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Adjustment Experiences and Ethnic Identity Attitudes Among High School Students in Advanced Academic Programs

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ADJUSTMENT EXPERIENCES AND ETHNIC IDENTITY ATTITUDES AMONG HIGH SCHOOL STUDENTS IN ADVANCED ACADEMIC PROGRAMS

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ABSTRACT

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African American high school students have been historically underrepresented in advanced placement (AP), International Baccalaureate (IB), and dual enrollment (DE) programs. The adoption of more equitable admissions practices has helped many school divisions develop a more ethnically diverse AP, IB, and DE student body. Despite increased African American student enrollment, retaining these students remains an ongoing problem. Equally troubling is the persistent achievement gap that exists between African American and White students in AP, IB, and DE programs. African American students do not perform as well as Whites on program exit exams nor do they complete these programs at a rate comparable to White students. African American student underrepresentation must be addressed through both recruitment and retention. Thus, it is critical to understand academic and social adjustment among this student population and the effect that their ethnic identity achievement may have on their adjustment. Identifying differences in academic and social adjustment between African Americans and Whites is equally important. This dissertation hypothesizes that African American students enrolled in AP, IB, and DE programs do not achieve the same levels of academic and social adjustment as their White peers. It further hypothesizes that academic and social adjustment are influenced by ethnic identity achievement.

This was a statistical study of African American and White AP, IB, and DE students in two school districts. Data were collected using a student questionnaire comprised of the Institutional Integration Scale and the Multigroup Ethnic Identity Measure, as well as additional questions that solicited demographic information.

African American participants indicated higher levels of ethnic identity achievement than White participants and differences were statistically significant; however, differences in academic and social adjustment were not statistically significant between the two student groups. Thus, results suggest that African Americans and Whites in AP, IB, and DE programs achieve equal levels of academic and social adjustment. However, African American respondents who reported higher levels of ethnic identity achievement indicated higher levels of academic and social adjustment than African Americans who reported lower levels of ethnic identity achievement. Recommendations for high schools and suggestions for future research are given.

This dissertation is dedicated to my mother who taught me to dream big and work hard.

Annette Chavis Hall
March 16, 1956-February 8, 2010

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Lastly, I thank God for allowing me to make it through this experience. And thirty pounds lighter to boot! It has been quite a journey marked by tragedy, celebration, and the requisite blood, sweat, and tears. Now, I'm ready to party. Some sleep would be nice too.

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CHAPTER 1: INTRODUCTION

The underrepresentation of African American students in advanced high school academic programs has been a persistent problem at all levels of education throughout the history of American education (Ford & Whiting, 2007; Mickelson, 1999). Underrepresentation has often been examined with the intent of increasing minority student enrollment in advanced academic programs, particularly gifted education programs (Mayer, 2008). With this goal in mind, previous studies have typically involved the critical examination of nomination processes, admission policies, and eligibility criteria (Bernal, 2002; Ford, Harris, Tyson, & Trotman, 2002). Many of these studies have yielded suggestions for the creation of equitable admission practices that level the playing field for minority students, thereby increasing minority students' chances of placement in advanced programs (Camara, Dorans, Morgan, & Myford, 2000; Curry, MacDonald, & Morgan, 1999; Ford et al., 2002; Klopfenstein, 2004; Soloranzo & Ornelas, 2004; Taliaferro & DeCuir-Gunby, 2008).

A major shortcoming of research investigating minority underrepresentation has been the failure to identify and critically analyze those factors that contribute to minority students remaining in and/or completing advanced programs of study (Ford & Whiting, 2007). The research has focused so intensely on increased access for minority students that the lived experiences of African American students enrolled in these programs and how their experiences compare to those of their White peers have been largely overlooked as a means to identify and recommend those programmatic factors that may potentially increase the likelihood that African Americans will remain in these programs. Underrepresentation cannot be fully addressed without also examining minority student

retention once these students are accepted into advanced academic programs (Ford & Whiting, 2007).

Background of the Study

In pre-Civil War America, African Americans were denied any form of education largely due to persistent fear that slaves' ability to read and comprehend abolitionist literature would insight slave revolts (Spring, 2007). Between 1800 and 1835, southern states passed sweeping laws making the education of slaves punishable under the law (Spring, 2007). Offenders often faced harsh penalties including a fine of $100 and six months in jail for Whites, 50 lashes with a whip for slaves, and a fine, imprisonment, and even corporal punishment for free Blacks (Adams & Adams, 2003). This denial of education through the Civil War period was used as a method to ensure the subservience of African Americans in American society (Spring, 2007).

Education, long considered the great equalizer able to alter the lives of its recipients for the better, was denied to slaves as a means to subjugate them making the possibility of liberty seemingly out of reach (Spring, 2007). Following the U.S. Civil War, newly freed African Americans desperately sought educational opportunities; however, there were many roadblocks in place to limit their access to high quality academic opportunities (Spring, 2007). These strategies included school segregation and underfunding of schools serving African American students (Adams & Adams, 2003; Spring, 2007). Historically, African American students have been the recipients of substandard education in American public schools (Mickelson, 1999; Spring, 2007). Perhaps at no point in history was this more evident than during the Civil Rights era when a segment of America, primarily African Americans, challenged the doctrine of

separate but equal to include separate but equal schooling. The Civil Rights Movement revealed the racial disparities within public school systems throughout the United States. African American students attended substandard schools with inadequate instructional materials while their White counterparts attended better schools where a quality education could be expected (Spring, 2007). Again, education was used to prevent the liberation of African Americans, as well as this ethnic group's integration and acceptance into American society (Spring, 2007).

In 1954, the landmark Supreme Court case *Brown v. Board of Education* ended segregation in America's public schools; however, most states were resistant to the idea of integrated schools and were slow to adopt policies requiring the enrollment of African American students (Spring, 2007). Following the *Brown v. Board of Education* ruling, cross-town bussing forced the integration of public schools by requiring that students from predominantly African American neighborhoods be transported, or bussed, to predominantly White schools and vice versa (Spring, 2007). Since the forced integration of public schools, racial diversity among the student population has steadily increased at all levels of education.

Despite increased student diversity, public education has remained largely Eurocentric (Grantham & Ford, 2003; Spring, 2007). Although efforts have been made to introduce multicultural education into school curricula, those efforts have made little impact on the overall school culture and curriculum (Ford, Harris, & Harris, 2005). When evaluating the inclusion of multiculturalism into the curriculum through the lens of Banks' (1998) Model on Levels of Infusing Multicultural Content into Curriculum, one can find that most schools are infusing multicultural education at the two lowest levels of

Banks' model, the contributions level and the additive level. At the lowest level, contributions, teachers focus on heroes, holidays, and other discrete elements of ethnic groups at specific times during the school year. The best examples are the focus on Martin Luther King, Jr. every January in recognition of that month's Martin Luther King, Jr. holiday and the increased emphasis on the contributions of select African Americans during Black History Month in February. This level is the most basic and least effective, as the traditional curriculum remains unchanged (Banks, 1998). Sadly, this approach also tends to reinforce minority group stereotypes as cultural traditions, events, and people may be introduced without meaningful discussion of their significance to minority groups (Banks, 1998).

At the second level of Banks' model, the additive level, the content, concepts, themes, and perspectives of minority groups are added to the curriculum without being fully integrated throughout the curriculum (Ford et al., 2005). Again, the curricular structure remains unchanged (Ford et al., 2005). The additive approach to multicultural education is frequently utilized when teachers select a multicultural book for one particular content area such as English without attending to the infusion of multicultural education into other academic disciplines (Ford et al., 2005). While the content changes slightly in this approach, multicultural concepts, issues, and groups continue to remain on the fringe of the curriculum (Banks, 1998; Ford et al., 2005).

Banks' (1998) suggested restructuring the curriculum so that multiculturalism is truly woven into the curriculum, thereby changing the traditional curriculum's structure, goals, and salient characteristics. This occurs at levels three and four of Banks' (1998) model; the transformation level and social action level, respectively (Ford et al., 2005).

At both levels, students gain in depth understanding of concepts, events, and traditions from the perspective of minority groups, which will hopefully cultivate understanding of, respect for, and awareness of minority cultures and their contributions to the larger American culture.

Educational disparities have undoubtedly contributed to the achievement gap between African Americans and Whites (Mickelson, 1999). Substandard schools were less likely to produce African American graduates capable of competing with their White counterparts. Lack of a quality education impaired the upward mobility of African Americans in American society, the effects of which are still seen today. On average, Whites have a higher earning potential that African Americans and are more likely to graduate high school, complete college, own a home, have access to health care, and enjoy a better quality of life (Holmes, 1996).

While education has been wielded as a weapon to oppress African Americans, increased emphasis on closing the achievement gap has resulted in the introduction of a variety of programs aimed at making quality education available to all regardless of ethnicity (Ray-Taylor, 2003). Low-income schools, which typically have high African American student enrollment, are eligible to receive Title I funds to enhance the academic program. Considerable attention has been given to the underrepresentation of African American students in advanced academic programs. The No Child Left Behind Act of 2001 (NCLB) specifically addresses minority underrepresentation in advanced academic programs by imploring school districts to make concerted efforts to attract minority students to these programs (Ray-Taylor, 2003). NCLB includes provisions that support minority students enrolled in advanced academic programs including funding that

can be used to pay for Advanced Placement (AP) exams. Moreover, an additional requirement of NCLB is that public schools demonstrate that they are successfully preparing minority students to perform at acceptable levels on reading and math assessments. Schools must also demonstrate that they are closing the achievement gap between African Americans and Whites. NCLB not only calls for closure of the achievement gap between Whites and African Americans on state approved student assessments it also calls for increased African American student access to advanced academic programs that influence students' college readiness. Increased African American student access and inclusion can also ameliorate the persistent disparate conditions between the races in post-secondary education and in life in general (Camara et al., 2000)

Problem Statement

Although much has been done to increase the educational opportunities of African Americans in the United States, underrepresentation of African American students in advanced academic programs continues to be a pervasive problem (Ford et al., 2002). Increasing African American students' access to these programs has been the dominant approach when addressing underrepresentation; however, African American student underrepresentation must be attacked using a two-pronged approach that focuses on access and retention (Ford & Whiting, 2007). Increased access has resulted in more African American students applying for admission into advanced academic programs, but once accepted these students do not always stay. African American students may face social and academic challenges that are not typical of other student groups (Ford et al., 2002; Morris, 2002). African American students may enter these programs underprepared

academically, which may lead to poor performance and eventually voluntary or involuntary separation from the program. Additionally, a significant number of African American students admitted into advanced academic programs may experience a culture shock once there. For many, entry into these programs may be the first time these students are in a predominantly White environment where they lack ethnic peers or even same-race teachers and school support staff, which may lead to feelings of isolation resulting in voluntary separation from advanced academic programs. Undoubtedly, efforts to increase African American student access to advanced academic programs has increased their participation in these programs; however, to fully address the underrepresentation of African American students educators must seek to understand the experiences of this student group in order to make programmatic changes that address their unique social and academic challenges thereby encouraging African American student retention and success.

Purpose Statement

This study examined social and academic adjustment among African American high school students enrolled in International Baccalaureate (IB), Advanced Placement (AP), and Dual Enrollment (DE) programs and compared their rates of adjustment to those of White students enrolled in the same programs. The study also investigated the extent to which African American and White students' adjustment experiences were influenced by their perceived ethnic identity. A critical race theory ideological orientation was utilized to examine the intersection of race and social and academic adjustment. This ideological orientation is concerned with racism and emphasizes the socially constructed nature of race (Delgado & Stefancic, 2001). Moreover, critical race theory endeavors to

amend social inequalities by advancing a social justice framework (Delgado & Stefancic, 2001). It has been used extensively in educational reform as a means to discover and correct educational inequities. Likewise, findings of this study will be used to redress any identified inequities in AP, DE, and IB programs.

Approximately 500 high school students enrolled in IB, AP, or DE programs in Bay Town Public Schools (BTPS) and Allen Public Schools (APS) were included in the study. While this study primarily focused on African American students' levels of academic and social adjustment and ethnic identity formation, all students regardless of ethnicity were surveyed. Results permitted comparative analyses of levels of social and academic adjustment and ethnic identity achievement between White and African American students, as well as comparisons within the African American student sample.

Research Questions

The following research questions were developed to address the study's goals:

1. Do levels of ethnic identity development differ between African American and White students in AP, IB, and DE programs?
2. Do levels of academic and social adjustment differ between African American and White students in AP, IB, and DE programs?
3. Does African American students' ethnic identity attitude categorization based on Cross' Nigrescence model moderate academic and social adjustment within these programs?
4. Does ethnic identity influence academic and social adjustment among students within these programs?

Significance of the Study

While much is known about the social and academic adjustment among African American students attending predominantly White colleges and universities, investigations into the social and academic adjustment among African American high

school students attending predominantly White high schools or programs of study are not as numerous. If educators are to go beyond merely attracting African American students to programs of advanced study at the high school level, research must be performed that specifically seeks to examine social and academic adjustment among this student group in an effort to address their unique needs. Implications of such research may inform counseling practices, pedagogy, and the development of culturally sensitive programs to include curricula and learning environments.

Overview of the Methodology

This study utilized quantitative methods to examine ethnic identity achievement, ethnic identity attitudes and social and academic adjustment among African American and White AP, IB, and DE students. Students enrolled in AP, IB, and DE programs completed a three-part, 61 item questionnaire (Appendix A). The first part captured demographic data such as age, grade, and number of years in their respective advanced studies program, the second part queried students about their ethnic identity, and the final section assessed participants' academic and social adjustment within their respective programs of study.

The second section of the questionnaire consisted of the Multigroup Ethnic Identity Measure (MEIM), developed by Phinney (1992) to measure ethnic identity across diverse ethnicities and age groups, has an alpha coefficient of .8 and has been used in numerous studies related to ethnic identity formation (Worrel, 2000; Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003). This instrument was used to assess ethnic identity development and participant comfort with and awareness of ethnic identity. While this study focused primarily on academic and social adjustment, students' ethnic

identity was explored to discover how ethnic identity may moderate academic and social adjustment. The final section of the questionnaire consisted of Pascarella and Terenzini's (1980) Institutional Integration Scale (IIS), which has consistently demonstrated acceptable to strong reliability, typically with alphas ranging from .72 to .92 (Fox, 1984; French & Oakes, 2004). Although the IIS has been administered to recent high school graduates, it is most frequently used to measure academic and social adjustment among undergraduate college students. A more detailed description of the study's methodology is provided in chapter three.

Delimitations

This study is limited to ethnic identity formation and social and academic adjustment among African American and White high school students enrolled in AP, IB, and DE programs in two public school divisions. Although students representing other ethnic groups completed the student questionnaire, this study chose to compare only the rates of social and academic adjustment and ethnic identity formation between African Americans and Whites because of the historical academic achievement gap between the two student groups. Additional limitations included the survey instruments utilized for data collection. The MEIM and IIS were selected because of ease of administration in addition to their demonstrated strong reliability and validity in previous studies. Additionally, both instruments helped assure manageability of collected data as neither included open ended response items and could be completed by students in less than 20 minutes. A goal of this study was that it not interfere with an exorbitant amount of instructional time, as student questionnaires were completed during the school day.

Definitions of Terms

The following key terms were used extensively when communicating research plans and results:

Academic adjustment- a student's level of success in coping with the educational demands of an academic program or institution characterized by students' motivation, application, performance, and satisfaction with the academic environment (Baker & Siryk, 1984)

Advanced Placement (AP)- a specialized high school program managed by the College Board that allows students to enroll in college level courses taught by trained high school faculty and to receive college credits by passing an end-of-course AP exam with a score of maximum score of five (Kyburg et al., 2007; McCauley, 2007; Santolini, 2002)

Dual Enrollment (DE)- a specialized high school program established through partnership between a high school and a college or university wherein high school students enroll in credit bearing college courses taught at the college or university (McCarthy, 1999)

Ethnic identity- the extent to which a person is knowledgeable of and value their ethnicity and ethnic heritage (Ford et al., 2005)

International Baccalaureate (IB)- a rigorous program created in 1965 by the International Baccalaureate Organization wherein 11^{th} and 12^{th} grade students complete a prescribed pre-university program of study where they are awarded the IB diploma upon completion and are prepared for entry into colleges and universities around the world (Gehring, 2001; Kyburg et al., 2007; Nugent & Karnes, 2002; Savage, 1982; Tookey, 2000)

Social adjustment- a student's level of success with interpersonal relationships, extent of participation in social activities, and degree of acceptance of the social environment (Baker & Siryk, 1984)

Underrepresented population- an ethnic, gender, or socioeconomic group that is not represented in specialized academic programs in proportion to the group's overall student population (Grantham, 2002)

Summary

This chapter has provided an introduction to the study, which examined the social and academic adjustment among African American students enrolled in IB, AP, and DE programs and specifically sought to identify differences between the levels of adjustment between African American and White students and the extent to which their personal ethnic identities may influence social and academic adjustment. Additionally, the purpose of the study has been articulated, as well as the research questions addressed and the significance of the study. Finally, an overview of the methodology was presented as well as a discussion of delimitations of the study and definitions of key terms associated with the study.

Chapter two presents a review of the existing literature and research relevant to African American high school students enrolled in advanced programs of study. The review of the literature appraises the impact of legislation designed to address the issue of minority underrepresentation in advanced studies programs as well as the benefits of enrollment in such programs. Finally, the literature review includes a comprehensive description of the AP, IB, and DE programs as well as social and academic adjustment and ethnic identity development.

A detailed explanation of the research methodology utilized for this study is provided in chapter three. This chapter features descriptions of the study's research approach, context, participants, researcher, data sources, and data analysis procedures. In addition, researcher biases are discussed.

CHAPTER 2: REVIEW OF THE LITERATURE

For the purpose of this study, it was necessary to review the literature on African American student participation in advanced academic programs and factors, particularly those related to social and academic adjustment, that influence the success of African American students in advanced academic programs in high school. There is a substantial body of literature focused on high achieving African American students; however, the majority of that literature has been specific to African American students attending predominantly White colleges and universities. While much is known about the unique social and academic adjustment experiences of African Americans attending predominantly White post-secondary institutions, the social and adjustment experiences of African American high school students enrolled in predominantly White high schools, particularly programs for the academically advanced are not as fully understood.

As a result of calls to close the achievement gap that exists between African American and White students, previous research has examined differences in student achievement at all levels of education. Moreover, considerable attention has been given to issues of minority accessibility to advanced academic programs (Camara et al., 2000; Curry et al., 1999; Solorzano & Ornelas, 2004; Taliaferro & Decuir-Gunby, 2008). The lived experiences of African Americans attending White institutions of higher learning have been chronicled frequently; however, the lived experiences of African American high school students participating in AP, IB, and DE programs, which typically have a high proportion of White enrollees, have not been sufficiently documented. Because AP, IB, and DE programs are considered programs that encourage student interest in post-secondary education and prepare participants for the demands of college, it is important

to understand the experiences of African American students participating in these programs that are widely considered pathways to college success; however, scant research exists that has given voice to any AP, IB, and DE students and this is especially true for African American students (Callahan, 2000; Kyburg, Hertberg-Davis; Callahan, 2007; Matthews & Kitchen, 2007).

Advanced Academic Programs

American high schools offer a variety of advanced academic programs aimed at providing students with the appropriate level of academic rigor while preparing them for the demands of higher education. These programs have traditionally been designed for students identified as intellectually gifted or students who consistently perform at advanced levels academically (Matthews & Kitchen, 2007). Generally, these programs rely on a formal application process and eligibility criteria to select student participants. Critics of such programs argue that these programs have a history of covert discriminatory admission practices aimed at excluding minority students and are used by school systems as a means to curtail White flight (Matthews & Kitchen, 2007). Disturbingly, increased African American participation has been cited as detrimental to the overall quality of advanced programs (Lichten, 2000).

These programs, which have been developed to meet the needs of academically advanced students across a school district, are normally open to application for students throughout the district regardless of school zoning (Matthews & Kitchen, 2007). Although advanced academic programs are strongly recommended as optimal learning environments for identified gifted students and these programs occasionally come under

the supervision of district level gifted education administrators, admission is not restricted to the gifted (Kyburg et al., 2007; Poelzer & Feldhusen, 1997).

Interest in advanced academic programs has increased as more students consider college attendance as a possibility (McCauley, 2007; Santolini, 2002). With increased student interest, college admission has become more competitive. Students are routinely advised to enroll in advanced academic programs to increase their likelihood of acceptance into colleges of choice (Santolini, 2002). Moreover, successful completion of advanced academic programs can directly affect the expense of college attendance as successful completion often translates into advanced academic standing once admitted into a college or university reducing college cost significantly (Curry et al., 1999; Santolini, 2002). Furthermore, universities and even some states offer partial or full scholarships to students who successfully complete advanced academic programs. More importantly, advanced studies students are usually well prepared for the academic demands of higher education. Given the advantages associated with participation in advanced academic programs, it is reasonable to view African American student participation in such programs as a way to address society's persistent disparities between African Americans and Whites. Lack of proper academic preparation and college costs are frequently cited as reasons African American students consider college attendance improbable. Inclusion in and successful completion of advanced programs of study at the high school level can put African American students on the path to higher education thereby changing the trajectory of their lives and hopefully erasing some of the longstanding inequalities between the races.

The passage of the No Child Left Act of 2001 (NCLB) called for greater access to advanced academic programs for African American students in an effort to close the achievement gap and to remedy racial disparities. Increased access has resulted in growing interest in these programs among African American students; however, African American students enrolled in advanced programs typically do not experience the same levels of success as their White or Asian-American counterparts (Borman, Stringfiled, & Rachuba, 2000). While African American students now have greater access, the achievement gap remains even within advanced academic programs where it is assumed that all participants are high achievers.

Advanced Placement

Since 1955, the College Board's Advanced Placement (AP) program has enabled secondary students to participate in college level courses in high school and earn credit or placement toward their college programs. Through the years, high schools that offer the AP program have been found to help raise the academic standards of high achieving students by encouraging more of them to pursue and master advanced coursework (College Board, 1999; Kyburg et al., 2007; McCarthy, 1999; McCauley, 2007; Nugent & Karnes, 2002;Santolini, 2002; Savage, 1982; Tookey, 2000). These learning opportunities prepare students for college by providing them with rigorous academic experiences that are formally recognized by colleges and universities (College Board, 1999; Kyburg et al., 2007; McCarthy, 1999; McCauley, 2007; Nugent & Karnes, 2002; Santolini, 2002; Savage, 1982; Tookey, 2000). In fact, AP courses are increasingly being used as a screening tool in the college admission process (Klopfenstein, 2003). While students may be given advanced academic standing for college credit earned through successful

completion of AP exams, college admission boards consider AP experience an indicator of college success (Klopfenstein, 2003). This gives applicants who have taken AP courses, regardless of AP exam performance, an advantage over applicants who may not have taken such courses (Klopfenstein, 2003). Furthermore, colleges consider high schools that offer an AP program to have an overall more rigorous curriculum for all courses regardless of AP status (Solorzano & Ornelas, 2004; Wade, MacDonald, & Morgan, 1999). Solorzano and Ornelas (2004) posited that college applicants who did not participate in AP courses were at a "distinct disadvantage" (p. 23) because their overall grade point averages did not benefit from weighted AP course grades, such students were not eligible for college credits because they had not taken AP exams, and lack of AP courses on an applicant's transcript may lead college admission board members to questions the quality of the applicant's high school.

In a study conducted to assess the influence of AP participation on graduation rates from a four-year college or university, McCauly (2007) found that taking an AP class in high school significantly influenced whether students completed college within six years. Based on the same study's findings, McCauley (2007) further concluded that AP courses familiarize participants with the rigors of college, thereby preparing students to be successful in higher education.

Despite the documented benefits of AP enrollment, Klopfenstein (2003) found that African American students enroll in AP courses at nearly half the rate of White students (Klopfenstein, 2003). In a study evaluating student access to AP courses, the disparity in African American enrollment was attributed to the students' unequal access to AP courses (Klopfenstein, 2003). A study conducted by Taliaferro and Decuir-Gunby

(2007) also found that there was an "opportunity gap" (p. 165) in AP course access. The student nominating practices of White teachers were cited as a cause for this gap (Taliaferro & Decuir-Gunby, 2007). An examination of AP student enrollment in three public high schools in California revealed that African Americans were grossly underrepresented in AP programs as compared to Whites at a rate of 1:5 (Solorzano & Ornelas, 2004).

Between 1997 and 2006, the number of African American students taking AP exams increased by 250%; however, African American pass rates on AP exams has not kept pace with increases in African American student enrollment (Kyburg et al., 2007). In 2005, 6.4% of the nation's African American students took AP examinations (Taliaferro & Decuir-Gunby, 2007). The mean score for African Americans taking the AP exam was 1.99, which was below the national average of 2.88 (Taliaferro & Decuir-Gunby, 2007). A score of 3 or higher is necessary for the course to be considered for college credit. Historically, African American students have underperformed on AP exams when compared nationally (Taliaferro & Decuir-Gunby, 2007). Taliaferro and Decuir-Gunby (2007) suggested that teacher and parental support, as well as a sense of belonging might positively influence the achievement of African American AP students.

African American students enrolled in AP programs sometimes face unique cultural and racial challenges that may impede their achievement (Taliaferro & DeCuir-Gunby, 2007). Sometimes these students do not have an ethnic peer group with which they can associate (Grantham & Ford, 2003; Wong, Eccles, & Sameroff, 2003). More often than not, African American AP students may only encounter same-ethnicity peers outside of the AP program. Having an ethnic peer group is culturally supportive and

helps in the development of ethnic identity (Taliaferro & DeCuir-Gunby, 2007). African American students' sense of belonging may be at risk without the social and cultural support of same-race peers also enrolled in the AP program (Taliaferro & Decuir-Gunby, 2007). Taliaferro and DeCuir-Gunby's (2007) examination of African American students in AP programs was limited to African American educators' perspectives on disparities in student access to AP programs. Although the researchers' focus was not retention or achievement, the participating educators repeatedly referred to African American students' need for a sense of belonging in order for them to remain and be successful in AP programs (Taliaferro & DeCuir-Gunby, 2007).

International Baccalaureate

Like AP programs, African American students are ostensibly underrepresented in IB programs. The IB program, created in Europe in 1965, is a rigorous academic program that prepares its students for admission to colleges and universities around the world (Kyburg et al., 2007). The IB program has been offered to American high school students in grades 11 and 12 since 1971 (Kyburg et al., 2007). Initially offered at only 20 high schools in the United States, the IB program has expanded significantly since 1971 and by 2007 was offered at 520 high schools in the United States (Kyburg et al., 2007). Unlike the AP program, which allows students to choose from a variety of courses, the IB program is a highly prescribed, pre-university program (Kyburg et al., 2007).

The IB program is recognized as a model of rigorous curriculum for high school students and is frequently cited as an appropriate program option for identified gifted students (Kyburg et al., 2007). Additionally, the program has been applauded for its cost effectiveness for families and its attention to college preparation (Kyburg et al., 2007;

Savage, 1982). Graduates of the IB program are often granted advanced standing by colleges and universities and therefore may not incur the cost of a full four years of college, they are considered better prepared for the rigors of higher education, and are more likely to complete college (Kyburg et al., 2007; Savage, 1982).

The IB curriculum is based on the holistic development of man from a global perspective (Tookey, 2000). Through the completion of advanced work in the five major curriculum areas and a sixth student-selected area in either the arts, computer science, classical languages, or a second subject from one of the five major curriculum areas, students examine ways of knowing and world perspectives (Nugent & Karnes, 2002; Poelzer & Feldhusen, 1997; Tookey, 2000). Students are required to complete a certain number of clock hours in each of the six curriculum areas. They must also complete a two-year Theory of Knowledge course requiring them to draw on knowledge and skills acquired in the six curriculum areas. Additionally, students must pass examinations in all six subjects and complete an independent research project, the 4,000-word extended essay, in order to earn the IB diploma (Nugent & Karnes, 2002; Poelzer & Feldhusen, 1997; Tookey, 2000).

As found in AP programs, the achievement of African American students enrolled in IB programs lags behind that of White program participants. The International Baccalaureate Organization (IBO) does not report student participation and achievement by ethnicity, thus national student participation and achievement based on student ethnicity cannot be reported here; however, a report of Texas students' 2001-02 IB examination results revealed that .16% of the state's African American students were enrolled in the IB program and .36% of the state's White students were enrolled (Texas

Education Agency, 2003). The student body of all Texas IB programs was 63% White and 7% African American (Texas Education Agency, 2003). Of the participants who took the IB program's final exam, 61.1% of African American students passed while 86.9% of White students passed (Texas Education Agency, 2003). Moreover, the exam performance of African American students lagged behind that of any other ethnic student group in the IB program (Texas Education Agency, 2003).

Dual Enrollment

Since the mid-1980s qualified high school students have been allowed to take college courses while concurrently enrolled in high school through DE programs (McCarthy, 1999). These programs were developed through collaborative partnerships between school divisions and colleges and universities to meet the needs of students who may benefit from the academic stimulation of college level courses (McCarthy, 1999). DE programs allow students who may be ready for the rigors of collegiate level work the opportunity to pursue college-level courses while remaining actively involved in high school activities (McCarthy, 1999). For many students, this provides the appropriate level of academic rigor without requiring students to forego the high school experience (McCarthy, 1999). Students maintaining a 2.8 GPA are awarded college credit upon course completion (Hugo, 2001)

As with similar programs designed for high ability students, African American students are underrepresented in DE programs (Hugo, 2001). DE programs have been recognized as a way to prepare minority students for the competitive college admissions process and for the academic rigors of college (Hugo, 2001). In fact, participation in DE and similar programs has a greater impact on college degree completion for African

American students than any other pre-college indicator of academic success (Adelman, 1999).

In the scant literature that exists about DE programs, there has been a tendency to identify DE programs as a viable option for African American students because it exposes students to college life and may encourage college attendance post-high school (Borman, Stringfield, & Rachuba, 2000; Hugo, 2001). Despite being frequently suggested as a beneficial program for African Americans, further research is necessary to evaluate African American students' performance in DE programs and after completion.

Social and Academic Adjustment and Ethnic Identity Development

African American students often enter AP, IB, and DE programs underprepared, which can be attributed to a variety of factors including uneven schooling and lack of academic cultural capital (Kyburg et al., 2007; Mickelson, 1999). African American students are more likely to attend elementary schools with inadequate teachers and insufficient resources, thus they sometimes enter advanced academic programs at an academic disadvantage (Kyburg et al.,; Mickelson, 1999). African American students also tend to lack academic cultural capital, which is described by Kyburg et al., (2007), as "the kinds of knowledge students need to proceed along the path to higher education" (p. 185). Such knowledge includes the skills necessary to function in eurocentric learning environments. Often, these are skills that are passed down from generation to generation in families (Kyburg et al., 2007), which places African American students at a distinct disadvantage because their parents are more likely to lack such skills, are more likely to have had negative school experiences, and are less likely to have attended college (Kyburg et al., 2007). There are certain habits and skills, such as time management, study

skills, how to locate information, how to communicate with school personnel, and how to prepare for and apply to college, that African American students may not have fully developed (Kyburg et al., 2007). These are all habits and skills that advanced academic program personnel may assume all students have, which decreases the likelihood that there will be planned opportunities for students to develop such skills, further placing African American students at a disadvantage.

Inadequate preparation can negatively affect the academic adjustment of African American students enrolled in AP, IB, and DE programs. In a study examining the effects of segregation on African American high school seniors' academic achievement, data indicated that early segregation experiences had negative effects on students' academic achievement (Mickelson, 1999). The findings further demonstrated that learning environments with diverse student populations had a positive effect on academic performance among African American high school seniors. The study, which included high school seniors enrolled in Charlotte-Mecklenburg Schools in North Carolina, found that attending segregated elementary schools had a small yet significant effect on high school achievement (Mickelson, 1999). Results of correlational analyses suggested that student achievement was affected by fewer human and material resources, less qualified, educated, and experienced teachers, and a lack of ethnic, linguistic, and socioeconomic diversity among students; all of which are characteristic of minority-majority schools (Mickelson, 1999).

In addition to inadequate preparation, African American student retention and success is often affected by the extent to which African American students socially adjust to the advanced academic program's environment (Chavouse, Bernat, Schmeelk-Cone,

Caldwell, Kohn-Wood, & Zimmerman, 2003; Ford & Whiting, 2007; Grantham & Ford, 2003; Wong et al., 2003). Like all students, African American students have a need to connect with peers; however, African American students also have a need to connect with same-race peers. This is especially true when African American students are in settings where they are severely underrepresented (Ford & Whiting, 2007). Forming supportive connections with same-race peers may not be possible for African Americans enrolled in advanced academic programs due to the underrepresentation of African American students in these programs. The absence of an ethnic peer group could possibly lead to feelings of isolation for African American AP, IB, and DE programs, which traditionally have an overwhelmingly White student body.

African American students' affiliation with an ethnic peer group is essential to the healthy development of ethnic identity (Grantham & Ford, 2003). Ethnic identity refers to the extent to which people are knowledgeable of and value their ethnicity and ethnic heritage (Grantham & Ford, 2003). There have been numerous studies investigating ethnic or racial identity development among students. Many of these studies have concluded that African American students are more likely than White students to encounter threats to healthy ethnic identity development (Grantham & Ford, 2003). Ford (1992) concluded that African Americans in predominantly White settings are at a greater risk to encounter negative threats to healthy identity development than African Americans in predominantly African American settings. Smith (1989) asserted that healthy ethnic identity development is particularly important for minority students for whom race plays a significant role in socio-emotional and psychological well being. Moreover, ethnic identity development influences academic achievement and attitudes

about school (Ford, Schuerger, & Harris, 1993). Thus, it can be assumed that ethnic identity development has some impact on students' academic adjustment.

In 2001, Cross and Vandiver introduced a revised model of Cross' Nigrescense Theory, which is a theory of ethnic identity that describes the process of identifying as African American. This theory contends that African Americans develop ethnic identity in three stages: pre-encounter, immersion-emersion, and internalization (Cross & Vandiver, 2001). The eight identity types within each of these stages are described below.

- Pre-encounter assimilation-identity is based on a sense of Americanism and individualism with little emphasis on ethnic identity or ethnic group affiliation
- Pre-encounter miseducation-identity is based on negative stereotypes and misinformation about African Americans that may not be accepted for one's self
- Pre-encounter racial self-hatred-identity is based on negative perceptions of African American culture and Blackness that result in self-loathing
- Immersion-emersion anti-White-identity is based on hatred for White people and mainstream society resulting in radicalism about African American issues and culture
- Immersion-emersion intense Black involvement-identity is based on cult-like dedication to Blackness resulting in constantly proving one's Blackness with other African Americans
- Internalization nationalist-identity is based on Afrocentrism about self, other African Americans, and society and is further characterized by engagement in the African American community and its challenges

- Internationalization biculturalist-identity is equally based on being an American and being African American allowing engagement in issues affecting the African American community and America as a whole
- Internalization multiculturalist- identity is based on three or more social reference groups which facilitates the ability to engage in issues affecting diverse groups of people (Cross & Vandiver, 2001)

African Americans' progression through the eight identity types is influenced by experiences, as well as other factors such as social network and support systems (Cross, 1995). As ethnic identity develops, there are opportunities for regression and stagnation (Cross, 1995).

In 1988, Phinney introduced a theory of ethnic identity development based on Erickson's theory of psychosocial development. Phinney (1996) proposed that ethnic identity development occurs during adolescence and young adulthood. Phinney's (1992) theory asserted that during adolescence, ethnic identity is largely informed by the ethnic attitudes and values of parents. Phinney (1996) posited that an experience or developmental crisis acts as the catalyst that encourages adolescents to explore ethnicity and develop a sense of their own ethnic identity. Phinney (1992) identified three stages of ethnic identity development and suggested that progression through the stages is influenced by self-identification, ethnic behaviors and practices, and a sense of belonging. During the unexamined stage, individuals have limited to no interest in or awareness of their ethnic identity. Like Cross and Vandiver's (2001) pre-encounter stage, individuals in the unexamined stage have not explored their personal ethnic identities and are more likely to base ethnic identity on other's beliefs about their ethnic group. The

second stage, identity, is typically precipitated by a developmental crisis or experience. This stage is characterized by earnest exploration and awareness of ethnic identity which may include cultural emersion, activism, and enrollment in programs to learn about one's own ethnicity. This stage corresponds with the immersion-emersion stage of Cross and Vandiver's (2001) revised Nigrescence Theory. Phinney's (1992) final stage, ethnic identity, marks the completion of the exploration process and commitment to an ethnic identity. Similar to the internalization stage of Cross and Vandiver's (2001) Nigrescence Theory, individuals in this stage internalize ethnic identity into their overall self-identity.

Cross and Vandiver (2001) and Phinney (1992) asserted that individuals may stagnate and regress through the stages of their respective models of ethnic identity development as progression is influenced by experiences. The social experiences of young African Americans are particularly influential in their ethnic identity development (Grantham & Ford, 2003). Thus, African American students may go through periods of progression, regression, and stagnation as they navigate the social settings of their school environments (Grantham & Ford, 2003). These social experiences are more likely to be negative when African Americans are in predominantly White settings (Grantham & Ford, 2003).

Summary

This review of the literature included an examination of African American students' rates of participation in IB, AP, and DE programs as well as their levels of success in those programs. Considering that the IB, AP, and DE programs all utilize rigorous application processes, it can be assumed that all admitted students demonstrated the capacity to learn at advanced levels as well as the ability to achieve at high levels;

however, the achievement gap exists even in programs where all participants can be described as highly intelligent and high achieving. Sufficient changes to admissions policies have attempted to address African American students' access to advanced programs; however, significant steps must be taken to support African American students once they enter these programs, particularly because these students are sometimes more likely to have uneven academic preparation and may have limited experience with predominantly White settings. Moreover, they may lack the support of an ethnic peer group. Differences in academic and social adjustment for African American participants as well as their perceptions of those experiences through the lens of their own ethnic identity may influence differences in student performance and levels of success.

The fact that there is such disparity in achievement rates and program completion rates in programs where everyone is assumed to be highly capable makes it important to understand social and academic adjustment among African American participants and its influence on performance if educators are to adequately address the cognitive and affective needs of this student group. Doing so may positively influence African American participants' rates of achievement and completion thereby narrowing or even closing the achievement gap within these programs and beyond.

This study sought to examine levels of academic and social adjustment among African American students enrolled in AP, IB, and DE programs and to compare their levels of adjustment to those of White participants. The study further sought to test the hypothesis that ethnic identity acts as a moderator of academic and social adjustment among students enrolled in AP, IB, and DE programs. Based on the findings of the proposed study, recommendations will be developed for school personnel that may be

helpful in supporting African American students enrolled in advanced academic programs.

CHAPTER 3: METHODOLOGY

Research Design

This study utilized quantitative methods to examine ethnic identity achievement, ethnic identity attitudes and social and academic adjustment among African American and White AP, IB, and DE students. The purpose of the ex-post facto design was to compare the ethnic identity and academic and social adjustment scale scores of African American and White participants in nonequivalent groups to determine if there were significant differences in ethnic identity achievement and social and academic adjustment by ethnicity. Furthermore, the study sought to compare the academic and social adjustment scale scores of African American students based on their classification into four ethnic identity attitudes quadrants. The study was also designed to determine the strength and direction of the relationship between ethnic identity achievement and social and academic adjustment among African American and White students. Finally, this study also tested the hypothesis that social and academic adjustment differed among African American participants based upon their ethnic identity attitudes described by Cross' Nigresence model. The study examined the following research questions:

1. Do levels of ethnic identity development differ between African American and White students in AP, IB, and DE programs?
2. Do levels of academic and social adjustment differ between African American and White students in AP, IB, and DE programs?
3. Does African American students' ethnic identity attitude categorization based on Cross' Nigrescence model moderate academic and social adjustment within these programs?
4. Does ethnic identity influence academic and social adjustment among students within these programs?

Context

The study was conducted in Allen Public Schools (APS) and Bay Town Public Schools (BTPS), two school districts located in a large metropolitan area on the east coast. APS, an urban school system and BTPS, a suburban school system, are located in neighboring cities. In addition to being conveniently located, APS and BTPS each offer the AP, DE, and IB programs at its high schools. Furthermore, both districts were selected for this study largely due to an unpublished 2009 study examining the social and academic adjustment experiences of African American graduates previously enrolled in AP, DE, and IB programs in these districts. The study found that there were significant differences in the experiences of APS participants and BTPS graduates. These differences were attributed to differences in socioeconomic status, academic rigor, and the larger school community being majority-minority or minority-majority. For example, the APS graduates reported fewer instances of perceived racism than BTPS participants possibly due to minority-majority setting wherein minority students may be less inclined to feel underrepresented and may have more frequent interaction with like-race peers and school personnel. The APS participants also reported feeling underprepared for advanced academic programs and less prepared for the rigors of college after high school graduation whereas the BTPS participants felt well prepared for academic success while enrolled in BTPS' AP, DE, and IB programs and well prepared for college as a result of participation. The APS participants were more frequently placed in remediation courses in college as a result of college placement testing while BTPS participants were consistently granted advanced academic standing. Many of the findings of the previous

study conducted in APS and BTPS informed the design of this proposed study, thus both districts were selected.

Allen Public Schools

Based on data available at the Virginia Department of Education (VDOE) website, APS served 34,068 students in kindergarten through twelfth grade at the district's 35 elementary schools, nine middle schools, and five comprehensive high schools during the 2009-2010 school year. The school district did not achieve Adequately Yearly Progress (AYP) pursuant to NCLB regulations. A number of its schools were not fully accredited. Demographic data for school personnel was not readily available; however, based on VDOE data, 1% of APS' teachers did not meet the federal definition of highly qualified and 6% were provisionally licensed during the 2009-2010 school year.

APS, a nationally recognized urban school division, boasts a diverse student body. According to 2009-2010 data, .0.23% of APS students were American Indian, 2.62% were Asian American, 63.2% were African American, 4.19% were Hispanic, 0% were Hawaiian, and 22.98% were White (VDOE, 2009). Many of the division's schools qualified for Title I funding due to 63.95% of its students qualifying for free or reduced lunch in that same school year (VDOE, 2010).

APS provides its students with numerous academic programs. Its high school academy programs include the Academy of Leadership and Military Science, the Academy of the Arts, the Leadership Center for the Sciences and Engineering, and the Medical and Health Sciences Program. These programs utilize the school-within-a-school model. Elementary school students may enroll in the Chavis Academy of Math, Science, and Technology or Davis Academy at Elm Elementary School. Students living in either

school's zone are eligible to attend without application; however, out-of-zone students must apply for admission. Middle school students in the division can also apply for admission to the division's School of International Studies at Forest Hill (no relation to the International Baccalaureate program) or Simms Academy Magnet School. Students residing in Simms Academy's school zone are eligible to attend without application while those outside of its zone must formally apply. Additionally, the division offers the IB program and Middle College High School, which is a dual enrollment program offered collaboratively by APS and Cape Community College.

APS had a total high school enrollment of 8,955 students during the 2009-2010 school year. Of that total, 1,798 were enrolled in one or more AP courses, 117 were enrolled in DE, and 105 were enrolled in the IB program. In the same school year, 1,620 students took one or more AP exams and 78 students took the IB exam.

The district's identified gifted students are served via the cluster model at the elementary school level. Middle school students identified as gifted may apply to attend Emerging Scholars, which is a full-time gifted program housed at Simms Academy. A modified cluster model is used at the middle school level. At both the middle and high school levels, identified gifted students are encouraged to take honors and AP courses. Other than Emerging Scholars at Simms Academy, no formal gifted program exists for secondary students enrolled in APS.

Bay Town Public Schools

BTPS, one of the 50 largest school districts in the United States, is a suburban school district. During the 2009-2010 school year, the district served 71, 198 students in grades kindergarten through twelve at its fifty-seven elementary schools, fourteen middle

schools, eleven high schools, and secondary/post-secondary specialty centers. All of its schools are fully accredited based on NCLB requirements. Forty-five percent of its instructional personnel hold a bachelor's degree, 52% have a master's degree, and 1% have a doctoral degree. All instructional personnel meet the federal definition of highly qualified and 2% are provisionally licensed.

BTPS serves a diverse student body. Most recent demographic data available at the VDOE's website reported that during the 2009-2010 school year, 0.38 % of students were American Indian, 5.78% were Asian American, 27.3% were African American, 6.14% were Hispanic, 55.17% were White, 0.93% were Hawaiian, and 4.26%% were an unspecified race. Only 31.88% of the district's students receive free or reduced lunch, which is an indicator of poverty. The percentage of students receiving free or reduced lunch is used to qualify schools for Title I funding. Due to the small percentage of students receiving free or reduced lunch, few schools in BTPS are designated Title I schools.

BTPS offers its students a variety of academy and advanced academic programs. The high school academy programs include the Health Sciences Academy, the Global and World Languages Academy, the Legal Studies Academy, the Technology Academy, and the Visual and Performing Arts Academy. The Foreign Language Partial Immersion Academy and the Math and Science Academy are offered at the elementary school level. All of the district's academy programs are offered through the school-within-a-school model and admission to all is based on formal application regardless of assigned school zone.

BTPS had a total high school enrollment of 22,535 students during the 2009-2010 school year. Of that number, 5,248 students were enrolled in one or more AP courses, 361were enrolled in DE, and 495 were enrolled in the IB program. That same year 4,140 students took one or more AP exams and 223 students took the IB exam.

The district addresses the needs of its identified gifted students through the cluster model delivered at each elementary school and Drummond Hill Center, a full-time gifted program for elementary students, and Kesner Lakes Magnet, a full-time gifted program for middle school students. High school students can elect courses designed specifically for gifted learners at their respective schools. BTPS also offers the International Baccalaureate program for high school students as well as the Middle Years Program, a pre-IB program for middle school students. Both programs adhere to the school-within-a-school model.

Participants

This study was limited to each school division's IB program host high school, both divisions' DE programs, and AP students at all five of APS's high schools and two of BTPS' high schools. In APS, participants included students enrolled in the divisions' IB program at Gable High School, Middle College High School (the division's DE program), and AP classes. Although 1,500 student questionnaires were distributed in APS, only 309 (21%) were returned in June 2010. Completed surveys were collected from each of the district's five high schools. The student participation rate in APS was adversely affected by delayed distribution of study documents to the district's five high schools. Study materials were distributed during the final two weeks of school when student absenteeism is historically high, particularly among high school seniors.

In BTPS, participants included students enrolled in the division's IB program at Williamson High School and those enrolled in DE and AP courses. To qualify for participation in the study, students had to be high school sophomores, juniors, or seniors enrolled in the AP, IB, or DE program at the time the study was conducted. Freshmen were excluded because enrollment in AP, IB, and DE courses is typically restricted to those in grades ten or higher.

Procedure

Approval for the study was granted by ODU's Institutional Review Board (IRB) in January 2010. IRB granted the study exempt status and thus did not require guardians or participants to give informed consent. Rather, parents of potential participants received a letter about the study (Appendix B) and potential participants were given an assent form (Appendix C) that did not require a signature for participation. The study was carried out in both school districts in its entirety.

Following IRB approval, formal application for participation was made to APS and BTPS in March 2010. A detailed timeline of events for APS is included in Table 1 and in Table 2 for BTPS. After almost two months of negotiations that required numerous revisions, APS' Department of Research and Evaluation approved the distribution of student questionnaires to each of its five high schools. Questionnaires were given to 372 students. Participating high schools were Livingstone, Gable, Northern, Brookside, and Mitchellville high schools. Study materials, which included the student questionnaire and communications to students, parents, teachers, and guidance counselors, were delivered to each high school's guidance department by courier service. The guidance department managed distribution of materials to AP, IB, and DE teachers

and/or coordinators who in turn were responsible for distributing the teacher and student letters and student questionnaires to AP, IB, and DE students. APS participants completed the student questionnaire during class time. Upon completion, AP, IB, and DE teachers/coordinators were responsible for returning completed student questionnaires and any unused study materials to the school's guidance department. Completed questionnaires and unused materials were collected from each school's guidance department by the researcher on a predetermined date.

Table 1

Allen Public Schools Timeline of Events

March 2010	1.	Application to conduct a survey submitted to division's Office of Research and Evaluation
April 2010	1.	Numerous e-mails requesting application status unanswered
	2.	Received an e-mail from Office of Research and Evaluation representative suggesting specific revisions to several study documents
	3.	All revisions made and documents resubmitted to Office of Research and Evaluation representative
May 2010	1.	Several telephone and face-to-face meetings held with Office of Research and Evaluation representative to revise study documents
	2.	Several iterations of study document submitted for review throughout the month
June 2010,	1.	Approval to conduct study in APS received via e-mail
Week 1	2.	Sent correspondence to principals requesting participation in study
	3.	Received approval from principals of Mitchellville and Gable high schools
	4.	Contacted guidance departments of schools for which permission had yet to be granted regarding survey distribution
	5.	Received approval from Livingstone and Northern high schools
	6.	Communications to Brookside high school were unanswered

Table 1 continued

June 2010, Week 2	1.	Distributed all survey materials to all five high schools, including Brookside, via courier
June 2010, Week 3	1.	Collected completed questionnaires and remaining study materials from all five high schools

Due to the high participation rate originally anticipated in APS, a machine readable questionnaire was developed for that district. Once completed questionnaires were collected from APS, they were scanned and a data file was created. Items that were negatively worded were reverse coded for data analysis. Incomplete questionnaires were excluded. Data from questionnaires completed by students identifying themselves as African American or White were used to create a separate data file because the intent of this study was to compare ethnic identity formation and social and academic adjustment between African American and White participants. Of the 309 (83% return rate) completed questionnaires, 170 questionnaires were included for data analysis.

In April 2010, approval was granted to equally distribute student questionnaires among Williamson, Kingston, and Lee high schools in BTPS. Lee High School's principal declined participation; therefore, Williamson High School and Kingston High School each received 150 student questionnaires. Student questionnaires and student, parent, teacher, and guidance counselor letters were delivered to both high schools by the researcher. BTPS requested the researcher to provide participants with large envelopes to return completed questionnaires in as a measure for privacy. These were delivered along with all other study materials. The guidance department managed distribution of teacher, student, and parent letters and student questionnaires to AP, IB, and DE teachers and/or

coordinators who in turn distributed student and parent letters and student questionnaires to eligible students. Student questionnaires were completed outside of class time.

Each school's guidance office received a memo that included a timeline (Appendix D) which delineated study deadlines. Each school complied with the prescribed timeline and each guidance chairperson sent an e-mail informing the researcher that questionnaire administration was complete. Following receipt of the e-mail from the guidance chairperson, completed questionnaires and unused materials were collected from each school's guidance department in May 2010. A detailed timeline of events is included in Table 2.

Table 2

Bay Town Public Schools Timeline of Events

March 2010	1.	Application to conduct a survey submitted to division's Office of Research
April 2010	1.	Approval to conduct a survey at Kingston, Williamson, and Lee high schools granted via e-mail and formal letter delivered via USPS
	2.	E-mails sent to each high school's principal requesting participation
	3.	Kingston and Williamson high schools' principals agreed to participate
	4.	Lee High School's principal declined participation
	5.	Questionnaires and other documents prepared for distribution
May 2010,	1.	Distributed memorandum (Appendix D) to guidance counselors
Week 1	2.	Guidance counselors distributed parent letters (Appendix B), student assent(Appendix C), and teacher letters (Appendix E) to select AP, DE, and IB teachers/coordinators
	3.	AP, DE, and IB teachers/coordinators distributed parent letters, student assent, and student questionnaires in envelopes to AP, DE, and IB students

Table 2 continued

May 2010, Week 2	1. Students required to return questionnaires by the end of this week 2. Teachers/coordinators turned in returned questionnaires and any unused materials to the guidance department 3. Guidance department representative alerted researcher that study materials were ready to be collected 4. Researcher collected study materials

Two hundred twelve (71%) surveys were completed. Fifty-one incomplete surveys were excluded. Data from each survey was manually entered into a spreadsheet. Items that were negatively worded were reverse coded for data analysis. Of the 161 participants who fully completed the questionnaire, 103 identified themselves as either White or African American. After questionnaires containing errors were excluded, 83 were included for data analysis.

Instrumentation

Students completed a 61-item multiple choice and Likert scale student questionnaire which included a demographic questionnaire, the Multigroup Ethnic Identity Measure (MEIM), and the Institutional Integration Scale (IIS) (Appendix A). This instrument was completed by participants in BTPS. Due to revisions requested by APS, item 61 was eliminated from the original student questionnaire and some of the items were reworded. APS' revised questionnaire is included as Appendix F. APS' questionnaire was also designed as a machine readable document to allow for computerized scanning. This was done due to the district's approval of the distribution of 1,500 questionnaires to be completed during class time and the anticipated high return rate.

Demographic Questionnaire

The instrument's demographic questionnaire consisted of eleven items which queried students about age, academic standing, grade point average (GPA), years of participation in AP, DE, and IB programs, socioeconomic status, gifted identification status, and post high school aspirations. The first ten items were multiple choice while item eleven was open response as it asked students to indicate their intended career field.

Multigroup Ethnic Identity Measure

The MEIM, developed by Phinney (1992) to measure ethnic identity across diverse ethnicities and age groups, was used to assess ethnic identity development and participant comfort with and awareness of ethnic identity. The instrument has an alpha coefficient of .8 and has been used in numerous studies related to ethnic identity formation (Worrel, 2000; Ponterotto et al., 2003). This four-point Likert scale instrument was used in both districts to measure two constructs: ethnic identity and other-group orientation. A description of each scale is featured in Table 3 below.

Table 3

Description of MEIM Scales

Scale	Descriptor	Items
Ethnic Identity Achievement	Measures the extent to which respondents pursue information about and participate in the traditions of their own culture using	15, 16, 18, 22, and 24
Affirmation, Belonging, and Commitment	Measures respondents attachment to their own ethnic group	17, 19, 20, 21, 23, 25, and 26
Other-group Orientation	Measures respondents interest in and willingness to interact with those outside of their own ethnic group	27-32

Ethnic identity, or the degree to which students engage in and try to learn more about the customs and traditions of their own ethnic group, was assessed by two subscales of the MEIM—ethnic identity achievement and affirmation, belonging and commitment. An average of the total score from both subscales provided the ethnic identity summed or total score. Other-group orientation, the extent to which students interact with students outside of their own ethnic group, was assessed by the other-group orientation subscale. Ethnic identity and other-group orientation were examined as two independent variables.

Recent studies have categorized Phinney's stages of ethnic identity development into four distinct categories that correspond with behaviors and attitudes described in Cross' Nigrescence theory (Schaefer & Worrel, 2003; Worrel, Conyers, Mpofu, & Vandiver, 2006). These four categories are based on respondents' ethnic identity summed score and other-group orientation score. Respondents with high ethnic identity and other-

group orientation scores are categorized as high-high; those with a high ethnic identity score and a low other-group orientation score are considered high-low; those with a low ethnic identity score and a high other-group orientation score are considered low-high; respondents with low ethnic identity and other-group orientation scores are categorized as low-low (Worrel et al., 2006; Schaefer & Worrel, 2003).

Institutional Integration Scale

Pascarella and Terenzini's (1980) Institutional Integration Scale (IIS) was included in the student questionnaire to evaluate participants' social and academic adjustment. The IIS is a 5-point Likert-scale instrument consisting of five sections or scales. A description of each IIS scale is featured in Table 4. The IIS has consistently demonstrated acceptable to strong reliability, typically with alphas ranging from .72 to .92 (Fox, 1984; French & Oakes, 2004).

Table 4

Description of IIS Scales

Scale	Descriptor	Items
I: Peer Group Interaction	Degree to which students believe they are able to interact with other students in the program	33-39
II: Interaction with Faculty	Degree to which students believe they are able to interact with program faculty	40-44
III: Faculty Concern	Degree to which students believe program faculty are concerned about students' academic and social development	45-49

Table 4 continued

Scale	Descriptor	Items
IV: Academic and Institutional Development	Degree to which students believe their academic and intellectual needs are being met by the program	50-56
V: Institutional and Goal Commitment	Degree to which students believe they are satisfying the academic requirements of the program	56-60, APS 56-61, BTPS

Data Analysis

Data were screened for missing or problematic responses. Items pertaining to ethnic identity and social and academic adjustment had the largest portion of missing or problematic responses. Problematic responses were those wherein a clear answer was not given. For example, the respondent may have indicated more than one response to a Likert scale item. The researcher could not identify any visible pattern for missing or problematic responses and found that missing or problematic values were randomly distributed across data records. Following the deletion of records with missing or two or more values, a review of descriptive statistics for each school division's data file indicated no substantial differences in sample means.

Of the 309 completed questionnaires in APS, 170 questionnaires were included for data analysis. Of the 212 completed questionnaires from BTPS, eighty-three were included for data analysis. Reduction in sample size was a result of the exclusion of questionnaires completed by students who did not identify themselves as African American or White. The sample was further reduced after some data records were deleted due to missing or problematic values.

Table 5 features the variables used in the data analysis. Each research question and its associated variables and analyses are included in Appendix F.

Table 5

List of Variables Used in Data Analysis

Variable Name	Description
Independent Variables	
Ethnic identity achievement	Measure of the extent to which respondents pursue information about and participate in the traditions of their own culture using. Scores were derived from an average of items 17, 19, 20, 21, 23, and 25 on the MEIM.
Affirmation, belonging, and commitment	Measure of the extent to which respondents are attached to their own ethnic group using the MEIM. Scores were derived from an average of items 15, 16, 18, 22, and 24 on the MEIM.
Ethnic identity attitude	Four distinct categories based on attitudes associated with ethnicity among African American participants. Categorization is based on the average of an individual's ethnic identity achievement and affirmation, belonging, and commitment scores and other-group orientation score, all of which are MEIM scales.
Other-group orientation	Measure of respondents' interest in and willingness to interact with those outside of one's ethnic group. Scores were derived from an average of items 27-32 after recoding negatively worded items.
Dependent Variables	
Academic adjustment	Measure of academic adjustment using the IIS. Scores were derived from an average of scale scores after recoding negatively worded items.
Social adjustment	Measure of social adjustment using the IIS. Scores were derived from an average of scale scores after recoding negatively worded items.

Quantitative data were analyzed using SPSS and Excel software. Once final spreadsheets were developed, descriptive statistics were computed for African American and White participants. Results yielded descriptive data (mean, median, and standard deviation) for students' age, academic standing, and cumulative grade point average (GPA), as well as number of participants by ethnicity. Descriptive statistics (mean, median, and standard deviation) by ethnicity were also formulated for each scale of the MEIM and IIS once total scores were calculated for each instrument's scales.

T-tests were performed to compare mean reported scores of African American participants to mean reported scores of White participants on each scale of the MEIM and each scale of the IIS. Additional mean comparisons were performed for ethnic identity total scores, which were derived from the average of each participant's overall ethnic identity achievement score and affirmation, belonging, and commitment score.

African American participants' ethnic identity total scores and other-group orientation scores were used to assign these respondents to one of four ethnic identity attitude categories: high-high (high ethnic identity total score and high other-group orientation score), high-low (high ethnic identity total score and low other-group orientation score), low-high (low ethnic identity total score and high other-group orientation score), and low-low (low ethnic identity total score and low other-group orientation score). Once grouped, an ANOVA was performed to compare differences in IIS scale mean scores among the four categories of African American participants. Tukey's HSD was performed in instances where ANOVA yielded a significant F-value. Statistically significant differences among the four groups, particularly between African Americans categorized as high-high and low-low could support the hypothesis that

African Americans with a more developed sense of ethnic identity and a greater willingness to engage with those outside of their ethnic group are more likely to indicate higher rates of social and academic adjustment within the AP, IB, and DE programs.

Finally, a Pearson product moment correlation analysis was done to determine the strength and direction of the relationship between ethnic identity total scores and each scale of the IIS for African American and White participants. Positive, significant correlations between ethnic identity and social and academic adjustment could support the hypothesis that ethnic identity attitudes moderate social and academic adjustment among African American students. The same procedure was performed to determine the strength and direction of the relationship between other-group orientation and each IIS scale for African American and White participants. Positive, significant correlations could support the hypothesis that other-group orientation, or one's willingness to engage with people from ethnic groups other than one's own, influences social and academic adjustment among African American students.

Limitations

Originally, this study included both quantitative and qualitative methods. IRB divided the original study into two separate studies based on methodology. The first study was for the quantitative portion of the original mixed methods study. Hence, the student questionnaire and all documents related to it were approved by IRB and granted exempt status. The focus group interviews and all documents related to it had to be resubmitted as a separate study for IRB review. Approval for the second, or qualitative, portion of the study was granted in February 2010. This portion required informed consent from parents

and students. Additionally, parents had to be given a copy of focus group interview questions along with the informed consent form.

This study proposed to examine students' lived experiences within IB, AP, and DE programs via in-depth interviews with a sample of students who completed the student questionnaire (Appendix F). However, interviews could not be performed due to APS' persistent objections to various proposed letters to parents, students, and school district personnel and to specific student questionnaire items. This required numerous revisions of letters and the student questionnaire. The revised letters and student questionnaire distributed in APS are included as Appendices G through K.

Student questionnaires were not distributed in APS until two weeks prior to the end of the school year. Thus, there was not sufficient time to schedule and perform student interviews. Although questionnaires were distributed to BTPS without revisions and completed questionnaires collected in a timely manner, student interviews were not conducted in the school division due to the amount of resources exerted addressing NPS's concerns.

As a result of the elimination of the student interviews, a purely quantitative study was conducted to test the hypothesis that ethnic identity and social and academic adjustment differed between African American and White students enrolled in AP, DE, and IB programs.

Changes to the research design also necessitated revisions to the research questions.

The study had been designed to examine the following research questions:

1. What are students' experiences with the AP, IB, and DE programs' social climate?
2. What are students' experiences with the AP, IB, and DE programs'

   a. Classroom environments?
   b. Program personnel?
   c. African American students?
   d. Students of other ethnicities?
   e. Curricular goals?
3. To what extent do students feel prepared to meet the programs' academic demands?
4. To what extent do students feel supported in their academic pursuits?
5. Do students believe that they are more likely to attend college and more likely to be successful in college as a result of program participation?
6. In what ways are the social and academic adjustment experiences of African American students different from those of other student groups?
7. To what extent does students' ethnic identity influence students' academic and social adjustment within these programs?

Because the focus group interviews were not performed, research questions one, two, three, and four could not be fully examined. While the student questionnaire captured data about students' social and academic adjustment, the questionnaire did not provide students an opportunity to discuss their experiences within or preparation for the programs. Although the student questionnaire included a question wherein respondents indicated their post high school intentions, there was no opportunity to ask the participants if they believed they were more likely to attend college and more prepared for college as a result of program participation. Thus, it was necessary to revise the research questions as follows:

1. Do levels of ethnic identity development differ between African American and White students in AP, IB, and DE programs?
2. Do levels of academic and social adjustment differ between African American and White students in AP, IB, and DE programs?

3. Does African American students' ethnic identity attitude categorization based on Cross' Nigrescence model moderate academic and social adjustment within these programs?
4. Does ethnic identity influence academic and social adjustment among students within these programs?

Researcher Bias and Assumptions

Potential biases included personal partiality to programs offered by BTPS. The researcher was formerly employed in the district's gifted education department, which provided direct oversight to the academic programs included in this study. Although the researcher was also employed by APS' gifted education department, department personnel did not supervise that district's AP, IB, and DE programs at that time.

Additionally, the researcher attended APS from pre-kindergarten through third grade and BTPS from fourth through twelfth grades. While enrolled in both districts, the researcher was enrolled in numerous gifted and advanced academic programs. Moreover, as a former student in such programs and as the mother of an African American male enrolled in advanced academic courses at a predominantly White middle school in BTPS, the researcher has firsthand knowledge of the social and academic adjustment experiences of African American students in predominantly White settings, particularly advanced academic programs. As a result of these experiences, the researcher assumes that neither district, but particularly BTPS, is doing enough to address the social and academic adjustment needs of African American students enrolled in advanced academic programs.

Furthermore, the researcher grew up in and currently lives in a predominantly White neighborhood, has worked in predominantly White settings, and is currently enrolled in a Ph. D program where she is the only African American student. The researcher is a proponent of advanced academic programs and is in support of strategies designed to address the underrepresentation of minority and disadvantaged students in such programs. Additional investigation was conducted to identify any other researcher biases and assumptions. None were identified.

Summary

This chapter described the methodology that was used to conduct this study investigating the social and academic adjustment among African American and White students enrolled in AP, IP, and DE programs in two South Hampton Roads school divisions. The study's research design, its measures, and its data collection and analysis procedures have been presented. Analysis of researcher bias and assumptions was provided.

CHAPTER 4: RESULTS

Demographics

APS' average African American respondent was 16.13 years old, a sophomore, and had a grade point average (GPA) ranging from 3.0-3.49. There were 44 African American male respondents and 25 African American female respondents (see Table 6). The district's average White respondent was 16.21years old, a sophomore, and had a GPA ranging from 3.0-3.49. There were 58 White male respondents and 42 White female respondents. One respondent did not identify gender. It is important to note that none of APS's respondents were seniors due to the late distribution of the student questionnaires. Seniors are not required to attend school during the final week of school, which is when the questionnaires were administered. Demographic data for the APS participants are presented in Table 6.

BTPS's average African American respondent was a 16.23 year old sophomore with a GPA ranging from 3.0 to 3.49. There were 10 African American female and 3 African American male respondents. The division's average White respondent was a 16.81 year old junior. White respondents consisted of 32 males and 38 females. Demographic data for the BTPS respondents included for data analysis are provided in Table 6.

Table 6

Demographic Data for Study Participants

	Allen Public Schools						Bay Town Public Schools					
	African American Participants N=69			White Participants N=101			African American Participants N=13			White Participants N=70		
	M	Mdn	SD	M	Mdn	SD	M	Mdn	SD	M	Mdn	SD
Age	16.13	16	0.71	16.21	16	0.68	16.23	16	1.01	16.81	16	1.08
Cumulative GPA Range [a]	2.07	2	1	2.09	2	1.63	2.15	2	0.99	1.65	2	0.73
Class standing [b]	1.42	1	0.5	1.53	2	0.5	1.62	1	0.96	2.07	3	0.98

[a] Cumulative GPA categories were presented in ranges (1=3.5 or higher, 2= 3.0-3.49, 3= 2.5-2.99, 4=2.0-2.49, and 5=1.99 or lower)

[b] Class standing (1=Sophomore, 2=Junior, 3=Senior)

Research Question 1: Do levels of ethnic identity development differ between African American and White students in AP, IB, and DE programs?

The Multigroup Ethnic Identity Measure (MEIM), developed by Phinney (1992) to measure ethnic identity across diverse ethnicities and age groups, was used to assess ethnic identity development and participant comfort with and awareness of ethnic identity. This four-point Likert scale instrument was used in both districts to measure two constructs: ethnic identity and other-group orientation. Ethnic identity, or the degree to which students engage in and try to learn more about the customs and traditions of their own ethnic group, was assessed by two subscales of the MEIM—ethnic identity achievement and affirmation, belonging and commitment. An average of the total score from both subscales provided the ethnic identity summed or total score. Other-group orientation, the extent to which students interact with students outside of their own ethnic group, was assessed by the other-group orientation subscale. Ethnic identity and other-group orientation were examined as two independent variables.

Mean scores were derived for each MEIM scale for African American students and White students in both districts. Descriptive data for the MEIM for APS and BTPS are shown in Table 7. In APS, African American participants achieved higher mean scores than White participants on each MEIM subscale while African American participants in BTPS achieved higher mean scores on three out of four of the MEIM subscales.

Table 7

MEIM Scores for Allen Public Schools and Bay Town Public Schools Study Participants

	Allen Public Schools						Bay Town Public Schools					
	African American Students N=69			White Students N=101			African American Students N=13			White Students N=70		
	M	Mdn	SD	M	MD	SD	M	Mdn	SD	M	MD	SD
Ethnic identity achievement	2.65	2.8	0.53	2.33	2.4	0.59	2.78	2.8	0.66	2.32	2.2	0.5
Affirmation, belonging, and commitment	3.07	3	0.56	2.87	3	0.64	3.21	3.14	0.38	2.78	2.86	0.53
Ethnic identity summed score	2.90	3	0.48	2.65	2.75	0.57	3.03	3.08	0.45	2.59	2.58	0.48
Other-group orientation	2.96	3	0.37	2.75	2.78	0.44	2.86	2.83	0.30	3.02	3	0.39

A t-test for independent means assuming equal variance was performed for each MEIM scale and the ethnic identity total score to determine if there was a significant difference between the mean scores of African American and White respondents. Results for APS are included in Table 8 and results for BTPS are included in Table 9.

Questionnaire items 15, 16, 18, 22, and 24 assessed participants' ethnic identity achievement. T-test results for this construct demonstrated a significant effect for ethnic identity achievement, $t_{(168)}=3.63$, $p=0.00$, with African American participants achieving higher levels of ethnic identity achievement than their White peers in APS. Similarly, t-test results for ethnic identity achievement for Bay Town respondents demonstrated a significant effect, $t_{(81)}=2.92$, $p=0.00$, with African American respondents demonstrating higher levels of ethnic identity achievement than White respondents.

Questionnaire items 17, 19, 20, 21, 23, 25, and 26 measured participants' affirmation, belonging, and commitment. As shown in Table 5, APS' African American participants had a mean score higher than that of White participants. T-test results, $t_{(168)}=2.09$, $p=0.04$, suggest that African American students in Allen's IB, AP, and DE programs have achieved higher levels of affirmation, belonging, and commitment than White students in the same programs.

Results for BTPS respondents were similar. There was a statistically significant effect for affirmation, belonging, and commitment, $t_{(81)}=2.77$, $p=0.01$, with African Americans again demonstrating a higher level of affirmation, belonging, and commitment than Whites. Results are provided in Table 9.

Other-group orientation was measured by questionnaire items 27 through 32. As Table 8 shows, the t-test result for APS indicates a statistically significant difference in

Other-group orientation was measured by questionnaire items 27 through 32. As Table 8 shows, the t-test result for APS indicates a statistically significant difference in mean scores between African American and White respondents for this construct, $t_{(168)}$=2.26, p=0.03. Although the difference between other-group orientation mean scores for African American and White BTPS respondents was statistically nonsignificant, $t_{(81)}$=1.42, p=0.16, this is the only MEIM construct wherein White students achieved a higher mean score than African Americans. BTPS results appear in Table 9.

Table 8

MEIM t-test Results for Allen Public Schools

Scale	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Ethnic identity achievement						
African American	69	2.65	0.53	3.63	168	0.00
White	101	2.33	0.59			
Affirmation, belonging, and commitment						
African American	69	3.07	0.56	2.09	168	0.04
White	101	2.87	0.64			
Ethnic identity summed score						
African American	69	2.90	0.48	2.93	168	0.00
White	101	2.65	0.57			
Other-group orientation						
African American	69	3.08	0.36	2.26	168	0.03
White	101	2.94	0.3			

Table 9

MEIM t-test Results for Bay Town Public Schools

Scale	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Ethnic identity achievement						
African American	13	2.78	0.66	2.92	81	0.00
White	70	2.32	0.5			
Affirmation, belonging, and commitment						
African American	13	3.21	0.38	2.77	81	0.01
White	70	2.78	0.53			
Ethnic identity summed score						
African American	13	3.03	0.45	3.11	81	0.00
White	70	2.59	0.48			
Other-group orientation						
African American	13	2.86	0.3	-1.42	81	0.16
White	70	3.02	0.39			

Research Question 2: Do levels of academic and social adjustment differ between African American and White students in AP, IB, and DE programs?

Institutional Integration Scale

Pascarella and Terenzini's (1980) Institutional Integration Scale (IIS) was included in the student questionnaire to evaluate participants' social and academic adjustment. The IIS is a 5-point Likert-scale instrument consisting of five sections or scales. IIS scores for APS and BTPS participants are shown in Table 10.

Table 10

IIS Scores for Allen Public Schools and Bay Town Public Schools

	Allen Public Schools						Bay Town Public Schools					
	African American Students N=69			White Students N=101			African American Students N=13			White Students N=70		
	M	Mdn	SD	M	Mdn	SD	M	Mdn	SD	M	Mdn	SD
Scale I: Peer Group Interaction	3.69	3.57	0.48	3.72	3.57	0.51	3.71	3.71	0.39	3.96	3.86	0.58
Scale II: Interaction with Faculty	4	4	0.66	4.11	4	0.64	3.57	3.6	0.63	3.81	4	0.78
Scale III: Faculty Concern	3.92	4	0.73	4.06	0.64	0.71	3.32	3.2	0.51	3.71	3.8	0.8
Scale IV: Academic and institutional development	3.83	3.86	0.71	3.88	3.86	0.63	3.57	3.57	0.69	3.69	3.79	0.69
Scale V: Institutional and goal commitment	4.08	4	0.85	4.26	4.25	0.69	3.8	4	0.95	4.1	4.33	0.8

Social and Academic Adjustment

An independent samples t-test was conducted on each of the five subscales of the IIS to determine if there was a statistically significant difference in the levels of social and academic adjustment between African American students and White students in APS and BTPS. Although group mean scores for White students were higher than those of African American students in both school districts for each of the five IIS scales, mean score differences were statistically nonsignificant. Results for APS are presented in Table 11 and results for BTPS are presented in Table 12.

Table 11

IIS t-test Results for Allen Public Schools

Scale	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Scale I: Peer Group Interaction						
African American	69	3.69	0.48	-0.38	168	0.71
White	101	3.72	0.51			
Scale II: Interaction with faculty						
African American	69	4.00	0.66	-1.08	168	0.28
White	101	4.11	0.64			
Scale III: Faculty concern						
African American	69	3.92	0.73	-1.21	168	0.23
White	101	4.06	0.71			
Scale IV: Academic and Institutional Development						
African American	69	3.83	0.71	-0.53	168	0.60
White	101	3.88	0.63			

Table 11 continued

Scale	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Scale V: Institutional and Goal Commitment						
African American	69	4.08	0.85	-1.53	168	0.13
White	101	4.26	0.69			

Table 12

IIS t-test Results for Bay Town Public Schools

Scale	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Scale I: Peer Group Interaction						
African American	13	3.71	0.48	-1.48	81	0.14
White	71	3.96	0.51			
Scale II: Interaction with faculty						
African American	13	3.57	0.66	-1.07	81	0.29
White	71	3.81	0.64			
Scale III: Faculty concern						
African American	13	3.32	0.73	-1.66	81	0.1
White	71	3.71	0.71			
Scale IV: Academic and Institutional Development						
African American	13	3.57	0.71	-0.57	81	0.57
White	71	3.69	0.63			

Table 12 continued

Scale	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Scale V: Institutional and Goal Commitment						
African American	13	3.80	0.85	-1.19	81	0.24
White	71	4.10	0.69			

Research Question 3: Does African American students' ethnic identity attitude categorization based on Cross' Nigrescence model moderate academic and social adjustment within these programs?

Previous studies (Worrel, et al., 2006; Schaefer & Worrel, 2003) related to the validity and reliability of the MEIM have asserted that scores used to compute the ethnic identity total score and the other-group orientation score can be used to categorize students into four groups: high ethnic identity and high other group orientation (high-high), high ethnic identity and low other-group orientation (high-low), low ethnic identity and high other-group orientation (low-high), and low ethnic identity and low other-group orientation (low-low). Studies (Worrel et al., 2006; Schaefer & Worrel, 2003) have further documented that these four categories correspond to behaviors described in Cross' Nigresence model. Table 13 shows each category along with its associated Nigresence model behaviors.

Table 13

MEIM Categories and Corresponding Nigresence Model Behaviors

MEIM Category	Nigrescence Model Behaviors
high-high	multicultural attitudes reflective of a strong orientation toward one's own racial group
high-low	Afrocentric attitudes reflecting a strong orientation to Black culture and a low orientation toward White culture
low-high	assimilation attitudes, which downplay the importance of Black culture but highlight majority culture
low-low	low race salience attitudes, which downplay the significance of race across the board

To allow for comparisons among African American participants, the total ethnic identity score derived from the ethnic identity scale and the affirmation, belonging, and commitment scale of the MEIM and the other-group orientation score were used to assign African American students to one of the four MEIM ethnic identity categories described in Table 13. Scores ranging from 1 to 2.9 were classified as low, while scores ranging from 3 to 4 were classified as high. Descriptive data for the ethnic identity total score and other-group orientation score for each category of African American participants are provided in Table 14 for APS and in Table 15 for BTPS.

Descriptive data for IIS scales one through five for each ethnic identity category are provided in Table 16 for APS participants. Students categorized as high-high, or having multicultural attitudes with a strong sense of their own culture, achieved the highest mean score across all scales of the IIS except Scale II: Interaction with Faculty. For this scale, high-high participants achieved a mean score of 4.14, while those

categorized as low-high, or having assimilation attitudes, achieved a higher mean score (M=4.27).

Table 14

Allen Public Schools Descriptive Data for Ethnic Identity Categories, MEIM

	High-high Multicultural N=23			High-low Afrocentric N=12			Low-high Assimilation N=19			Low-low Low race salience N=15		
	M	Mdn	SD	M	MD	SD	M	Mdn	SD	M	MD	SD
Ethnic identity total score	3.25	3.25	0.22	3.24	3.13	0.31	2.57	2.67	0.35	2.49	2.58	0.42
Other-group orientation	3.30	3.33	0.22	2.78	2.83	0.13	3.33	3.33	0.20	2.64	2.67	0.23

Table 15

Bay Town Public Schools Descriptive Data for Ethnic Identity Categories, MEIM

	High-high Multicultural N=2			High-low Afrocentric N=6			Low-high Assimilation N=3			Low-low Low race salience N=2		
	M	Mdn	SD	M	MD	SD	M	Mdn	SD	M	MD	SD
Ethnic identity total score	3.29	3.29	0.29	3.15	3.21	0.59	2.78	2.75	0.13	2.79	2.79	0.18
Other-group orientation	3.17	3.17	0	2.69	2.75	0.25	3.11	3	0.19	2.67	2.67	0.24

Table 16

Allen Public Schools Descriptive Data for Ethnic Identity Categories, IIS Scales

	High-high Multicultural N=23			High-low Afrocentric N=12			Low-high Assimilation N=19			Low-low Low race salience N=15		
	M	Mdn	SD	M	Mdn	SD	M	Mdn	SD	M	Mdn	SD
Scale I: Peer Group Interaction	3.79	3.86	0.51	3.76	3.71	0.44	3.73	3.71	0.46	3.42	3.57	0.41
Scale II: Interaction with Faculty	4.14	4	0.69	3.97	3.9	0.58	4.27	4.2	0.46	3.48	3.6	0.66
Scale III: Faculty Concern	4.2	4.2	0.68	3.83	4	0.45	3.94	4	0.75	3.55	3.6	0.83
Scale IV: Academic and institutional development	4.01	4.29	0.77	3.92	3.86	0.36	3.86	4	0.87	3.44	3.57	0.49
Scale V: Institutional and goal commitment	4.29	4.25	0.76	4.10	4.13	0.76	4.18	4.5	0.94	3.62	3.75	0.8

An analysis of variance (ANOVA) was performed to test for mean score differences on each IIS scale among the four categories of African American participants. Results for African American participants in APS indicated a statistically significant effect on Scale II: Interaction with Faculty, $F_{(3, 65)}=5.34$, $p=0.00$, and Scale III: Faculty Concern, $F_{(3, 65)}=2.69$, $p=0.05$. The ANOVA was followed by a Tukey-Kramer multiple comparison test to assess which African American student categories had statistically significant mean differences on Scale II and Scale III. Results indicated significant mean differences between African American students categorized as high-high and low-low and between those categorized as low-high and low-low on Scale II: Interaction with Faculty. Additionally, there were significant mean differences between African Americans categorized as high-high and low-low for Scale III: Faculty Concern. ANOVA results for scales one through five for APS African American participants are given in tables 17 through 21 respectively.

Table 17

Allen Public Schools Scale I: Peer Group Interaction ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	1.406481	3	0.468827	2.180859	0.098706
Within Groups	13.97329	65	0.214974		
Total	15.37977	68			

Table 18

Allen Public Schools Scale II: Interaction with Faculty ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	5.937129	3	1.979043	5.33716	0.002385
Within Groups	24.10229	65	0.370804		
Total	30.03942	68			

Table 19

Allen Public Schools Scale III: Faculty Concern ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	3.989181	3	1.329727	2.685215	0.053786
Within Groups	32.18821	65	0.495203		
Total	36.17739	68			

Table 20

Allen Public Schools Scale IV: Academic and Institutional Development ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	3.173129	3	1.05771	2.199424	0.096525
Within Groups	31.2587	65	0.480903		
Total	34.43182	68			

Table 21

Allen Public Schools Scale V: Institutional and Goal Commitment ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	4.480923	3	1.493641	2.19517	0.097021
Within Groups	44.22741	65	0.680422		
Total	48.70833	68			

Descriptive data for IIS scales one through five for each ethnic identity category are provided in Table 22 for BTPS. Similar to APS results, students categorized as high-high having multicultural attitudes with a strong sense of their own culture achieved the highest mean score across all scales of the IIS except Scale II: Interaction with Faculty. For this scale, high-high participants achieved a mean score of 4.14, while those categorized as low-high, or having assimilation attitudes, achieved a higher mean score (M=4.27). Again, just as in APS, those categorized as low-low, or having low race salience, consistently achieved the lowest mean scores across the IIS.

An ANOVA was performed to test for mean score differences on each IIS scale among the four categories of African American participants. Results indicate that mean scores did not differ significantly across the four groups of African American students on any of the IIS scales. ANOVA results for scales one through five for BTPS African American participants are shown in tables 23 through 27.

Table 22

Bay Town Public Schools Descriptive Data for Ethnic Identity Categories, IIS Scales

	High-high Multicultural N=23			High-low Afrocentric N=12			Low-high Assimilation N=19			Low-low Low race salience N=15		
*	M	Mdn	SD	M	MD	SD	M	Mdn	SD	M	MD	SD
Scale I: Peer Group Interaction	3.79	3.86	0.51	3.76	3.71	0.44	3.73	3.71	0.46	3.42	3.57	0.41
Scale II: Interaction with Faculty	4.14	4	0.69	3.97	3.9	0.58	4.27	4.2	0.46	3.48	3.6	0.66
Scale III: Faculty Concern	4.2	4.2	0.68	3.83	4	0.45	3.94	4	0.75	3.55	3.6	0.83
Scale IV: Academic and institutional development	4.01	4.29	0.77	3.92	3.86	0.36	3.86	4	0.87	3.44	3.57	0.49
Scale V: Institutional and goal commitment	4.29	4.25	0.76	4.1	4.13	0.76	4.18	4.5	0.94	3.62	3.75	0.80

Table 23

Bay Town Public Schools Scale I: Peer Group Interaction ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	0.380952	3	0.126984	0.785047	0.53177
Within Groups	1.455782	9	0.161754		
Total	1.836735	12			

Table 24

Bay Town Public Schools Scale II: Interaction with Faculty ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	1.614359	3	0.53812	1.56565	0.264391
Within Groups	3.093333	9	0.343704		
Total	4.707692	12			

Table 25

Bay Town Public Schools Scale III: Faculty Concern ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	1.249744	3	0.416581	2.045035	0.17809
Within Groups	1.833333	9	0.203704		
Total	3.083077	12			

Table 26

Bay Town Public Schools Scale IV: Academic and Institutional Development ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	1.687075	3	0.562358	1.244147	0.349981
Within Groups	4.068027	9	0.452003		
Total	5.755102	12			

Table 27

Bay Town Public Schools Scale V: Institutional and Goal Commitment ANOVA Results

	Sum of Squares	*df*	*MS*	*F*	*Sig.*
Between Groups	2.693821	3	0.89794	0.988586	0.440867
Within Groups	8.174769	9	0.908308		
Total	10.86859	12			

Research Question 4: Does ethnic identity influence academic and social adjustment among students within these programs?

Pearson product-moment correlation analyses were performed to estimate the strength and direction of the linear relationship between ethnic identity and social and academic adjustment. Results did not indicate a strong relationship between ethnic identity total scores and IIS scale scores for any student group in either school district; however, the correlation between APS' African American students' MEIM ethnic identity total scores and IIS Scale IV: Academic and Institutional Development scores is moderate (r=0.40).In BTPS, there was not a strong relationship between ethnic identity and any of the IIS scales. Correlation coefficients for both districts are shown in Table 28.

Students' other-group orientation scores were also used to examine the strength and direction of the relationship between students' attitudes toward interacting with students from ethnic groups other than their own and each of the five IIS scales. While correlation coefficients did not indicate a strong relationship between other-group orientation and any of the IIS scales, the relationship between other-group orientation and Scale II: Interaction with Faculty is moderate (r=.41) for African American participants in APS. In BTPS, the relationship between other-group orientation and Scale II: Faculty

Concern is moderate (r=0.59) for African Americans and the relationship between other-group orientation and Scale IV: Academic and Institutional Development is moderate (r=0.41) for Whites. Results appear in Table 29.

Table 28

Correlation Coefficients for Ethnic Identity and Social and Academic Adjustment

	Scale I: Peer Group Interaction	Scale II: Interaction with Faculty	Scale III: Faculty Concern	Scale IV: Academic and Institutional Development	Scale V: Institutional and Goal Commitment
	r	*r*	*r*	*r*	*r*
APS					
Ethnic identity summed score					
African American	0.29	0.16	0.25	0.40	0.25
White	0.14	0.14	0.34	0.39	0.37
BTPS					
Ethnic identity summed score					
African American	0.17	0.23	-0.35	0.16	0.14
White	0.15	0.10	-0.10	0.13	0.19

Table 29

Correlation Coefficients for Other-group Orientation and Social and Academic Adjustment

	Scale I: Peer Group Interaction	Scale II: Interaction with Faculty	Scale III: Faculty Concern	Scale IV: Academic and Institutional Development	Scale V: Institutional and Goal Commitment
	r	*r*	*r*	*r*	*r*
APS					
Other-group orientation					
African American	0.33	0.41	0.24	0.25	0.28
White	-0.05	0.21	0.33	0.26	0.25
BTPS					
Other-group orientation					
African American	0.12	0.33	0.59	-0.16	0.23
White	0.37	0.29	0.18	0.41	0.33

CHAPTER 5: DISCUSSION

While much is known about social and academic adjustment among African American students attending predominantly White colleges and universities, investigations into social and academic adjustment among African American high school students attending predominantly White high schools or programs of study are not as numerous. Although African American student enrollment in AP, IB, and DE programs is on the rise, African American students are not performing as academically well as White students (Camara, Dorans, Morgan, & Myford, 2000; Curry, MacDonald, & Morgan, 1999; Ford et al., 2002; Klopfenstein, 2004; Soloranzo & Ornelas, 2004; Taliaferro & DeCuir-Gunby, 2008). Furthermore, there is a persistent achievement gap between Whites and African Americans for exit exam pass rates and program completion (Camara, Dorans, Morgan, & Myford, 2000; Curry, MacDonald, & Morgan, 1999; Ford et al., 2002; Klopfenstein, 2004; Soloranzo & Ornelas, 2004; Taliaferro & DeCuir-Gunby, 2008). Due to these disparities, it is important to determine academic and social factors that may contribute to African American students' success in these programs.

This study examined social and academic adjustment among African American and White students and compared their levels of academic and social adjustment in order to identify statistically significant differences between the two student groups. The study further sought to examine the strength and direction of the relationship between ethnic identity and social and academic adjustment levels among African Americans and Whites. Finally, this study also compared levels of academic and social adjustment among African American students based on their classification into one of four quadrants

that correspond with behaviors and attitudes described in Cross' Nigrescence Theory. The following research questions were addressed:

1. Do levels of ethnic identity development differ between African American and White students in AP, IB, and DE programs?
2. Do levels of academic and social adjustment differ between African American and White students in AP, IB, and DE programs?
3. Does African American students' ethnic identity attitude categorization based on Cross' Nigrescence model moderate academic and social adjustment within these programs?
4. Does ethnic identity influence academic and social adjustment among students within these programs?

Ethnic Identity among African Americans

Ethnic identity, an aspect of self-concept and social identity based on one's knowledge of group membership and the value attached to that membership, was more salient among African American respondents in APS and BTPS. This supports existing literature which asserts that African Americans tend to demonstrate a greater sense of ethnic identity than Whites (Martinez & Dukes, 1997; Perry, 2002; Phinney & Alipuria, 1990; Vaughn, Naylor, & White, 2009). Ethnic identity and self-identity are inextricably linked among African American youth (Phinney, 1990). Phinney and Alipuria (1990) reported that African American students consider ethnic identity more important than White students. Like most minority group adolescents, African Americans struggle with identity development within the context of their ethnic group (Spencer & Markstrom-Adams, 1990; Phinney, 1990). African American group membership is frequently associated with negative stereotypes and social stigmas (Cross & Vandiver, 2001). Encounters with these stereotypes and stigmas, as well as other forms of racism, influence African American adolescents' stagnation, regression, and progression through

the stages described in Cross' Nigresence model (Cross & Vandiver, 2001). During this period, a sense of ethnic identity may become more salient as African Americans seek to understand what their ethnic group affiliation means in their search for self (Cross & Vandiver, 2001; Phinney, 1990; Spencer & Markstron, 1990). It is at this time that the need to connect with same-race peers may become more pronounced, particularly when African American adolescents are in situations where they are severely underrespresented (Grantham & Ford, 2003; Ford & Whiting, 2007).

Healthy ethnic identity among African Americans has been attributed to conscious efforts within the African American community to counteract negative images of African Americans with positive ones (Blash & Unger, 1995). Davis and Grandy (1999) cited these counteractive measures as part of the African American socialization process whereby African American youth are taught to cope with racism and respond to it within the boundaries of what is socially acceptable while also learning about African American culture. The African American community has consistently supported programs designed to positively influence the ethnic identity of African American youth through activities that provide historical and cultural information, teach intellectual and social skills, and promote values that are consistent with African American culture and community needs.

In a 1995 study, Blash and Unger found that an appreciation for African American heritage and ethnic identity were positively related among African American male youth. Highlighting the contributions, culture, and traditions of African Americans by including African American history and multicultural education into the overall school curriculum has given African American students opportunities to explore their heritage,

which may influence ethnic identity development among African American students. Although history continues to be presented from a largely Eurocentric perspective in American schools, history education has shifted over the years to include the contributions of African Americans and other minority groups. In addition to academic offerings, many public schools sponsor multicultural programs and clubs such as steel drum and choral groups that perform Afro-Caribbean and traditional Black music, African dance and step troupes, and clubs that explore African American culture and observe the traditions of this ethnic group. African American students now have opportunities to develop affirming views of their history within the school setting while also developing relationships with same-race peers with a common cultural interest. Forming supportive connections with in-group peers has been described by Grantham and Ford (2003) as essential to developing a healthy ethnic identity.

As the American population becomes more diverse, there has been a greater appreciation for cultural diversity. Efforts have been made to positively portray African Americans in mainstream media and to address the diverse and sometimes their unique economic, education, and healthcare needs. Moreover, many aspects of African American culture have been embraced by the mainstream. Emulation of African American slang, music, dance, and fashion by members of other ethnic groups serves as further evidence of a greater appreciation for cultural diversity.

Ethnic Identity among Whites

Whites in this study demonstrated lower levels of ethnic identity than African Americans. This is consistent with the findings of previous studies (Martinez & Dukes, 1997; Perry, 2002; Vaughn, et al., 2009). Lack of ethnic identity among Whites has been

attributed to negative connotations traditionally associated with pride in White ethnicity, or White pride (Vaughn, et al., 2009; Perry, 2002; Martinez & Dukes, 1997). White respondents' efforts to avoid responding to ethnic identity measures in a manner that would suggest White pride is considered a cause of persistent differences in ethnic identity achievement between African Americans and Whites (Martinez & Dukes, 1997; Perry, 2002; Vaughn, et al., 2009).

White pride is not as publicly encouraged as ethnic pride is for other ethnic groups. In previous studies, White participants did not acknowledge the existence of a White ethnic identity due to an overwhelming belief that cultural or ethnic identity is unique to minority groups (Perry, 2002; Vaughn et al., 2009). Whiteness is also frequently associated with privilege in mainstream media and in scholarly writing (Perry, 2002). As stated by Thompson (2001), "White privilege depends on the devaluation of non-Whites." Thus, White ethnic pride is at risk of being mistaken as relishing White privilege and encouraging White supremacy (Perry, 2002; Vaughn et al., 2009).

Whiteness in scholarly writing is often referred to as the norm or default ethnic category by which all other ethnic groups are compared. Because Whiteness is considered the norm, it is sometimes viewed as invisible. Knowles and Peng (2005) described Whiteness as an insufficiently examined racial category, routinely unseen and unacknowledged. This view of whiteness may also contribute to lower rates of ethnic identity achievement among White participants.

Other-Group Orientation

African American students in BTPS tended to have lower other-group orientation scores than their White counterparts, which suggest that African American students in

BTPS are less willing to interact with students outside of their own ethnic group; however, differences between African American and White respondents in BTPS were not statistically different. Thus, other-group orientation attitudes are essentially the same for African Americans and Whites.

The inverse was true in APS where African American students had higher rates of other-group orientation than their White counterparts. There was a statistically significant difference, $t_{(168)}=2.26$, $p=0.03$, between mean scores for African American participants ($M=3.08$) and White participants ($M=2.94$) in APS. Here, African American participants were more willing to interact with students outside of their own ethnic group.

Developed by Tajfel and Turner (1986) to understand the psychological nexus of intergroup discrimination, Social Identity Theory proposes that a person has numerous personal selves and each personal self emerges in response to social contexts. This theory recognizes the importance of group membership to self-concept. Social Identity Theory posits that frequent or prolonged interactions with other-group members increase one's in-group identification (Tajfel & Turner, 1986). Based on Tajfel and Turner's theory, White participants in APS may have reported lower rates of other-group orientation as a result of being a numerical minority in a predominantly African American context. Previous studies conducted by Knowles and Peng (2005) and Phinney (1997) found that when in the numerical minority, White adolescents expressed a greater need for in-group identification. Likewise, in a comparison of Whites attending a predominantly White high school and Whites attending an ethnically diverse high school, Perry (2002) reported that Whites at the ethnically diverse high school expressed a desire to have the same sort

of culture-based activities and student groups that were offered for other ethnic student groups at the high school.

Although mean score differences for other-group orientation were not significantly different in BTPS, $t_{(81)}=1.42$, $p=0.16$, mean scores for African American and White students in this district also adhered to Tajfel and Turner's Social Identity Theory. African American respondents ($M=2.86$) expressed lower rates of other-group orientation than Whites ($M=3.02$). In this instance, African Americans were the numerical minority and as a result may have been less interested in relationships with other-group members.

Academic and Social Adjustment

On average, academic and social adjustment subscale scores were higher among White respondents than African American respondents in both school districts. Differences were not statistically significant. Thus, the two groups had equal levels of academic and social adjustment. While higher rates of academic and social adjustment among Whites are well documented in existing literature, differences between ethnic groups has been associated with ethnic labels in previous studies (Adelabu, 2008; Klopfenstein, 2004; Kyberg et al., 2007; Solorzano & Ornelas, 2004; Taliaferro & Decuir-Gunby, 2007).

Ethnic Identity as a Moderator of Social and Academic Adjustment

Results of this study indicated a negligible relationship between ethnic identity and academic and social adjustment. While students' levels of ethnic identity achievement were positively related to academic and social adjustment, this relationship was not strong for the majority of academic and social adjustment subscales. Among APS's African American respondents, there was a moderate positive relationship ($r=.40$)

between ethnic identity and academic and institutional development, which is the degree to which students believe their academic and intellectual needs are being met by their academic program. In essence, as ethnic identity levels increased, African American students tended to have favorable views of the ability of their chosen academic programs to satisfy their academic and intellectual needs.

There was also a moderate positive relationship between other-group orientation and faculty concern among African Americans in BTPS, r=.59. As other-group orientation scores increased, African American students' perceptions of faculty concern improved. Again, other-group orientation refers to the willingness of a person to interact or develop relationships with members of other ethnic groups. African Americans' other-group orientation mean score, M=2.86, suggests that African American students in BTPS may prefer in-group relationships to other-group relationships. Based on this premise and in light of Tajfel and Turner's Social Identity Theory, African American students in BTPS with lower other-group orientation scores may consider the predominantly White program faculty as other-group members thus resulting in less favorable views of faculty concern. This is supported by previous studies which have found that African American students have a strong need to establish in-group relationships, particularly in instances where they are underrepresented (Ford & Whiting, 2007; Grantham & Ford, 2003).

There was also a moderate, positive relationship between other-group orientation and academic and institutional development for White students in Bay Town. Here, as White students' indicated a greater willingness to interact with people from other ethnic groups, they had a higher degree of satisfaction with the program's ability to assist in their personal academic and intellectual development.

Social and Academic Adjustment among African American Participants

Perhaps most important for African American students in advanced academic programs, Ford, Harris, and Schuerger (1999) asserted that ethnic identity development influences academic achievement and attitudes about school among African American youth. The present study further analyzed academic and social adjustment to detect differences within the African American sample. After African American participants were sorted into one of four groups based on stages of ethnic identity realization described in Cross' Nigrescence model, their levels of academic and social adjustment were compared to determine if ethnic identity realization had an effect on their academic and social adjustment. There were significant effects among African American students in APS for two academic and social adjustment subscales, both of which are related to program faculty. Significant differences between means were noted for APS students classified as high-high and low-low on Scale II: Interactions with Faculty and Scale III: Faculty Concern and between those classified as low-high and low-low on Scale III. Students' perceptions of their interaction with faculty tended to be more favorable among African Americans with higher levels of achieved ethnic identity. The same was true for faculty concern in APS.

These findings support previous research that found that negative perceptions of interactions with faculty adversely affected African American students' academic achievement in predominantly White academic settings. One such study found that African American students enrolled at a predominantly white college described their interactions with faculty as "disappointing" and further described faculty as "aloof" and "uncaring" (Thomas, Thompson, Pollio, Greenberg, Conwill, Sall, Klukken, Davis, &

Dias-Bowie, 2007). These respondents were all first or second year African American college students who had been high achieving in high school, but were on academic probation while enrolled at a predominantly White college.

The ability to interact with faculty is considered an indicator of cultural competence (Grantham, 2002; Whiting & Ford, 2009). African American students are frequently cited as having limited cultural competence due to persistent disparities in educational attainment and education quality that have adversely affected African Americans over several generations (Grantham, 2002; Whiting & Ford, 2009). African American students often enter advanced academic programs at a distinct disadvantage when compared to White students partially as a result of limited cultural competence (Grantham, 2002; Whiting & Ford, 2009). Whiting and Ford (2009) described cultural competence as a tool that can positively impact the African American presence in AP programs.

Although academic and social adjustment scores on each section of the IIS tended to be higher as ethnic identity increased, differences could not be attributed to students' ethnic identity stage in BTPS. It is important to note that outcomes may have been adversely affected by the small number of African American participants (n=13) in BTPS. A larger sample size may have permitted detection of an effect attributable to ethnic identity stage among African American students in BTPS.

CHAPTER 6: CONCLUSIONS

Ethnic Identity

The findings of this study suggest that African American students in AP, IB, and DE programs have a well developed sense of ethnic identity. This finding was consistent regardless of enrollment in a majority-majority school district. Perhaps this is an effect of the Black power political movement of the 1960s wherein there was a conscious effort to counter negative images with a positive one. This time period saw the creation of Black pride social groups and the use of empowerment phrases such as "Black is beautiful." These counteractive measures are viewed as part of the African American socialization process (Davis & Gandy, 1999).

While the Black power movement is not as potent as it was in the 1960s, the remnants of this movement continue to have a profound effect on the African American experience. Recognition of African American traditions and special celebrations such as Kwanzaa and Black History Month, as well as multicultural education and ethnic social organizations has helped African Americans develop an affirming view of their history and culture. However, African American history and culture continues to be approached in the school setting with an other-group orientation. Rather than being presented as a part of the overall American culture and history, African American culture and history are often taught in isolation. This approach retains the largely Eurocentric perspective in American education while highlighting discrete facts about African Americans (Banks, 1988). Based on Banks' 1988 Model on Levels of Infusing Multicultural Content into Curriculum, this approach is at the lowest level of the model. Banks (1998) described this level as the contributions approach. Here, teachers focus on African American heroes,

holidays, and other discrete elements at specific times of the year (Banks, 1998). While this approach has undoubtedly exposed many students to previously unknown information about African American history, American education should move beyond the contributions approach and strive toward restructuring the curriculum so that multiculturalism is truly woven into the curriculum, thereby changing the traditional curriculum's structure, goals, and salient characteristics. This occurs at levels three and four of Banks' (1988) model; the transformation level and social action level respectively (Ford et al., 2005). At both levels, students gain an in depth understanding of concepts, events, and traditions from the perspective of minority groups, which will hopefully cultivate understanding of, respect for, and awareness of minority cultures and their contributions to the larger American culture. By infusing multicultural content into the wider curriculum, schools may be able to better satisfy the academic needs of African American students while also addressing African American students' interest in African American history and culture.

Conversely, the findings of this study suggest that Whites do not have a well developed sense of ethnic identity. White racial and ethnic identity should be given the same attention that racial and ethnic identity among minority groups is given. In order to develop healthy ethnic identities, White adolescents need opportunities to make sense of their own race and ethnicity without feeling guilty for being White. If all students are to develop positive intergroup attitudes and mature intercultural thinking, then steps should be taken to make ethnic pride acceptable for all ethnic groups.

Social and Academic Adjustment among African American Students

The interplay between ethnic identity and social and academic adjustment was more salient among African American participants once they were classified into four groups based on ethnic identity and other-group orientation scores. There were significant differences between groups on IIS scales associated with AP, DE, and IB faculty. African American students with low ethnic identity and low other group orientation scores consistently achieved lower IIS mean scores than African American students with higher ethnic identity and other-group orientation scores. This suggests that African American students with lower levels of ethnic identity and other-group orientation may be less likely to develop positive relationships with program faculty. These students may also consider program faculty to be unapproachable and unconcerned with students in general.

Failure to develop positive relationships with program faculty as well as the inability to approach faculty may adversely affect African American students' success in the programs and ultimately, program completion. For this reason, efforts should be made to cultivate positive relationships between African American students and AP, IB, and DE faculty. Many school divisions offer a variety of orientation and induction programs over the summer for elementary students transitioning into middle school and middle school students transitioning into high school. Perhaps similar programs can be offered for the typically small group of African American students entering AP, IB, and DE programs each school year. These orientation and induction programs could possibly include faculty and student games, relationship building exercises, and opportunities for students to interact with faculty in a nonthreatening and more relaxed environment.

Inclusion of a question and answer session would allow faculty to discuss program expectations and offer students suggestions for approaching faculty to discuss academic performance, expectations, and any other concerns.

Enrollment in these advanced academic programs normally requires completion of various academic assignments during the summer months prior to the start of the school year. Several assignments may be due on the first day of school. School divisions may consider assigning faculty members to serve as student mentors or advisors over the summer as students work to complete their summer assignments. This would give students opportunities to interact with faculty, receive constructive feedback that will help students refine summer assignments, and prepare students to meet the academic demands of AP, IB, and DE programs.

Implications and Future Research

The findings of this study suggest that African American students in AP, DE, and IB programs have well developed ethnic identities. Further research should be done to identify those factors that influence healthy ethnic identity formation among this student group. Identifying school based factors that influence ethnic identity development among African Americans need to be examined, to assess the effectiveness of the strategies many school districts utilize to infuse multicultural education and create an inclusive learning environment.

White ethnic identity and what it means to be White is a burgeoning field of research . Results of this and other studies indicate a need to educate White students about White ethnicity. Future studies might investigate the meaning of Whiteness among White adolescents and how their perceptions of Whiteness inform their ethnic identities.

Further examination of ethnic identity and social and academic adjustment among African American students in AP, IB, and DE programs is warranted. The inclusion of individual and/or focus group interviews may help illuminate the processes by which program participants make sense of their ethnic identity. Moreover, in depth interviews may assist in highlighting any mediating effects ethnic identity may have on social and academic adjustment among African American students in these programs, as well as help identify factors that influence students' decisions to complete advanced academic programs.

Finally, studies examining ethnic identity among any group should utilize a critical race theory ideological orientation and include individual and/or focus group interviews. A critical race theory ideological orientation would permit the examination of the intersection of ethnicity and other variables. Moreover, it emphasizes the socially constructed nature of race (Delgado & Stefancic, 2001). A major theme of critical race theory is storytelling which frees participants to name their own reality (Delgado & Stefancic, 2001). Subjects' daily lived experiences are essential to understanding the influence ethnic identity may have on social and academic adjustment as well as other outcomes. In the case of research focusing on White ethnic identity, storytelling may shed light on the complexity of White ethnic identity and how Whites make sense of Whiteness that is simultaneously considered invisible and preferred. Furthermore, Graham and Anderson (2008) citing Helms and Phinney and Alipura, stated that ethnic identity research is abandoning survey instruments as a means to examine ethnic identity in favor of interviews that permit the collection of information about real life, daily experiences.

Moreover, critical race theory endeavors to amend social inequalities by advancing a social justice framework (Delgado & Stefancic, 2001). It has been used extensively in educational reform as a means to discover and correct educational inequities. This is particularly important as educators seek to correct factors influencing recruitment and retention of African American students in advanced academic programs.

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APPENDIX A

Bay Town Public Schools Student Questionnaire

Part I: Demographic Data

Directions: Please read each of the following statements carefully and respond accurately. Circle your response to each statement. Thank you.

1. Age
   a. 14 years old
   b. 15 years old
   c. 16 years old
   d. 17 years old
   e. 18 years old
   f. 19 years old
   g. Other _____

2. Gender
   a. Male
   b. Female

3. Academic standing
   a. Sophomore
   b. Junior
   c. Senior

4. I was enrolled in the following advanced academic program(s) while in the following grades

a.	International Baccalaureate (IB)	10th	11th	12th	Never enrolled
b.	Advanced Placement (AP)	10th	11th	12th	Never enrolled
c.	Dual Enrollment/Early College (DE)	10th	11th	12th	Never enrolled

5. I live with
   a. both of my parents
   b. my mother only
   c. my father only
   d. other _____

6. What is your mother's highest level of education?
   a. Attended high school, but did not finish and did not earn GED
   b. High school graduate or earned GED
   c. Technical/career school
   d. 2-year college
   e. 4-year college
   f. Graduate degree
   g. I do not know

7. What is your father's highest level of education?
   a. Attended high school, but did not finish and did not earn GED
   b. High school graduate or earned GED
   c. Technical/career school
   d. 2-year college
   e. 4-year college
   f. Graduate degree
   g. I do not know

8. Currently my grade point average (GPA) is
   a. 3.50 or higher
   b. 3.00 to 3.49
   c. 2.50 to 2.99
   d. 2.00 to 2.49
   e. 1.99 or lower
   f. I am not sure.

9. Have you participated in gifted education programs in elementary, middle, or high school?
   a. Yes
   b. No
   c. Not sure

10. After graduating from high school, I will
   a. attend a 2-year college.
   b. attend a 4-year college.
   c. attend a technical/career school
   d. join the military.
   e. start working.
   f. Other _____

11. What is your anticipated career field? _____

Part II: Multigroup Ethnic Identity Measure

In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Chinese, Filipino, American Indian, Mexican American, White or White, Italian American, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please circle your response to the following statements.

12. My ethnicity is
   a. Asian or Asian American, including Chinese, Japanese, and others
   b. Black or African American
   c. Hispanic or Latino, including Mexican American, Central American, and others
   d. White, White, Anglo, European American; not Hispanic
   e. American Indian/Native American
   f. Biracial or multiracial; Parents are from two or more different ethnic groups
   g. Other (write in): _____

13. My father's ethnicity is
    a. Asian or Asian American, including Chinese, Japanese, and others
    b. Black or African American
    c. Hispanic or Latino, including Mexican American, Central American, and others
    d. White, White, Anglo, European American; not Hispanic
    e. American Indian/Native American
    f. Biracial or multiracial; Parents are from two or more different ethnic groups
    g. Other (write in): _____

14. My mother's ethnicity is
    a. Asian or Asian American, including Chinese, Japanese, and others
    b. Black or African American
    c. Hispanic or Latino, including Mexican American, Central American, and others
    d. White, White, Anglo, European American; not Hispanic
    e. American Indian/Native American
    f. Biracial or multiracial; Parents are from two or more different ethnic groups
    g. Other (write in): _____

Circle the response that best indicates how much you agree or disagree with each statement.

15. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs. Strongly disagree Disagree Agree Strongly agree
16. I am active in organizations or social groups that include mostly members of my own ethnic group. Strongly disagree Disagree Agree Strongly agree
17. I have a clear sense of my ethnic background and what it means for me. Strongly disagree Disagree Agree Strongly agree
18. I think a lot about how my life will be affected by my ethnic group membership. Strongly disagree Disagree Agree Strongly agree
19. I am happy that I am a member of the group I belong to. Strongly disagree Disagree Agree Strongly agree
20. I have a strong sense of belonging to my own ethnic group. Strongly disagree Disagree Agree Strongly agree
21. I understand pretty well what my ethnic group membership means to me. Strongly disagree Disagree Agree Strongly agree

Circle the response that best indicates how much you agree or disagree with each statement.

22. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.	Strongly disagree Disagree Agree Strongly agree
23. I have a lot of pride in my ethnic group.	Strongly disagree Disagree Agree Strongly agree
24. I participate in cultural practices of my own group, such as special food, music, or customs. .	Strongly disagree Disagree Agree Strongly agree
25. I feel a strong attachment towards my own ethnic group.	Strongly disagree Disagree Agree Strongly agree
26. I feel good about my cultural or ethnic background.	Strongly disagree Disagree Agree Strongly agree
27. I enjoy being around people from ethnic groups other than my own.	Strongly disagree Disagree Agree Strongly agree
28. I often spend time with people from ethnic groups other than my own.	Strongly disagree Disagree Agree Strongly agree
29. I do not try to become friends with people from other ethnic groups.	Strongly disagree Disagree Agree Strongly agree
30. I am involved in activities with people from other ethnic groups.	Strongly disagree Disagree Agree Strongly agree
31. I like meeting and getting to know people from ethnic groups other than my own.	Strongly disagree Disagree Agree Strongly agree
32. I sometimes feel it would be better if different ethnic groups did not try to mix together.	Strongly disagree Disagree Agree Strongly agree

Part III: Institutional Integration Scale

The statements that follow pertain to your participation in the International Baccalaureate (IB), Dual Enrollment (DE), and/or Advanced Placement (AP) program.

Circle the response that best indicates how much you agree or disagree with each statement.

33. While in IB, AP, or DE programs I developed a close personal relationship with other IB, AP, or DE participants.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
34. The student friendships I have developed in the IB, DE, or AP programs have been personally satisfying.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
35. My interpersonal relationships with other IB, DE, or AP program participants have had a positive influence on my personal growth, attitudes, and values.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
36. My interpersonal relationships with other IB, DE, or AP program participants have had a positive influence on my intellectual growth and interest in ideas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
37. It has been difficult for me to meet and make friends with other students while I have been in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
38. Few of the students I have met in the IB, DE, or AP program are willing to listen to me and help me if I had a personal problem.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
39. Most students in the IB, DE, or AP program have values and attitudes different from my own.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
40. My nonclassroom interactions with IB, DE, or AP faculty have had a positive influence on my personal growth, values and attitudes.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Circle the response that best indicates how much you agree or disagree with each statement.

41. My nonclassroom interactions with IB, DE, or AP faculty have had a positive influence on my intellectual growth and interest in ideas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
42. My nonclassroom interactions with IB, DE, or AP faculty have had a positive influence on my career goals and aspirations.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
43. Since participating in IB, DE, or AP programs I have developed a close, personal relationship with at least one faculty member in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
44. I am satisfied with the opportunities to meet and interact informally with faculty members in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
45. Few of the IB, DE, or AP faculty members I have had contact with are generally interested in students.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
46. Few of the IB, DE, or AP faculty members I have had contact with are generally outstanding or superior teachers.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
47. Few of the IB, DE, or AP faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
48. Most of the IB, DE, or AP faculty members I have had contact with are interested in helping students grow in more than just academic areas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
49. Most of the IB, DE, or AP faculty members I have had contact with are genuinely interested in teaching.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
50. I am satisfied with the extent of my intellectual development since enrolling in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Circle the response that best indicates how much you agree or disagree with each statement.

51. My academic experience in the IB, DE, or AP program has had a positive influence on my intellectual growth and interest in ideas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
52. I am satisfied with my academic experiences in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
53. Few of my courses in the IB, DE, or AP program have been intellectually stimulating.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
54. My interest in ideas and intellectual matters has increased since participating in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
55. I am more likely to attend a cultural event (for example a concert, lecture, or art show) now than I was before enrolling in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
56. I have performed academically as well as I anticipated I would in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
57. It is important for me to complete the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
58. I am confident I made the right decision in choosing this IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
59. It is likely that I will register for IB, DE, or AP next school year.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
60. It is not important to me to complete the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
61. Getting good grades in the IB, DE, or AP program is not important to me.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Thank you for your participation.

Appendix B

May 2010

Dear Parent/Guardian:

Your son/daughter, along with all other high school students enrolled in advanced programs in Bay Town Public Schools, has been invited to participate in a research study investigating social and academic adjustment and ethnic identity development among high school students enrolled in Advanced Placement, Dual Enrollment, and International Baccalaureate programs. As part of the study, students will take a 20-minute survey during the school day. Your student's responses will be anonymous; in fact, we will not ask her/him to put a name on the survey. The study and survey were reviewed by the Institutional Review Board at Old Dominion University and found to be exempt – which means that the questions on the survey are not inflammatory nor will they cause harm to your student. Participation is voluntary and will not affect your son's/daughter's grades. If you decide that your student does not want to take the survey, he or she should just leave it blank on the day it is administered.

If you have any questions about the research study or wish to review the questionnaire, please contact Dr. Shana Pribesh at 683-6683 or Tiffany M. Hall at 233-7989. If you have any questions about your student's rights as a study participant or this letter, please call Dr. George Maihafer, the current IRB chair, at 683-4520.

Sincerely,

Shana Pribesh, Ph.D.
Assistant Professor of Educational Research
Old Dominion University

Tiffany Hall, Ed.S.
Doctoral Candidate, Curriculum and Instruction
Old Dominion University

Appendix C

May 2010

Dear Student:

You, along with all other high school students enrolled in advanced programs in Bay Town Public Schools, are invited to participate in a research study investigating social and academic adjustment and ethnic identity development among students enrolled in Advanced Placement, Dual Enrollment, and International Baccalaureate programs. As part of the study, you will take a 20-minute survey. Your responses will be anonymous; in fact, we will not ask you to put a name on the survey. The results will be used by Tiffany Hall, a student at Old Dominion University, to write her doctoral dissertation. The study and survey were reviewed by the Institutional Review Board at Old Dominion University and found to be exempt – which means that the questions on the survey are not inflammatory. Participation is voluntary and will not affect your grades. If you decide that you do not want to take the survey, just leave it blank. If you choose to complete the survey, please seal it in the attached envelope and return it to your teacher. All survey materials must be returned to your teacher by Friday, May 14, 2010.

If you have any questions about the research study, please contact Dr. Shana Pribesh at 683-6683 or Tiffany M. Hall at 233-7989. If you have any questions about your student's rights as a study participant, please call Dr. George Maihafer, the current IRB chair, at 683-4520.

We appreciate your time and comments and thank you sincerely for helping us learn more about students' experiences in advanced high school programs.

Sincerely,

Shana Pribesh, Ph.D.
Assistant Professor of Educational Research
Old Dominion University

Tiffany Hall, Ed.S.
Doctoral Candidate, Curriculum and Instruction
Old Dominion University

Appendix D

MEMORANDUM

TO: Guidance Chairperson, High School Name

FROM: Tiffany M. Hall, Researcher

SUBJECT: Advanced Academic Programs Research Study

Thank you so much for assisting with the Advanced Academic Programs Research Study. This box contains copies of parent, student, and teacher letters, and student questionnaires that will be used in the study. A copy of each is attached to this letter for your convenience. Each teacher letter is accompanied by a class set of parent and student letters, student questionnaires, and envelopes. Please adhere to the following timeline:

May 4, 2010	Distribute teacher study packets, which include a teacher letter and class sets of parent and student letters, student questionnaires, and envelopes
May 14, 2010	All completed questionnaires and unused research materials should be returned to the guidance office
May 17, 2010	Tiffany Hall will pick up all research materials at an agreed upon time

Please contact Shana Pribesh, Ph. D, at 683-6684 or spribesh@odu.edu, or Tiffany M. Hall, Ed. S, at 233-7989 or tmhall@odu.edu if additional information is needed. Thank you.

Appendix E

MEMORANDUM

TO: Advanced Placement/International Baccalaureate/Dual Enrollment Teacher or Coordinator, High School Name

FROM: Tiffany M. Hall, Researcher

SUBJECT: Advanced Academic Programs Research Study

Thank you so much for assisting with the Advanced Academic Programs Research Study. This packet contains copies of parent and student letters and student questionnaires and envelopes that will be used in the study. A copy of each is attached to this letter for your convenience. Please give each student a student envelope. A student letter, parent letter, and student questionnaire are included in each student envelope. Students will return completed questionnaires in a sealed student envelope. Students are not required to participate in this study and do not have to complete the student questionnaire. Any student who does not wish to participate may return all student materials to you.

Please adhere to the following timeline:

May 4-12, 2010	Distribute student envelopes to your students
May 14, 2010	All completed questionnaires and unused research materials should be returned to the guidance office

Please contact Shana Pribesh, Ph. D, at 683-6684 or spribesh@odu.edu, or Tiffany M. Hall, Ed. S, at 233-7989 or tmhall@odu.edu if additional information is needed. Thank you.

Appendix F

Research Questions and Associated Variables and Analyses

Research Question	Independent Variable	Dependent Variable	Analysis
1.Do levels of ethnic identity development differ between African American and White students in AP, IB, and DE programs?	Ethnicity-students self-reported ethnicity as either African American or White on the demographic portion of the student questionnaire	Ethnic identity achievement-students self-reported the extent to which they pursue information about and participate in the traditions of their own culture (MEIM) Affirmation, belonging, and commitment-students self-reported the extent to which they are attached to their own ethnic group (MEIM) Ethnic identity total score-an average score based on students' self reported ethnic identity achievement score and affirmation, belonging, and commitment score(MEIM) Other-group orientation-students self-reported their interests in and willingness to interact with those outside of their own ethnic group (MEIM)	An independent t-test comparing mean scores on each MEIM subscale and ethnic identity total score derived by averaging the ethnic identity achievement score and affirmation, belonging and commitment score
2.Do levels of academic and social adjustment differ between African American and White students in AP, IB, and DE programs?	Ethnicity-students self-reported ethnicity as either African American or White on the demographic portion of the student questionnaire	Academic adjustment-students self-reported the extent to which they believe they are able to meet the academic demands of the AP/IB/DE program (IIS) Social adjustment-students self-reported the extent to which they believe they are able to integrate successfully with program faculty and students (IIS)	An independent t-test was conducted on each of the IIS subscales to determine if there was a statistically significant difference in the levels of social and academic adjustment between African Americans and Whites

Research Question	Independent Variable	Dependent Variable	Analysis
3.Does African American students' ethnic identity attitude categorization based on Cross' Nigrescence model moderate academic and social adjustment within these programs?	Ethnic identity attitude-African American students were assigned to one of four distinct categories based on attitudes associated with ethnicity. Categorization is based on the average of an individual's self-reported ethnic identity achievement and affirmation, belonging, and commitment score and other-group orientation score, all of which are MEIM scales	Academic adjustment-students self-reported the extent to which they believe they are able to meet the academic demands of the AP/IB/DE program (IIS) Social adjustment-students self-reported the extent to which they believe they are able to integrate successfully with program faculty and students (IIS)	An ANOVA was performed to test for mean score differences in academic and social adjustment (IIS) among the four categories (MEIM) of African American participants Tukey-Kramer was used to assess which African American student categories (MEIM) had statistically significant mean differences for social and academic adjustment (IIS)
4.Does ethnic identity influence academic and social adjustment among students within these programs?	Ethnic identity total score-an average score based on students' self reported ethnic identity achievement score and affirmation, belonging, and commitment score (MEIM) Other-group orientation-students self-reported their interests in and willingness to interact with those outside of their own ethnic group (MEIM)	Academic adjustment-students self-reported the extent to which they believe they are able to meet the academic demands of the AP/IB/DE program (IIS) Social adjustment-students self-reported the extent to which they believe they are able to integrate successfully with program faculty and students (IIS)	Pearson product-moment correlation analyses were performed to estimate the strength and direction of the linear relationship between ethnic identity (MEIM) and social and academic adjustment (IIS)

Appendix G

Allen Public Schools Student Questionnaire

Part I: Demographic Data

Directions: Please read each of the following statements carefully and respond accurately. Circle your response to each statement. Thank you.

1. Age
   h. 14 years old
   i. 15 years old
   j. 16 years old
   k. 17 years old
   l. 18 years old
   m. 19 years old
   n. Other _____

2. Gender
   c. Male
   d. Female

3. Academic standing
   d. Sophomore
   e. Junior
   f. Senior

4. I was enrolled in the following advanced academic program(s) while in the following grades

d.	International Baccalaureate (IB)	10^{th}	11^{th}	12^{th}	Never enrolled
e.	Advanced Placement (AP)	10^{th}	11^{th}	12^{th}	Never enrolled
f.	Dual Enrollment/Early College (DE)	10^{th}	11^{th}	12^{th}	Never enrolled

5. I live with
   e. both of my parents
   f. my mother only
   g. my father only
   h. other _____

6. What is your mother's highest level of education?
   h. Attended high school, but did not finish and did not earn GED
   i. High school graduate or earned GED
   j. Technical/career school
   k. 2-year college
   l. 4-year college
   m. Graduate degree
   n. I do not know

7. What is your father's highest level of education?
   h. Attended high school, but did not finish and did not earn GED
   i. High school graduate or earned GED
   j. Technical/career school
   k. 2-year college
   l. 4-year college
   m. Graduate degree
   n. I do not know

8. Currently my grade point average (GPA) is
   g. 3.50 or higher
   h. 3.00 to 3.49
   i. 2.50 to 2.99
   j. 2.00 to 2.49
   k. 1.99 or lower
   l. I am not sure.

9. Have you participated in gifted education programs in elementary, middle, or high school?
   d. Yes
   e. No
   f. Not sure

10. After graduating from high school, I will
   g. attend a 2-year college.
   h. attend a 4-year college.
   i. attend a technical/career school
   j. join the military.
   k. start working.
   l. Other _____

11. What is your anticipated career field? _____

Part II: Multigroup Ethnic Identity Measure

In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Chinese, Filipino, American Indian, Mexican American, White or White, Italian American, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please circle your response to the following statements.

12. My ethnicity is
   h. Asian or Asian American, including Chinese, Japanese, and others
   i. Black or African American
   j. Hispanic or Latino, including Mexican American, Central American, and others
   k. White, White, Anglo, European American; not Hispanic
   l. American Indian/Native American
   m. Biracial or multiracial; Parents are from two or more different ethnic groups
   n. Other (write in): _____

13. My father's ethnicity is
    a. Asian or Asian American, including Chinese, Japanese, and others
    b. Black or African American
    c. Hispanic or Latino, including Mexican American, Central American, and others
    d. White, White, Anglo, European American; not Hispanic
    e. American Indian/Native American
    f. Biracial or multiracial; Parents are from two or more different ethnic groups
    g. Other (write in): _____

14. My mother's ethnicity is
    h. Asian or Asian American, including Chinese, Japanese, and others
    i. Black or African American
    j. Hispanic or Latino, including Mexican American, Central American, and others
    k. White, White, Anglo, European American; not Hispanic
    l. American Indian/Native American
    m. Biracial or multiracial; Parents are from two or more different ethnic groups
    n. Other (write in): _____

Circle the response that best indicates how much you agree or disagree with each statement.

15. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs. Strongly disagree Disagree Agree Strongly agree
16. I am active in organizations or social groups that include mostly members of my own ethnic group. Strongly disagree Disagree Agree Strongly agree
17. I have a clear sense of my ethnic background and what it means for me. Strongly disagree Disagree Agree Strongly agree
18. I think a lot about how my life will be affected by my ethnic group membership. Strongly disagree Disagree Agree Strongly agree
19. I am happy that I am a member of the group I belong to. Strongly disagree Disagree Agree Strongly agree
20. I have a strong sense of belonging to my own ethnic group. Strongly disagree Disagree Agree Strongly agree
21. I understand pretty well what my ethnic group membership means to me. Strongly disagree Disagree Agree Strongly agree

Circle the response that best indicates how much you agree or disagree with each statement.

22. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.	Strongly disagree Disagree Agree Strongly agree
23. I have a lot of pride in my ethnic group.	Strongly disagree Disagree Agree Strongly agree
24. I participate in cultural practices of my own group, such as special food, music, or customs. .	Strongly disagree Disagree Agree Strongly agree
25. I feel a strong attachment towards my own ethnic group.	Strongly disagree Disagree Agree Strongly agree
26. I feel good about my cultural or ethnic background.	Strongly disagree Disagree Agree Strongly agree
27. I enjoy being around people from ethnic groups other than my own.	Strongly disagree Disagree Agree Strongly agree
28. I often spend time with people from ethnic groups other than my own.	Strongly disagree Disagree Agree Strongly agree
29. I try to become friends with people from other ethnic groups.	Strongly disagree Disagree Agree Strongly agree
30. I am involved in activities with people from other ethnic groups.	Strongly disagree Disagree Agree Strongly agree
31. I like meeting and getting to know people from ethnic groups other than my own.	Strongly disagree Disagree Agree Strongly agree
32. I sometimes feel it would be better if different ethnic groups did not try to mix together.	Strongly disagree Disagree Agree Strongly agree

Part III: Institutional Integration Scale

The statements that follow pertain to your participation in the International Baccalaureate (IB), Dual Enrollment (DE), and/or Advanced Placement (AP) program.

Circle the response that best indicates how much you agree or disagree with each statement.

33. While in IB, AP, or DE programs I developed a close personal relationship with other IB, AP, or DE participants.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
34. The student friendships I have developed in the IB, DE, or AP programs have been personally satisfying.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
35. My interpersonal relationships with other IB, DE, or AP program participants have had a positive influence on my personal growth, attitudes, and values.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
36. My interpersonal relationships with other IB, DE, or AP program participants have had a positive influence on my intellectual growth and interest in ideas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
37. It has been difficult for me to meet and make friends with other students while I have been in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
38. The students I have met in the IB, DE, or AP program are willing to listen to me and help me if I had a personal problem.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
39. Students in the IB, DE, or AP program have values and attitudes different from my own.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
40. My nonclassroom interactions with IB, DE, or AP faculty have had a positive influence on my personal growth, values and attitudes.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Circle the response that best indicates how much you agree or disagree with each statement.

41. My interactions with IB, DE, or AP faculty have had a positive influence on my intellectual growth and interest in ideas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
42. My interactions with IB, DE, or AP faculty have had a positive influence on my career goals and aspirations.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
43. Since participating in IB, DE, or AP programs I have developed a close, personal relationship with at least one faculty member in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
44. I am satisfied with the opportunities to meet and interact informally with faculty members in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
45. The IB, DE, or AP faculty members I have had contact with are generally interested in students.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
46. The IB, DE, or AP faculty members I have had contact with are generally outstanding or superior teachers.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
47. The IB, DE, or AP faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
48. The IB, DE, or AP faculty members I have had contact with are interested in helping students grow in more than just academic areas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
49. The IB, DE, or AP faculty members I have had contact with are genuinely interested in teaching.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
50. I am satisfied with the extent of my intellectual development since enrolling in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Circle the response that best indicates how much you agree or disagree with each statement.

51. My academic experience in the IB, DE, or AP program has had a positive influence on my intellectual growth and interest in ideas.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
52. I am satisfied with my academic experiences in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
53. My courses in the IB, DE, or AP program have been intellectually stimulating.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
54. My interest in ideas and intellectual matters has increased since participating in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
55. I am more likely to attend a cultural event (for example a concert, lecture, or art show) now than I was before enrolling in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
56. I have performed academically as well as I anticipated I would in the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
57. It is important for me to complete the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
58. I am confident I made the right decision in choosing this IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
59. It is likely that I will register for IB, DE, or AP next school year.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
60. It is important to me to complete the IB, DE, or AP program.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Thank you for your participation.

Appendix H

June 2010

Dear Parent/Guardian:

Your son/daughter, along with all other high school students enrolled in advanced programs in Allen Public Schools, has been invited to participate in a research study investigating social and academic adjustment and ethnic identity development among high school students enrolled in Advanced Placement, Dual Enrollment, and International Baccalaureate programs. As part of the study, students will take a 20-minute survey during the school day. Your student's responses will be anonymous; in fact, we will not ask her/him to put a name on the survey. The study and survey were reviewed by the Institutional Review Board at Old Dominion University and found to be exempt – which means that the questions on the survey are not inflammatory nor will they cause harm to your student. Participation is voluntary and will not affect your son's/daughter's grades. If you decide that your student does not want to take the survey, he or she should just leave it blank on the day it is administered.

If you have any questions about the research study or wish to review the questionnaire, please contact Dr. Shana Pribesh at 683-6683 or Tiffany M. Hall at 233-7989. If you have any questions about your student's rights as a study participant or this letter, please call Dr. George Maihafer, the current IRB chair, at 683-4520.

Sincerely,

Shana Pribesh, Ph.D.
Assistant Professor of Educational Research
Old Dominion University

Tiffany Hall, Ed.S.
Doctoral Candidate, Curriculum and Instruction
Old Dominion University

Appendix I

June 2010

Dear Student:

You, along with all other high school students enrolled in advanced programs in Allen Public Schools, are invited to participate in a research study investigating social and academic adjustment and ethnic identity development among students enrolled in Advanced Placement, Dual Enrollment, and International Baccalaureate programs. As part of the study, you will take a 20-minute survey. Your responses will be anonymous; in fact, we will not ask you to put a name on the survey. The results will be used by Tiffany Hall, a student at Old Dominion University, to write her doctoral dissertation. The study and survey were reviewed by the Institutional Review Board at Old Dominion University and found to be exempt – which means that the questions on the survey are not inflammatory. Participation is voluntary and will not affect your grades. If you decide that you do not want to take the survey, just leave it blank.

If you have any questions about the research study, please contact Dr. Shana Pribesh at 683-6683 or Tiffany M. Hall at 233-7989. If you have any questions about your student's rights as a study participant, please call Dr. George Maihafer, the current IRB chair, at 683-4520.

We appreciate your time and comments and thank you sincerely for helping us learn more about students' experiences in advanced high school programs.

Sincerely;

Shana Pribesh, Ph.D.
Assistant Professor of Educational Research
Old Dominion University

Tiffany Hall, Ed.S.
Doctoral Candidate, Curriculum and Instruction
Old Dominion University

Appendix J

MEMORANDUM

June 2010

TO: Advanced Placement, International Baccalaureate, Dual Enrollment Program Coordinator, High School Name, Allen Public Schools

FROM: Tiffany M. Hall, Researcher

SUBJECT: Advanced Academic Programs Research Study

Thank you so much for assisting with the Advanced Academic Programs Research Study. This box contains copies of parent, student, and teacher letters, and student questionnaires that will be used in the study. A copy of each is attached to this letter for your convenience. Each teacher letter is accompanied by a class set of parent and student letters, student questionnaires, and envelopes.

Please adhere to the following timeline:

June 8, 2010	Distribute teacher study packets, which include a teacher letter and class sets of parent and student letters, student questionnaires, and envelopes
June 18, 2010	All completed questionnaires and unused research materials should be returned to the guidance office
June 21, 2010	Tiffany Hall will pick up all research materials at an agreed upon time

Please contact Shana Pribesh, Ph. D, at 683-6684 or spribesh@odu.edu, or Tiffany M. Hall, Ed. S, at 233-7989 or tmhall@odu.edu if additional information is needed. Thank you.

Appendix K

MEMORANDUM

TO: Advanced Placement/International Baccalaureate/Dual Enrollment Teacher or Coordinator, High School Name, Allen Public Schools

FROM: Tiffany M. Hall, Researcher

SUBJECT: Advanced Academic Programs Research Study

Thank you so much for assisting with the Advanced Academic Programs Research Study. This packet contains copies of parent and student letters and student questionnaires that will be used in the study. A copy of each is attached to this letter for your convenience. Each student should receive a parent letter, student letter, and student questionnaire. Students are not required to participate in this study and do not have to complete the student questionnaire. Any student who does not wish to participate may return all student materials to you.

Please adhere to the following timeline:

June 7-18, 2010	Distribute parent letters, student letters, and student questionnaires to your students
June 18, 2010	All completed questionnaires and unused research materials should be collected and returned to Advanced Placement/International Baccalaureate/Dual Enrollment Coordinator

Please contact Shana Pribesh, Ph. D, at 683-6684 or spribesh@odu.edu, or Tiffany M. Hall, Ed. S, at 233-7989 or tmhall@odu.edu if additional information is needed. Thank you.

VITA

Tiffany Michelle Hall is a 1993 graduate of Salem High School in Virginia Beach, Virginia. After earning an advanced studies diploma, she enrolled at Virginia State University in Petersburg, Virginia, where she earned a Bachelor of Science degree in administrative systems management in 1997. Following graduation, she began teaching primary grades in Washington D.C. Public Schools and later, Howard County Public Schools in Maryland. In 2000, she earned a Master of Arts degree in early childhood education from Norfolk State University in Norfolk, Virginia. While enrolled at Norfolk State, she was the director of an early childhood learning center in Virginia Beach and was later a primary grades teacher in Norfolk Public Schools. She went on to serve as a gifted education resource teacher in Norfolk. She also worked as a gifted education resource teacher in Virginia Beach City Public Schools during the 2003-04 school year. She earned an endorsement in gifted education at the University of Virginia in 2004. That same year she returned to Norfolk to serve as the district's gifted education identification specialist. She overhauled the district's gifted identification process, which resulted in the division's selection by the Virginia Department of Education to serve as one of two source divisions for its Javits grant funded Project PROMISE initiative, which targeted statewide underrepresentation of ethnically diverse and socioeconomically disadvantaged students in gifted education programs. During the project's four years, she served as a member of its administrative team and was primarily responsible for curriculum development and teacher professional development. In 2007, she entered the doctoral program in curriculum and instruction at Old Dominion University in Norfolk, Virginia, where she is currently a doctoral candidate.