-Gunby, 2008; Tyson et al., 2005) which was mentioned throughout student interviews. Enlistment also covers having measures in place to support minority students' success in rigorous classes in the way of support classes during the day and tutoring offered outside of school hours (Rubin, 2003; Taliaferro & DeCuir-Gunby, 2008). The majority of the students interviewed referenced some form of safety net as having been important in their success in honors/AP courses. Some students also mentioned a specific teacher instrumental in their success or continuation in honors/AP courses while others discussed the availability of tutoring as being key- both of which confirms the literature on enlistment and empowerment from Invitational Theory.

The students also discussed the desire to please their teachers, consistent with the survey results indicating that minority students stated their teachers played more of an influence than parents in selecting courses, also aligned with literature indicating Black students, more than any other racial group, value their teachers' opinions and seek to please them (Burton et al., 2002; Ferguson, 2003; Ndura et al., 2003).

During interviews, students spoke of having interesting classes, being in classes their friends are in, and having positive feelings towards school, all components of enjoyment. Reponses to the open-ended question, "What can this school do to encourage more students to enroll in honors/AP courses?" elicited various responses that can be categorized under enjoyment. Student responses "make classes fun and not stressful", "teachers should be in better moods", and "have classes we want", indicate that they wish for a more positive, pleasing

experience which would lead them to enjoy school (Ferguson & Kennedy, 2001; Ford, 1998; Klopfenstein, 2004; Tyson et al., 2005; Wakelyn, 2009).

Research Question Five

What factors do students report as playing a significant role in their decision not to enroll in honors/advanced placement courses? Students who chose not to enroll in honors/AP courses made the decision with similar ideas as those who chose to enroll in the more rigorous courses. Although the answers were on opposite ends of the spectrum, students presented similar categorical responses as contributing to their decisions to enroll (or not enroll) in honors/AP courses.

Students enrolled in honors and AP courses stated they understood they needed those courses for ACT preparation and for college admission, confirming that they were aware of the direct benefits of enrolling in said courses. They also discussed teachers encouraging them to enroll in more rigorous classes and the impact it had on their decisions to remain in the courses. With such statements as "why should I?" and "I do enough to get by," it's clear that both Keisha and O'Brian were not aware of the benefits of enrolling in honors and advanced placement courses. Furthermore, because O'Brian has aspirations of going to college and appears to have the ability, his lack of direction regarding taking the ACT and the need to apply early for financial aid suggests that perhaps he did not receive adequate guidance from school counselors.

Students' responses to the open-ended question also suggest that they did not feel properly informed about the availability or benefits of the classes. Because is was mentioned with both students in honors/AP courses as well as those not enrolled in said classes, it appears that some students are receiving subtle invitations to enroll in honors/AP courses and others may be left out of conversations informing them of the benefits and availability. Determining what

differentiates students that are receiving such information from those not being informed is a step the school should seek to address.

Closely related to the previous paragraph is the screening and identification process. Because some students commented that "no one told me about it" or "they talked to a friend of mine, but never me," suggests that perhaps changes could be made in the process school officials use to determine which students would be appropriate for honors and AP courses. Student responses to the open-ended question support the qualitative data indicating the screening, identification, and referral process as a concern, and literature on Invitational Theory support equity as an important element to assess the extent to which schools are inviting (Ford, 1998; Johnson, 2006; Taliaferro & DeCuir-Gunby, 2008)

Student responses also confirm literature stating teachers often have lower expectations for minority students (CollegeBoard, 20002a; Klopfenstein, 2004; Lubienski, 2002; Taliaferro & DeCuir-Gunby, 2008), another element describing an inviting school, and which speaks directly to the process to identify and refer students for more rigorous courses, suggests that perhaps open enrollment is the best way to increase minority participation in honors/AP courses (Tyson, 2007).

Although enrolled in honors courses, Tia confirmed that racialized peer pressure is occurring at some level within the school as she spoke of friends not wanting others to know of their abilities for fear of viewing them in a negative light, a phenomena discussed by various researchers (DeCuir & Dixson, 2004; Fordham & Ogbu, 1986; Ogbu, 2003; Stewart, 2007; Tyson et al., 2005). While she, herself, was not susceptible to the peer pressure, she confirmed that it existed to some extent.

Implications for Educators

Because this study was conducted at one high school, the results can not be generalized to other populations. While the implications discussed are intended for the high school where the study took place, because literature stresses the importance of the school environment on academic performance, Invitational Theory is a framework all educators can use to gauge the school environment from the students' perspectives.

There is a great need for educators to realize the impact of the school environment on student achievement, and make the needed adjustments to improve the environment in order to improve teaching and learning, resulting in an increase in student achievement. An abundance of literature stresses the importance of school officials creating the environment necessary for student growth and development (Borman & Kimball, 2004; Burton et al., 2002; Carbonaro, 2005; CollegeBoard, 2003; Darity et al., 2001; DeCuir & Dixson, 2004; Ferguson, 2003; Schmidt, 2007; Stanley et al., 2004; Wakelyn, 2009) and increasing minority students' achievement (Ndura et al., 2003; Noguera 2003; Salinas, 2002; Solorzano & Ornelas, 2004; Taliaferro & DeCuir-Gunby, 2008; Tyson et al., 2005).

Current literature is consistent with Invitational Theory as an appropriate framework to assess the level to which the school environment is inviting. While some research exists focusing on minority students enrolled in honors/AP courses, very few studies focus on the students' perspectives, although the importance of gathering students' voices is documented throughout the literature (Hunter & Smith, 2007; Schmidt, 2007; Wiggan, 2007). Thus, it is appropriate for school officials, interested in increasing their honors/AP enrollment, to utilize Invitational Theory, to determine the areas in need of improvement, from the students' perspective.

Based on the results from this study, officials at Southeastern High School can take specific, intentional measures to improve students' perceptions of the school environment and increase the number of minority students involved in the honors/AP curriculum, as stated in the plan for improvement.

Screening, Recruitment, and Identification Procedures

In attempting to increase the number of minority students enrolled in honors and AP courses, it is vital that schools and districts examine the process in which they identify and recruit students for such programs (Archbald et al., 2009; DeCuir & Dixson, 2004; Ford, 1998; Herr, 1992). Schools must examine the barriers that unintentionally discourage minority students from enrolling in such classes. Research suggests open enrollment for more rigorous courses (Thompson, 2007; Tyson et al., 2005) and teacher training to identify students that possess the potential yet may not seek the more rigorous courses. It is also suggested that schools have a system of incentives in place to encourage students to enroll in honors/AP courses and strive to be successful within the classes (Wakelyn, 2009).

Vertical Articulation

As supported by research, the key to ensure minority students are prepared for the rigor of honors/AP courses is to make certain both elementary and junior high schools adequately prepare students for the high school courses (Archbald et al., 2009; Burris & Welner, 2005; Darity et al., 2001; Ford, 1998; Johnson, 2006; Klopfenstein, 2004; Temple, 2006; Whiting, 2009; Yonezawa & Jones, 2006). While actively recruiting minority students into more rigorous courses, educators must work collaboratively across grade levels to facilitate student learning. Teachers working together might be successful with students for the school year, but to support long term sustained growth, schools must ensure collaborative efforts of all teachers to ensure

students have the prerequisite skills at the middle and junior high school level needed to be successful in honors/AP courses.

Parental Involvement

Research documents the importance of parental involvement and its affect on student achievement (Crozier, 2001; Rothstein, 2004; Taliaferro & DeCuir-Gunby, 2008; Zhao & Akiba, 2009), as well as the schools' responsibility in encouraging parents to maintain active involvement in their child's schooling (Crozier, 2001; Taliaferro & DeCuir-Gunby, 2008). Students' whose parents are no longer involved in educational decisions have such decisions left solely to the school's guidance department, or not made at all, resulting in students being misplaced in courses. Also, schools must not assume that all parents are equipped with the tools necessary to effectively support the educational endeavors of their children. If that assumption is made then school personnel, through inaction, allow the failure of some disadvantaged children. Instead, schools must educate parents, in addition to students, on the benefits of participation in honors/AP curriculum courses (CollegeBoard, 2002; Klopfenstein, 2004; Taliaferro & DeCuir-Gunby, 2008).

Schools can begin by enhancing communication and collaboration with parents. An important characteristic of schools successful in minority students enrolling in more rigorous courses is the school personnel taking initiatives to include parents to work as partners in students' academic learning (Herbert & Reis, 1999; Rothman, 2001; Zhao & Akiba, 2009).

School Environment

Invitational Theory is supported by research on school characteristics that promote optimal student growth and development and minority student achievement (see Table 6). Thus, it is an appropriate measure to assess the school environment as viewed through the eyes of the

students. In an attempt to increase minority student enrollment in honors/AP courses, it is suggested that schools regularly gauge the level to which students view the environment as "inviting"; and make certain each of the six elements (equity, expectation, enlistment, empowerment, encouragement, and enjoyment) are present in the school environment.

Appropriately Train Personnel

Because research documents teacher characteristics that are most beneficial to minority students (Burton et al., 2002; Dee, 2004; Haycock, 1998; Salinas, 2002), and "good teachers of minority students are good teachers of all students," having personnel in place to increase minority student achievement may increase achievement for all students. Adequate guidance counseling is an area school officials can work to improve. Counselors must be effective and provide adequate guidance throughout middle and junior high schools so students are prepared for the rigor of honors and AP courses (Johnson, 2006), as they are often the deciding factor in students being encouraged to participated in more rigorous courses.

Results from the study indicating minority students felt as if no one encouraged them to take honors or AP courses correlates with other studies where minority students felt they were overlooked for admission into honors and AP curriculum. Considering guidance counselors often have more of an influence in students' course selection than parents (Ndura et al., 2003), changing the manner in which counselors handle scheduling students into classes can bring about immediate and sustained improvements in increasing minority students enrolled in honors/AP courses.

Safety Nets

It is not sufficient for schools to offer honors/AP courses to students and assume that their success is solely the responsibility of the student or parent. Schools must be committed to

having appropriate measures in place to promote student success. Specific things schools can do include implementing a peer tutoring and afterschool tutoring programs, specifically for those students enrolled in the upper level courses, as there is an abundance of research documenting the impact tutoring and remediation has on student achievement (CollegeBoard, 2002; Darity et al, 2001; Rubin, 2003; Taliaferro & Decuir-Gunby, 2008; Wakelyn, 2009).

Recommendations for Further Research

Several recommendations for future research have evolved from this study:

1. Use a longitudinal approach for data collection to compare student perceptions over time (in 9th grade and again in 12th grade), and trends toward minority enrollment in more rigorous courses.

2. Replication of the study at other high schools would help determine if the findings are similar within the state, region, or nationally. Because this study began out of a direct need for information by the school district, the author did not consider including other schools in the study, as it was not feasible considering the time constraints.

1. Perform exploratory factor analysis to determine the underlying structure defining an "inviting" school environment. This study used the mean score on the PASS (encompassing all elements) to determine the level to which students' perceive the school as inviting. EFA is suggested to determine the number of factors and their strength in describing the level of invitingness.

4. It may be of value to replicate the study comparing students' perceptions to that of their teachers' for the sole purpose of professional development. While the results of this study were shared with both the school and district, the differences between student and teacher perceptions are likely to be profound and beneficial to explore.

Conclusions

The success of minority students, according to research, is contingent upon the school environment. These students, more than others, excel academically when the environment is such that student growth and development are encouraged and promoted. Recommendations which could eliminate barriers to honors and advanced placement courses for minority students would positively affect achievement for all students. Whereas this study took place in south central Alabama, the honors/AP enrollment gaps presented in this study accurately reflects the gaps observed throughout the United States (CollegeBoard, 2003). Therefore, although the study was situated in one state and the implications and recommendations cannot be generalized to other areas, because research validates the 6Es as the characteristics desired to improve student achievement and minority student success, school officials can use Invitational Theory as a framework to assess the school environment through the eyes of the students.

School and district administration must be committed to disrupting the current power structures and patterns that present barriers and hinder minority students from enrolling in honors and advanced placement courses. Gathering the students' perspectives is the key to the continuous improvement process. The collective goal of a school must be to empower all students through a rigorous, challenging, and relevant curriculum. Assessing the environment and making changes to promote minority student achievement and optimal student growth is the beginning.

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Appendix A

Letter Granting IRB Approval

AUBURN
UNIVERSITY

Office of Research Compliance
307 Samford Hall
Auburn University, AL 36849

Telephone: 334-844-5966
Fax: 334-844-4391
hsubjec@auburn.edu

January 13, 2011

MEMORANDUM TO: Ms. Molly Killingsworth
Department of Educational Foundations, Leadership and Technology

PROTOCOL TITLE: "Minority Students' Participation in Honors/Advanced Placement Programs"

IRB FILE NO.: 10-252 EX 1009

APPROVAL DATE: September 19, 2010
EXPIRATION DATE: September 18, 2011

The referenced protocol was approved "Exempt" by the IRB under 45 CFR 46.101 (b) (4):

> Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

You should retain this letter in your files, along with a copy of the revised protocol and other pertinent information concerning your study. If you anticipate a change in any of the procedures authorized in this protocol, you must request and receive IRB approval prior to implementation of any revision. Please reference the above IRB file number in any correspondence regarding this project.

If you will be unable to file a Final Report on your project before September 18, 2011, you must submit a request for an extension of approval to the IRB no later than August 11, 2011. If your IRB authorization expires and/or you have not received written notice that a request for an extension has been approved prior to September 18, 2011 you must suspend the project immediately and contact the Office of Research Compliance.

A Final Report will be required to close your IRB project file.

If you have any questions concerning this Board action, please contact the Office of Research Compliance.

Sincerely,

Kathy Jo Ellison, RN, DSN, CIP
Chair of the Institutional Review Board
for the Use of Human Subjects in Research

cc: Ms. Sherida Downer
Dr. Lisa Kensler

Appendix B

Program Access Student Survey (PASS)

Question 1

A counselor or teacher advised me on the classes I signed up for this school year.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 2

My counselor or teachers talk to me about taking classes that match my skills.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 3

A counselor or teacher at the middle school advised me on classes I picked for my 9th grade year.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 4

The classes I took in middle school prepared me to take honors classes in the 9th grade if I wanted to.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 5

I believe honors classes are open to any student who wants to register for an honors class.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 6

I believe AP classes are open to any student who wants to register for an AP class if they have taken the required courses.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 7

I feel like all students have an equal chance of being scheduled into an honors or AP class if they register for one.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 8

If you have NOT requested to be in an honors or AP class, then skip this question. If you HAVE requested to be in an honors or AP class, then please answer the following question:

I was scheduled into the honors or AP classes that I requested.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 9

My teachers have high expectations for me in class.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 10

Administrators (principal and assistant principals) have high expectations for students in this school.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 11

My parents expect me to make good grades in school.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 12

My friends talk to me about making good grades in school.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 13

If I made good grades in school, my friends would make fun of me or give me a hard time.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 14

I feel like I am scheduled into English classes that are challenging to me.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 15

I feel like I am scheduled into Math classes that are challenging to me.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 16

My counselor or teachers advise me by providing me with information that helps me choose classes that match my ability.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 17

My teachers challenge me in class.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 18

My academic classes (English, Math, Science, Social Studies) are too easy.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 19

If I struggle in classes, teachers offer extra help or support.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 20

I take my class work in high school more serious than when I was in middle school.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 21

I make good grades in school.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 22

I feel like I have the skills and ability to be successful in an honors or AP class.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 23

A counselor or teacher has talked to my parents about the benefits of taking honors or AP classes.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 24

My counselor has talked to me about the benefits of taking honors or AP classes.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 25

My teachers have talked to me about the benefits of taking honors or AP classes.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 26

Teachers influence my decision on which classes I should register for.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 27

My parent(s) influence my decision on which classes I should register for.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 28

My counselor influences my decision on which classes I should register for.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 29

My friends influence my decision on which classes I should register for.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 30

I try harder in class when my teacher encourages me to make good grades.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 31

I try harder in class when my parent encourages me to make good grades.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 32

I try harder in class when my friends encourage me to make good grades.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 33

I do NOT enjoy being in a class if none of my friends are in the class.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 34

My school offers honors or AP classes in an area that I am interested in.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 35

My counselor or teachers talk to me about taking classes that match my interests.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 36

I am more likely to take an honors or AP class if some of my friends are in there.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

Question 37

I enjoy going to school.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
○	○	○	○	○

[DEMOGRAPHIC INFORMATION]

Question 38

I have taken an honors class in high school.

- ○ Yes
- ○ No

Question 39

I have taken an AP course in high school.

- ○ Yes
- ○ No

Question 40

Were you served in the gifted program in elementary school?

- ○ Yes
- ○ No

Question 41

I am in the:

- ○ 9th grade
- ○ 10th grade
- ○ 11th grade
- ○ 12th grade

Question 42

I started going to this high school in the:

- ○ 9th grade
- ○ 10th grade
- ○ 11th grade
- ○ 12th grade

Question 43

I am:

- ○ 13 yrs old
- ○ 14 yrs old
- ○ 15 yrs old
- ○ 16 yrs old
- ○ 17 yrs old
- ○ 18 yrs old
- ○ 19 yrs old
- ○ 20 yrs old

Question 44

I am:

- ○ Male
- ○ Female

Question 45

I am:

- Asian or Pacific Islander
- Black
- Hispanic
- American Indian or Alaskan Native
- Multiracial
- White

Question 46

I live with my:

- mother and father
- mother only
- father only
- aunt and/or uncle
- grandparent
- Other, please specify

Question 47

My mother's education level:

- Did not complete high school
- Completed high school
- Went to some college
- Completed a college degree
- Other, please specify

Question 48

What is the name of the math class you took or are taking this year?

Question 49

In my last math class, my final grade was

- ○ 100-90
- ○ 89-80
- ○ 79-70
- ○ 69-0

Question 50

Have you taken a foreign language class in high school?

- ○ Yes
- ○ No

Question 51

If I were to buy lunch at school, I am charged:

- ○ Full price
- ○ Reduced price
- ○ Free lunch

[QUALITATIVE SURVEY QUESTION]

Question 52

What can we do at this high school to support and encourage more students to take honors or AP courses?

Appendix C

Codes for Demographic Information

PROGRAM ACCESS STUDENT SURVEY QUESTIONNAIRE

CODEBOOK

GENDER	1- Male
	2- Female
ETHNICITY	1- Asian/Pacific Islander
	2- Black/African American
	3- Hispanic
	4- American Indian/ Alaskan Native
	5- Multiracial
	6- White/Caucasian
GUARDIANSHIP	1- Mother and father
	2- Mother only
	3- Father only
	4- Aunt and/or uncle
	5- Grandparent
	6- Other
MOTHER'S EDUCATIONAL LEVEL	1- Did not complete high school
	2- Completed high school
	3- Some college

	4- Completed a college degree
	5- Other
SOCIOECONOMIC STATUS	1- Full price
	2- Reduced price
	3- Free lunch

Appendix D

Normality Test by Survey Item

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
counselor or teacher advised classes	855	1.00	5.00	3.2877	1.30627	-.370	.084	-1.014	.167
counselor or teachers talks classes and skills	855	1.00	5.00	3.1661	1.31307	-.228	.084	-1.170	.167
counselor or teacher at middle school advises classes	855	1.00	5.00	3.0749	1.30178	-.155	.084	-1.132	.167
middles school prepared for honors at high school	855	1.00	5.00	3.3228	1.22566	-.462	.084	-.805	.167
adv/honors classes open to all who are interested	855	1.00	5.00	3.8152	1.15680	-.909	.084	.010	.167
AP open to all who are interested	855	1.00	5.00	3.7895	1.04473	-.917	.084	.476	.167
all students equal chance scheduled into honors/adv	855	1.00	5.00	3.6351	1.14834	-.686	.084	-.330	.167
teachers have high expectations	855	1.00	5.00	3.8246	1.01262	-.891	.084	.536	.167
administrators have high expectations	855	1.00	5.00	3.8550	1.08320	-1.023	.084	.606	.167
parents expect good grades	855	1.00	5.00	4.6515	.70473	-2.771	.084	9.564	.167
friends talk about making good grades	855	1.00	5.00	3.2363	1.19340	-.389	.084	-.726	.167
Friends pick on for making good grades	855	1.00	5.00	1.7567	1.03079	1.426	.084	1.459	.167
English class is challenging	855	1.00	5.00	2.8117	1.23885	.106	.084	-1.051	.167
Math class is challenging	855	1.00	5.00	3.2035	1.29156	-.197	.084	-1.121	.167

counselor or teach help choose class match ability	855	1.00	5.00	3.2222	1.18824	-.356	.084	-.790	.167
teachers challenge me	855	1.00	5.00	3.5895	1.02023	-.717	.084	.128	.167
classes are too easy	855	1.00	5.00	2.6117	1.03628	.336	.084	-.291	.167
if struggle, teachers help	855	1.00	5.00	3.2690	1.23575	-.499	.084	-.788	.167
high school more serious than middle	855	1.00	5.00	4.0819	.97646	-1.261	.084	1.502	.167
make good grades	855	1.00	5.00	3.9123	.89392	-.991	.084	1.359	.167
have skills and ability for success honors	855	1.00	5.00	3.7789	1.09674	-.766	.084	-.102	.167
counselor or teach talked parent honors/AP	855	1.00	5.00	2.5146	1.21542	.413	.084	-.809	.167
counselor talked me benefits AP	855	1.00	5.00	2.7485	1.28718	.189	.084	-1.128	.167
teachers talked me benefits AP	855	1.00	5.00	2.9076	1.26921	-.050	.084	-1.115	.167
teachers influence what class sign up	855	1.00	5.00	3.1029	1.20253	-.239	.084	-.904	.167
parents influence what class sign up	855	1.00	5.00	3.7146	1.14334	-.900	.084	.077	.167
counselor influence what class sign up	855	1.00	5.00	2.8269	1.23113	-.007	.084	-1.077	.167
friends influence what class sign up	855	1.00	5.00	3.1883	1.22076	-.410	.084	-.833	.167
try harder when teacher encourage	855	1.00	5.00	3.9006	.98617	-.997	.084	.906	.167
try harder when parents encourage	855	1.00	5.00	4.0269	1.02566	-1.203	.084	1.241	.167
try harder when friends encourage	855	1.00	5.00	3.6678	1.08085	-.705	.084	.091	.167
do NOT enjoy if friends not there	855	1.00	5.00	3.6912	1.25659	-.637	.084	-.676	.167

school adv classes interesting	855	1.00	5.00	3.4550	1.15234	-.523	.084	-.433	.167
counselor or teach talk classes match interest	855	1.00	5.00	3.1368	1.22570	-.266	.084	-.940	.167
likely adv if friends there	855	1.00	5.00	3.2889	1.22696	-.297	.084	-.875	.167
enjoy school	855	1.00	5.00	3.1333	1.30429	-.381	.084	-.940	.167
Valid N (listwise)	855								

Appendix E

LSD Post Hoc Test with Multiple Comparisons for Ethnicity

Multiple Comparisons

Dependent Variable: OVR1_37
LSD

(I) ethnicity	(J) ethnicity	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.2803	.16196	.084	-.5982	.0376
	3.00	-.0266	.19312	.891	-.4056	.3525
	4.00	-.0659	.22954	.774	-.5164	.3847
	5.00	-.0240	.18153	.895	-.3803	.3323
	6.00	-.1780	.16074	.268	-.4935	.1374
2.00	1.00	.2803	.16196	.084	-.0376	.5982
	3.00	.2537(*)	.11458	.027	.0288	.4786
	4.00	.2144	.16889	.205	-.1171	.5459
	5.00	.2563(*)	.09373	.006	.0723	.4402
	6.00	.1023(*)	.04085	.012	.0221	.1824
3.00	1.00	.0266	.19312	.891	-.3525	.4056
	2.00	-.2537(*)	.11458	.027	-.4786	-.0288
	4.00	-.0393	.19896	.843	-.4298	.3512
	5.00	.0025	.14089	.986	-.2740	.2791
	6.00	-.1515	.11284	.180	-.3729	.0700
4.00	1.00	.0659	.22954	.774	-.3847	.5164
	2.00	-.2144	.16889	.205	-.5459	.1171
	3.00	.0393	.19896	.843	-.3512	.4298
	5.00	.0418	.18773	.824	-.3266	.4103
	6.00	-.1122	.16771	.504	-.4413	.2170
5.00	1.00	.0240	.18153	.895	-.3323	.3803
	2.00	-.2563(*)	.09373	.006	-.4402	-.0723
	3.00	-.0025	.14089	.986	-.2791	.2740
	4.00	-.0418	.18773	.824	-.4103	.3266
	6.00	-.1540	.09160	.093	-.3338	.0258
6.00	1.00	.1780	.16074	.268	-.1374	.4935
	2.00	-.1023(*)	.04085	.012	-.1824	-.0221
	3.00	.1515	.11284	.180	-.0700	.3729
	4.00	.1122	.16771	.504	-.2170	.4413
	5.00	.1540	.09160	.093	-.0258	.3338

Based on observed means.
* The mean difference is significant at the .05 level.