

Black Gold: Understanding the Relationships Between Racial Identity, Self-Efficacy,
Institutional Integration and Academic Achievement of Black Males in
Research Universities

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Dedication

To my dad who taught me how to dream, and to my sister who showed me what dreams can achieve.

Kenneth W. Reid
1927-1994

Monique Reid Berryhill
1956-2005

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The Biblical writer to the Hebrews wrote, “Therefore, since we are surrounded by such a great cloud of witnesses...let us run with perseverance the race marked out for us” (Hebrews 12:1).

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Table of Contents

Abstract.....	vii
Chapter 1: Introduction	1
Chapter 2: Review of the Literature	7
Institutional Integration	10
Perceived Institutional Support.....	11
Single Institution Studies of Perceived Support	11
Comparative Studies of Perceived Institution Support.....	13
Institutional Size	16
Academic Integration.....	17
Faculty Relationships.....	17
Social Integration.....	20
Peer Cohesion	20
Self-Efficacy.....	23
Sources of Self-Efficacy	24
Self-Efficacy in Higher Education.....	26
Self-Efficacy and Socioeconomic Status	29
Self-Efficacy and Race	30
Identity	32
Identity Influences Behavior.....	32
Identity Influences Performance	33
Achieved Identity, Crossing Borders, and Achievement.....	34
Racial Identity Attitudes	36
Pre-encounter Stage	37
Encounter Stage	38
Immersion-Emersion Stage.....	39
Internalization/Commitment Stage.....	40
Psychological and Emotional Links to Racial Identity Stages	41
Racial Identity and Social Integration	41
Racial Identity and Achievement.....	42
Summary: Toward an Integrated Model.....	45
Chapter 3: Method.....	49
Research Design	49
Sample of Sites	49
Sample of Students	50
Instrumentation	52
Procedures.....	54
Data Analysis.....	56
Measures	56
Statistical Analysis.....	57
Validity	61
Chapter 4: Results	63
Missing Data	63
Demographics	63
Checking the Assumptions	69

The Relationship between Self-Efficacy, Racial Identity, Institutional Integration and Achievement.....	72
Bivariate Analysis.....	72
Multiple Regression Analysis.....	77
Group Differences: High- and Low-Performers.....	87
Group Differences: STEM and Non-STEM Majors.....	90
Chapter 5: Discussion.....	92
Factors That Influence Achievement.....	92
Self-Efficacy.....	92
Self-Efficacy and Academic Integration.....	93
Academic Integration and Internalized Racial Identity.....	95
Academic Integration and Immersion-Emersion Identity.....	98
Social Integration and Internalized Racial Identity.....	100
STEM Majors.....	107
Cognitive Variables.....	108
Differences Among High-and Low-Performers.....	109
Academic Self-Efficacy and Academic Integration.....	110
Social Integration.....	110
Racial Identity.....	111
Chapter 6: Conclusion and Implications.....	114
A New Achievement Model.....	114
How Successful Interventions Apply the Achievement Model.....	116
The 21 st Century Program.....	116
Meyerhoff Scholars Program.....	118
Mentoring Programs.....	119
Implications.....	122
Chapter 7: Limitations.....	126
Appendix A: Email Introductions, Invitations, and Survey.....	128
Recruitment Email.....	128
Sample Pre-notice Introduction.....	129
Sample Introductory Email to Student Participants.....	130
Follow-up Email to Participants.....	131
Survey Questions.....	132
Appendix B: Taxonomy of Fitted Regression Models.....	137
References.....	139
Vitae.....	146

Abstract

African American college-going rates have been on the rise since the late 1960s. However, African American males are more likely than any other group to leave college. While studies have shown that collegiate *persistence* is predicated upon the quality of faculty and peer interactions, little is known about whether these interactions are also linked to *academic achievement* for Black males attending predominantly White institutions (PWIs), nor is it understood how specific motivational and psychosocial processes facilitate their campus integration. This dissertation extends Tinto's institutional integration theory by asserting that African American males who perform well (and not just persist) are also integrated into the campus milieu both academically (faculty interactions) and socially (peer cohesion). It further hypothesizes that racial identity attitudes and self-efficacy beliefs moderate their level of institutional integration, which in turn influences their academic achievement.

This was a statistical study of 190 African American males attending five research universities. The data were collected using a cross-sectional survey that comprised a battery of instruments and additional questions that solicited family and academic background information.

High achieving African American males report a heightened sense of self-efficacy, with this motivational belief having the strongest effect on achievement among all the factors considered. In addition, the most confident and successful students also reported being satisfied with their opportunities to interact with faculty. A two-way interaction exists between measures of institutional integration and certain racial identity attitudes. Black males with higher GPAs in college also report higher levels of faculty

and peer integration, though the relationship is moderated by certain racial identity attitudes.

These results suggest that predominantly White research universities can improve the outcomes of Black male undergraduates by facilitating opportunities for them to meet and interact with faculty and by developing their academic self-efficacy and racial identity beliefs. The dissertation subsequently introduces a multidimensional achievement model for African American males and applies this model to explain why certain university programs are successful. It ends by suggesting specific ways universities can foster the achievement of African American male undergraduates.

Chapter 1: Introduction

African American college-going rates have been on the rise since the late 1960s. From 1954 when the Supreme Court ruled that racial segregation in public education was illegal, to 1970, Black¹ student college enrollment more than doubled from 45,000 to 95,000 (Brubacher & Rudy, 2003). By 1970, 7 percent of all U.S. full-time undergraduates were African American, 4 percentage points below their 11 percent representation in the population (Brubacher & Rudy, 2003). In 2004, approximately 12.5² percent of all enrollees of 2- and 4-year degree granting institutions were African American (Knapp, Kelly-Reid, & Whitmore, 2006), slightly higher than their representation in the population (U.S. Census Bureau, 2001).

The enrollment progress, however, masks a troubling trend in American higher education. African American males make up just 35 percent of all Blacks enrolled in higher education, and only 4.4 percent of the total college enrollment (Knapp et. al., 2006). More disturbing is the gap between the bachelor's degrees awarded to African American males and females, a development that began more than 20 years ago (Journal of Blacks in Higher Education, 1999). Black women earned 67 percent of all bachelor's degrees conferred to African Americans in 2003-2004 and a substantial majority of all master's and non-professional doctoral degrees (Knapp et. al., 2006). Moreover, only 7.4

¹ I use "African American" and "Black" interchangeably throughout this paper. Both terms are inclusive of members of the African Diaspora who are both multi-generation African Americans and children of recent immigrants from Africa and the Caribbean.

² African Americans comprised 12.1 percent of all full-time 2- and 4-year enrollees in the fall of 2004.

percent of all males who received undergraduate degrees that year were Black males, while 10.9 percent of bachelor's degrees awarded to females were to Black women (Knapp et. al., 2006).

Contributing to the degree gap is the disproportionate percentage of Black males who fail to complete their postsecondary education. As Table 1 indicates, only 39.3 percent of African American men attending four-year private institutions graduated in six years — the lowest of all population segments — compared to 49.3 percent of Black women, and 62.9 percent of White males (Knapp et. al., 2006).

Table 1

Graduation rates at private Title IV institutions by race/ethnicity and gender: United States, cohort year 1998.

	Men	Women	Total
American Indian/AN	46.6	52.1	49.8
Asian/PI	71.6	74.6	73.3
Black	39.3	49.3	45.3
Hispanic	52.3	58.6	56
White	62.9	68.2	65.8
Non-Resident Alien	62.3	68.5	65.1
Race/Ethnicity	58.1	62.8	60.7
Unknown			
Total	60.3	65.6	63.3

Notably, the graduation gap between Black males and females is the largest gender gap of any subpopulation. Studies suggest the first-year experience is particularly challenging for Black males. In a large study of over 5,000 college students, African

American males had the lowest first-year persistence rates of most other subgroups except for married and older students (Leppel, 2002). In this study, the odds that a Black male would persist in college after the first year were about 10 percent lower than his White counterpart. However, Black women had a higher probability of persistence than White women by 3%. Offering an explanation for the disparate graduation outcomes between Black males and females, Carter and Wilson (1997) found that African American males were more likely to do poorly, to be forced to withdraw for academic reasons, and to have negative college experiences than women.

Researchers have proffered disparate theories to explain the low collegiate achievement and high attrition of Black males, including societal discrimination (Journal of Blacks in Higher Education, 1998; Wilson, 1996); inadequate pre-college preparation (Gainen, 1995; May, 2002); cultural factors (Coleman et al., 1966; Ogbu, 1990) and genetic deficits (Coleman et al., 1966; Herrnstein & Murray, 1994; Ogbu, 1990). However, these findings neglect the role of institutional factors within colleges and universities in patterns of underachievement.

Recent studies about persistence suggest that certain in-college factors may exert a greater influence on collegiate achievement than precollege variables (Astin, 1993; Bowen & Bok, 1998; Pascarella & Terenzini, 1991). In their study of students attending 28 selective colleges and universities, Bowen and Bok (1998) found that Black students tended to do more poorly than their White counterparts even after controlling for background factors. This result suggests that experiences in college may account for some of the difficulties Black males experience.

Indeed, Tinto (1993) and others (Brown, 1995) maintain students who are integrated and involved, who feel satisfied with the academic and social systems and

congruent with the mainstream of campus life are more likely to graduate. Likewise, the corollary is also true. The more socially isolated the student feels, the less likely that student will persist in college (Astin, 1993). In his comprehensive review of persistence, Tinto (1993) concluded that students of color may have difficulty gaining access to the campus cultural mainstream.

For Black males, a handful of studies have similarly discovered positive links between perceived levels of institutional support, faculty contact, and peer cohesion with college *persistence* (Davis, 1994; Johnson, 1993). However, little is known about whether the same factors influence the *achievement*³ of Black males in predominantly White institutions (PWIs) where the majority of Black males are enrolled (Knapp et. al., 2006).⁴ Further, we know far less about possible motivational and psychosocial processes that may foster or hinder their campus integration. For instance, the persistence literature is largely empirically silent about why Black males who share common academic and residential experiences achieve disparate grade point averages (GPAs) (Astin, 1993; Cokley, 2003; Davis, 1999; Moore, 2001; Pascarella, Smart, Ethington, & Nettles, 1987; Pascarella & Terenzini, 1991; Sedlacek, 2004; Tinto, 1993).

In this dissertation, I argue that the tendency to examine the effects of a singular domain of variables constrains the resultant explanations. For example, while there is evidence that institutional integration predicts Black male persistence, few studies have ventured to develop comprehensive models that combine multiple intellectual strands

³ I am using *achievement* primarily to mean cumulative GPA, and will use *persistence* (promotion or graduation) as a secondary measure of achievement when discussed in the literature.

⁴ As will be discussed later, African American males attending institutions where they are in the racial majority on average graduate with higher grade averages than their peers at PWIs (Allen, 1992).

(i.e., the structural, motivational, psychological, and psychosocial) to more robustly understand why African American males succeed (or do not). Such an isolated approach limits the explanatory power of the determinants considered. In this study, I argue that interactions between internal (psychological) and external (social and institutional) factors may trigger responses that idiosyncratically foster the integration of some African American males into the institutional milieu (Tinto, 1993). If indeed a “dynamic reciprocism” (Bandura, 1997) exists between the institution, social, and psychological dimensions that uniquely shape the experiences of Black males, then a combination of these factors should have a greater effect on the high achievers than those who perform less well. This dissertation seeks to prove this hypothesis.

This dissertation extends Tinto’s institutional integration theory beyond persistence by asserting that African American males who perform well (and not just persist) integrate into the institutional milieu along academic (faculty) and social (peer) dimensions (Donovan, 1984; McCauley, 1988; St. John, Hu, Simmons, Carter, & Weber, 2004). It further suggests that levels of institutional integration for Black males are moderated⁵ by their sense of academic self-efficacy and racial identity attitudes⁶. Specifically, I argue that their domain-specific human agency (self-efficacy beliefs) and racial self-concept (racial identity attitudes) respectively may influence the within-group

⁵ Throughout this dissertation, I use “moderate” to describe variables “that affect the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable” (Baron & Kenny, 1986, p. 1174) In this study, I show that certain racial identity attitudes moderate the effect of faculty and peer cohesion (independent variables) on achievement (dependent variable).

⁶ Academically successful African American males have been found to possess a healthy racial identity that profoundly influences their orientation toward academic pursuits (Hrabowski, Maton, & Greif, 1998; Johnson, 1993; Noguera, 2003; O'Connor, 1997; Saunders, 1998).

and between-group variation in academic and social adjustment to the institution. The overlap of these theoretical frames in turn provides a comprehensive explanation for the disparate experiences and outcomes of Black males in higher education.

To elucidate these factors, I conducted a quantitative survey study of 190 Black males attending five predominantly White research universities. The study specifically answers the following question: *Do African American male undergraduates in research PWIs who report heightened self-efficacy, racial identity attitudes, and levels of institutional integration score higher on measures of achievement than Black males who perform less well?*

By integrating three theoretical domains — institutional integration, academic self-efficacy, and racial identity theory, this study hopes to contribute to the literature by producing a multidimensional model for explaining within-group academic disparity of Black males.

Chapter 2: Review of the Literature

Three bodies of literature have emerged that explain many of the institutional, psychological, and social factors that contribute to African American male underachievement (Figure 1).

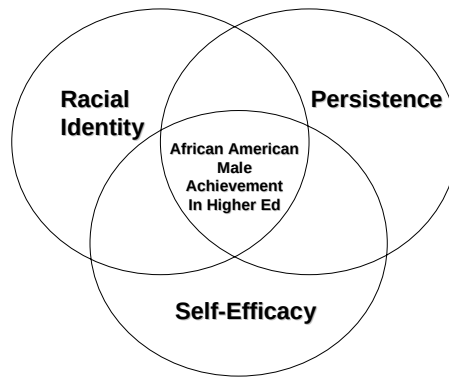


Figure 1: Bodies of Literature Consulted

As noted, the **persistence literature** essentially argues that academic success in college rests on the ability of the student to adjust to, and integrate into the institution both socially and academically (Jones, 2001; Moore, 2001; Tinto, 1993). The **self-efficacy literature** contends that students will be motivated to act and persevere through challenge and to employ effective learning strategies when they believe their actions will produce positive outcomes (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). The capacity and willingness to exercise certain achievement-related behaviors — actions linked to academic performance (Brown, 1988; Nicholls, 1984) — is essentially a reflection of one's self-efficacy beliefs (Bandura, 1997). Finally, there is growing

evidence to suggest African Americans attending predominantly White institutions (PWIs) may perceive and respond to university policies and practices in ways that are influenced by their attitudes toward their individual or reference group **identity** (Perry, Steele, & Hilliard, 2003). Academically successful African American males have been found to possess a healthy racial identity that profoundly influences their orientation toward academic pursuits (Hrabowski et al., 1998; Johnson, 1993; Noguera, 2003; O'Connor, 1997; Saunders, 1998) and their response to racism (Sedlacek, 2004).

This chapter begins by describing Tinto's (1993) institutional integration theory, that scholastically successful Black males are integrated into the institutional milieu along academic and social dimensions (Donovan, 1984; McCauley, 1988; St. John et al., 2004). However, because Tinto's framework does little to elucidate the specific motivational and psychosocial processes that may foster or hinder their campus integration, I suggest that the institutional integration of Black males is mediated by their sense of academic self-efficacy and racial identity attitudes. That is, African American male self-efficacy and racial identity attitudes may help explain the within-group variation in academic and social adjustment among the high and low achievers.

Thus, this chapter reviews the three bodies of literature to answer the following questions:

- *What are the known background and institutional factors associated with positive academic outcomes of African American males in higher education?*
- *How are perceived self-efficacy and related achievement cognitions linked to the performance and in-college experiences of successful Black males in college?*

- *How do racial identity attitudes influence the achievement of Black males in rigorous academic contexts?*

Few studies have explored African American males in higher education in sufficient detail. On the other hand, the research literature about Black students as a whole is broader in the number of factors it explicates and volume of scholarship it has generated. I have thus chosen to make the initial focus of my inquiry on studies that examine Black students in predominantly White institutions (PWIs). When studies disaggregate their findings by race and gender, I subsequently “drill down” to explore how the findings differ for Black males, if at all.

Institutional Integration

In-college experiences have been found to be more influential in explaining college student persistence than pre-college factors such as high school grades and test scores (Donovan, 1984). The persistence literature essentially argues that academic success in college rests on the ability of a student to adjust both socially and academically to the institution (Jones, 2001; Moore, 2001; Tinto, 1993). Students who feel that there is an institutional fit — that is, when they become more integrated, involved, and satisfied with the academic and social systems and congruent with the mainstream of campus life — are more likely to graduate (Brown, 1995; Light, 2001; Pascarella & Terenzini, 1991). Institutional fit is predicated on the success with which a student interacts with faculty (Academic Integration) and students (Social Integration) since both entities shape the cultural climate of any institution (Tinto, 1993).

Understandably, the corollary is also true. The more socially isolated or incongruent the student feels, the less likely the student will persist in college (Astin, 1993; Tinto, 1993). Tinto describes incongruence as a perceived mismatch between the individual and the intellectual and social life of the campus. In his comprehensive review of persistence, Tinto concluded that many students of color experience incongruence and thus feel at odds with the institution. This state of incongruence in turn impacts performance. Brown (1995) discovered this effect when he found that Black students who characterized their campus climate as “chilly” tended to have the lowest grade point averages. By contrast, African Americans in his study who perceived a “warm” campus climate typically were the high achievers. This finding was substantiated by Bowen and Bok (1998) who found that Black students who were most comfortable at their college tended to perform better academically. While such a result could call into question the

direction of causality (good students could be most comfortable *because* they perform well), there is some research that suggests that the perception of positive institutional support could in fact foster achievement.

Perceived Institutional Support

One measure of institutional fit used in the literature is the degree to which an institution is perceived to support students. Researchers have analyzed perceived institutional support both using single institution studies, and by comparing the perceived level of support across schools with different racial compositions.

Single Institution Studies of Perceived Support

The single institution method typically correlates the perceived level of institutional support with college success outcomes such as GPA or graduation (persistence). One such study examined the relationships between persistence and perceptions of social support for 143 Black and White students enrolled in their second semester at an Eastern public university (Mallinckrodt, 1988). The factor most strongly associated with persistence of Black students was their relationships in the campus community: "I am pretty satisfied with the quality of the close relationships I have with people here at school" (p. 62). However, the correlation between campus relations and persistence was not statistically significant. The relatively small sample size may have masked the direct effects on persistence. Still, the findings seem to suggest that high levels of support from members of the campus community may be more important for Black students than their White peers (family encouragement was found to be more important for White students) though the research design (i.e., sample size) may have obscured the strength of this argument.

A smaller study revealed an underlying social-psychological mechanism that may affect certain Black males' perception of institutional support. In a focus group study designed to capture the reasons for declines in enrollment and persistence of African American male students attending a research university, "*race*" was implicated ten times more often than any other named factor (Hall and Rowan, 2001). The researchers concluded that racism was a "significant impediment" to the college success of Black males, and that institutions of higher education must foster diversity "in various forms" to ensure their success. For these students, the campus could better serve its Black males by intentionally mitigating perceived racial hostility toward students of color⁷. These findings echo Steele's (2003) call for increasing "identity safety" on college campuses to reduce their "stereotype threat" that he empirically linked to underperformance of a variety of groups including high achieving African Americans. Lifting the threat improves the campus climate and liberates students to both test and reconcile their salient identities in a variety of settings. This discussion will be taken up further in the Identity section.

Sedlacek (2004), however, offers a counter argument. He found that the ability to successfully handle racism *when it occurred* was a consistently better predictor of persistence for "nontraditional students" than measures of perceived institutional support. While the relationship between racial identity attitudes and the response to racialized stimuli will be thoroughly examined later in this analysis, Sedlacek's argument is a viable explanation for why some Black males may respond differently to racism than others when it is encountered on predominantly White campuses. If both their sensitivity and

⁷ The last section of this chapter contains examples of successful initiatives.

response to racism influence African American male perceptions of institutional support, then conceivably the effect would surface when racial compositions of the institutions vary.

Comparative Studies of Perceived Institution Support

An alternative method of measuring institutional fit compares perceived levels of support for Black students attending PWIs with those attending Historically Black Colleges and Universities (HBCUs). Here, the proffered hypothesis is that Black students in the racial majority position attending an HBCU “benefit from a supportive social, cultural, and racial environment that enhances their successful adaptation to the academic demands of undergraduate life” (Pascarella & Terenzini, 1991, p. 382). In theory, therefore, the social climate derived from the college racial composition may foster the academic adjustment of Black males.

The literature generally bears this out, though the consensus is not universal. In a statistical analysis of 1,800 Black students attending both HBCUs and PWIs, campus racial composition (followed by interpersonal relationships) had the greatest influence on Black student outcomes (Allen, 1992).

These factors — characteristics of the individual and characteristics of the institution — combine to influence academic performance, extent of social involvement, and occupational goals. The way a student perceives and responds to events in the college setting will differentiate his or her college experience and shape his or her outcomes (p. 39).

While both comprehensive and informative, the nature of the research design failed to uncover the direction of causality. For instance, the researchers did not suppose whether high-performing students form better relationships with faculty *because* they perform well, or whether informal faculty relationships foster achievement. Moreover, it

would have been helpful to disaggregate the analysis to assess whether the effect of campus environment, study skills, etc. were different for Black men. With these limitations, I looked to other studies to validate Allen's conclusion that Black students "develop best in environments where they feel valued, protected, accepted, and socially connected" (p. 39).

In their survey study of 1,079 students (296 Black students enrolled in an HBCU, 723 White students attended a PWI, and 60 Black students attended a PWI), Brower and Ketterhageng (2004) found that Black students at HBCUs and White students attending PWIs appeared to succeed more easily than their counterparts in the non-dominant position. The study measured the value of seven life tasks ("getting good grades, making friends, being on one's own without family or friends, establishing future goals, establishing an identity, managing time, and maintaining one's physical health and well-being") (p. 99) that validly predicted academic and social adjustment, and thus persistence. The results of this investigation revealed that freshmen who were in the dominate position were more aware of the unwritten social and academic rules that could help them succeed. In other words, the academic and social mores were more implicit for students in the dominant racial group requiring little cognitive processing for decoding. On the other hand, Black freshmen at PWIs had to work harder mentally to succeed by having to learn the explicit rules of the institution. The participating institutions were selected because of their roughly equivalent levels of selectivity and enrollment standards (each institution recruited a national-caliber applicant pool).

As stated earlier, the positive effect of institutional racial composition on perceived support and academic outcomes is not universal. In an early study of persistence, Pascarella (1985) found no significant difference on bachelor-degree

attainment between Black students attending predominantly Black or White schools when “student age, academic and social self-confidence, secondary-school experiences, marital status, initial goal and institutional commitments, and family social and financial context” (p. 367) were controlled. Likewise, Kim (2002) too found no statistical relationship between racial composition and academic development of Black students. In his nine-year longitudinal study, when precollege (SAT, HSGPA) and institutional characteristics (institutional control, enrollment, faculty-student ratio, and single-sex) were taken into account, Kim concluded that attending a Black college was no more beneficial in developing a Black student’s overall academic, writing, and math ability than attending PWIs.

Neither study, however, accounted for possible non- or after-college experiences that could have influenced the participants’ self-reports of ability. (Both studies surveyed participants nine years after graduation.) Furthermore, in both studies (and many of those cited throughout this paper), the researchers used statistical controls to account for observed differences between students attending PWIs and HBCUs. For example, Kim controlled for the effects of single-sex institutions, college selectivity, and socioeconomic status on development. In practice, it is unlikely that any college could or would engineer two groups to match on all the background and institutional factors these studies took into account. To this point, Black students who attend HBCUs tend to come from families with lower incomes, they tend to be older, and on average have poorer high school records (Davis, 1994). While it is helpful to statistically account for group differences for explanatory purposes, it is more practical to explicate the unique conditions at HBCUs such as higher levels of perceived faculty encouragement and

support (Allen, 1992; Davis, 1994) that may foster favorable academic outcomes given the population they serve. These factors will be discussed later.

For African American males, the effect of racial composition on perceived institutional support ranged from having no significant effect on their educational attainment (Pascarella et al, 1989) to having a positive effect (Davis, 1994). In Davis' survey study of 742 Black males attending HBCUs and PWIs, Black males attending HBCUs earned higher grades and had more positive perceptions of institutional support than their counterparts attending PWIs. Confirming Tinto's theory of integration, they were also more integrated into the academic life of the college.

Davis however did not address institutional differences between PWIs and HBCUs. When Pascarella and his colleagues (1989) accounted for such institutional characteristics such as racial composition and institutional selectivity when comparing degree attainment (after nine years), the HBCU advantages were eliminated. Unfortunately, its use of degree attainment (after 9 years) precluded this study from offering insight into how the observed factors may have influenced the rate at which students graduated and their graduating GPA.

Institutional Size

Another perspective on perceived institutional support is a discovered negative correlation between institutional size and persistence, particularly for Black men (Pascarella, 1985). When Pascarella examined a secondary dataset comprising 5,577 students enrolled in 352 four-year colleges and universities, he found that initially attending a large public university had a stronger negative effect on Black male degree completion than on White males. Suggesting one reason for the negative association,

Pascarella suggests that peer cohesion may be hindered on larger campuses by stretching Pickering's notion of redundancy. As institutions become larger, "a situation ...occurs when a social system simply has too many people for the effective formation of primary peer groups with whom the person can identify and have personally satisfying interaction" (p. 367). On the other hand, because Black males on predominantly White campuses tend to maintain a small radius of friends (Brower & Ketterhageng, 2004), the theory of redundancy may not hold for this typically small subgroup. Rather, large institutions may inhibit quality interactions with faculty (Pascarella, Smart, & Stoecker, 1989). My analysis will thus turn to ways in which faculty (and student) relationships could foster conditions that influence African American student achievement, and particularly that of Black males.

Academic Integration

Faculty Relationships

The literature cites several academic outcomes positively associated with frequency of mostly informal faculty contact, including

- college persistence (Tinto, 1993)
- freshman-to-sophomore persistence (Pascarella & Terenzini, 1991)
- intellectual development: deeper learning, critical thinking skills development, and development of human/civic values (Tinto, 1993)
- educational aspirations (Baird, 1984; Pascarella, 1985).

While frequent faculty interactions have empirically proven to benefit all students, faculty expectations (as perceived by the student) have a specifically strong positive influence on the academic outcomes of African American students. Allen's

(1992) comparative study of Black students attending HBCUs and PWIs found that perceived level of faculty encouragement had a greater influence on achievement than the racial composition of the institution. Thus, the quality and type of faculty relationships, which are generally rated better by students attending HBCUs (Allen, 1992), may have been an underlying reason for Black males to report higher institutional support at the historically Black colleges involved in the Allen study. Providing more evidence for this line of inquiry, African American students who attended PWIs in the study reported lower college grades and less favorable relations with faculty despite entering with higher high school rankings.⁸ These two results suggest that Black males who perceived superior institutional support from their HBCU may be benefiting from greater faculty contact, though this hypothesis was not specifically tested in the study.

In a retrospective study of 4,597 students conducted nine years after graduation cited earlier, *knowing* a professor or administrator personally had significant and positive associations with key measures of development for all groups except White women (Pascarella et al., 1987). Specifically, personally knowing a faculty member or administrator had a greater effect on educational attainment, occupational status, and annual income for Black men than it did for Black women in the study. This finding adds to the consensus that such adult interactions matter for Black males on measures of achievement and college satisfaction (Davis, 1994; LaVant, Anderson, & Tiggs, 1997;

⁸ Unfortunately, the author did not control for the rigor of the high school curriculum and thus left unanswered whether some of the entering HS grade variation between HBCU and PWI students could be accounted for by mean differences in high school curricula.

Pascarella et al., 1987; Thile & Matt, 1995), though the Pascarella study did not exclusively examine faculty in their analysis.

When the quality of faculty-student interactions is low as reported by Black undergraduate students, Love (1993, as cited in Jones, 2001) posits that a root cause may be low expectations by faculty toward the students. “Low expectations by white faculty based on presumptions of lack of preparation, lack of ability, and prior disadvantage can block communication with students of color” (p. 14). Tinto (1993) agrees that the level of formal and informal intellectual engagement between student and faculty may be inhibited by the perceived level of academic preparedness of the student, regardless of the individual’s true level of preparation. This was the sentiment expressed by Black students attending a Midwestern university who struggled against a prevailing *myth of homogeneity* that all Black students were unprepared and unmotivated, and that they seldom graduate (Brown, 1995). This pervasive attitude impaired their learning and limited the satisfaction of their college experiences. In the end, a self-fulfilling prophecy played out on this campus where Black students underperformed. Steele (2003) proved in a controlled experiment that Black students who received feedback that explicitly communicated high standards and ability affirmation were more responsive to academic feedback and became more motivated to improve their work.

In summary, Black student persistence may hinge more on the perceived academic climate than on actual skills and abilities. Low faculty expectations could lead to students devoting minimal effort in their academic pursuits. According to Bandura (1997), a person will lower both his outcome expectations and effort if he perceives that there are “social constraints” that block his ability to succeed. His shaken domain- or task-specific confidence — that is, his lowered self-efficacy — could lead to a damning

disidentification with the domain (Steele, 2003) and possibly a psychosocial “role exit” (Flores-Gonzalez, 2002) from the domain entirely, dislodging “high achiever” from its salient place in his self-concept.

The notion of self-efficacy will be explored later. Here, it is important to note that informal contact with faculty may influence the quality of peer relationships as well. Students in the Allen (1992) study who reported positive relationships with faculty were also more socially involved on campus. I will now turn to discuss the link between Social Integration and achievement.

Social Integration

Peer Cohesion

Obtaining a degree is positively linked with attending a college that has a high degree of peer cohesion (Astin, 1993). Particularly, the extent to which a student is comfortable with the prevailing social values, norms, behaviors and attitudes on campus may predict the rate and degree of acclimation into the college environment, or play a part in the student’s decision to withdraw.

Among young adults, especially those in residential settings, interaction with one’s peers, especially one’s roommate, proves to be an important element in voluntary departure. (Moffatt, 1989, as cited in Tinto, 1993, p. 53).

Campus participation is one way that peer cohesion is fostered. Successful students are more likely to be involved in college-sponsored events (Pascarella & Terenzini, 1991), and this positive association between social and leadership involvement and achievement holds for Black students at PWIs as well (Leppel, 2002).

For Black males, campus involvement has a stronger positive effect on graduation rate than for White students and Black females, and contributes twice as much to degree completion than do measures of Academic Integration (Pascarella, 1985). However, joining more than three campus groups at one time has a diminishing effect on GPA for African American males (Leppel, 2002). The success factors differed for White students who showed that Academic Integration (informal interactions with faculty) mattered more for persistence rates than Social Integration factors. For Black women, the relative contributions of both Academic and Social Integration on graduation were about equal.

Insight into the specific type of social integration that matters for Black males was revealed by Pascarella (1985). Serving on a university or departmental committee had the strongest and solely significant influence on degree completion. For Black women, no single type of association was significant. (For White students, knowing a faculty or administrator personally had the strongest positive partial correlation with degree completion.) The authors concluded with this quote:

Such findings clearly underscore the relative importance of Social Integration in the persistence of Black students. They suggest that the social involvement aspects of the Black college student's collegiate experience are equal to, and perhaps even more important than, Academic Integration as an influence on ultimate degree completion (p. 369).

The tendency of Black males to join formal committees and organizations at PWIs should be highlighted. Tinto (1993) points out that the typical campus offers relatively few channels in which Black males feel comfortable getting involved on campus (whether real or perceived). Here, his preference to join university committees may be indicative of this challenge of integrating informally into campus life. Perhaps their attempts to circumvent the unnavigable informal channels to gain institutional

acceptance failed. Another plausible explanation for this tendency to join university committees may be reflective of their rare status on campus and thus valued opinions. Regardless of the reasons, the association between participation and persistence is very informative for institutions seeking ways to retain Black males.

In sum, Black male persistence is associated with measures of Social Integration such as student group and committee participating and use of campus facilities. It is still unclear, however, why some Black males are successful at becoming embedded in the campus life of their PWI and others do not. If Tinto's (1993) earlier argument is correct, then institutional factors outlined above may interact with personal attributes and attitudes to explain the difference. Such interactions could thus influence the performance of some more than others. I now turn to review the cognitive and psychosocial perspectives that offer plausible explanations.

Self-Efficacy

Several studies suggest that on average Black college students are more pessimistic about their performance prospects than Whites when setting their academic goals (Laar, 2000), which could explain the performance disparity. In their survey study of over 1,000 Black and White students attending PWIs and HBCUs, Brower and Ketterhageng (2004) discovered that Black students who attended PWIs adopted a “defensive pessimism” when setting their performance goals. In other words, these students set lower grade expectations that they subsequently hoped to *surpass*. By contrast, White students adopted a “strategic optimism” expectation about their academic performance, subsequently being satisfied only if they scored to within a half grade *lower* than expected. The researchers argue that defensive pessimism may be adopted by the Black students “to simultaneously protect themselves against failure and motivate themselves to succeed” (p. 111).

Though it may be a strategy for motivation or emotional self-preservation, setting low expectations may have a downward effect on performance. Bandura (1997) maintains that a person’s belief about their capabilities influences their future-oriented behaviors within that domain, and in turn produces outcomes that self-fulfill their beliefs. Bandura called this human agency *self-efficacy*, which is the belief about one’s capability to organize and execute courses of action that produce desired performances. His social cognitive theory on which self-efficacy beliefs are built asserts that a student will be motivated to persevere when he believes his actions will produce positive outcomes (Bandura et al., 2001). Unlike self-confidence, which assesses beliefs about current skills (Combs, 2001), self-efficacy reflects the belief in one’s capability for future performance-related behaviors. Thus, when discussing the effect of low faculty

expectations, a student will exert less effort if he no longer believes he can exercise control over his outcomes.

Self-efficacy beliefs have been positively linked to academic achievement, performance expectancies, self-perceptions of competence (Stipek, 1984) and possessing positive attitudes towards subject matter (Bandura, 1997). Students with heightened sense of self-efficacy also tend to take more challenging courses (Eccles, 1994); are better at solving conceptual problems; persist in searching for solutions; and demonstrate better time management (Bandura, 1997).

Given the overwhelming evidence that links self-efficacy beliefs with performance, that African American college students generally maintain lower expectations about their outcomes than their White counterparts is telling (Laar, 2000). As a case in point, Black males attending PWIs have lower degree aspirations than their counterparts attending HBCUs (Davis, 1994). If possessing lower self-efficacy beliefs explains at least a portion of the disparate outcomes of African American males in higher education, then a brief description of known sources of self-efficacy beliefs could inform strategies to increase achievement.

Sources of Self-Efficacy

Self-efficacy beliefs are acquired from four sources of information: performance accomplishments; vicarious experiences; verbal messages and social persuasions; and physiological states (Pajares, 2002). Students develop a sense of efficacy as they experience academic success (Schunk, 1983). Outcomes interpreted as successful raise self-efficacy, while perceived failures lower it. Thus, measures of accomplishments such as high school grades and SAT scores of talented students contribute to their sense of academic self-efficacy (Combs, 2001) and thus provide the resiliency, effort expenditure,

choice of activities, and emotional responses to overcome challenges brought upon by rigorous academic content.

The vicarious experiences of others with whom a student can relate are also crucial to fostering self-efficacy beliefs, especially when the individual is uncertain about their own abilities or has limited experience with the task or in the domain as is the case for freshmen. The success of a role model who possesses similar attributes is particularly helpful in raising self-efficacy beliefs (Pajares, 2002). This may be represented by the educational levels and occupations of parents, or the accomplishments of an upperclassman. On the other hand, watching a role model fail could have a deleterious effect on self-efficacy.

Family, professors, peers, and others who offer verbal judgments that affirm one's capabilities can build up an individual's perceived self-efficacy (Pajares, 2002), though it is easier to weaken self-efficacy through negative appraisals than to raise it with verbal praise (Morris, 2004). An African American student can be empowered by persuaders who cultivate beliefs in their abilities. Honors, awards and elected positions can provide this important source of self-efficacy. Likewise, negative appraisals can weaken these self-perceptions (Pajares, 2002).

Finally, anxiety, stress, fatigue, and moodiness while undertaking an academic task may cause a student to judge his capabilities as vulnerable. For instance, a student who experiences test anxiety and subsequently performs poorly will have lowered his sense of self-efficacy toward tests in that subject. Subsequent efforts become tentative, leading to a downward spiral that interweaves lack of confidence with lower performance outcomes (Bandura, 1997; Pajares, 2002).

Self-Efficacy in Higher Education

The literature relating self-efficacy of African American students in higher education to achievement is not robust. Much of the research correlates self-efficacy to self-concept, self-esteem (Laar, 2000), or ability to cope with situational stress (Phinney & Haas, 2003). Other studies examined the relationships between perceived self-efficacy and choices of majors or courses (Gainor & Lent, 1998). Only a handful of studies have attempted to correlate academic self-efficacy with achievement-related outcomes for students of color. One such study examined the relationship between self-efficacy and academic achievement among 197 majority and minority (mostly Mexican American) engineering students enrolled in a mid-sized West Coast university (Hackett, Betz, Casas, & Rocha-Singh, 1992). The first- and second-year students were assessed on their perceived ability to successfully complete their educational requirements for engineering and science occupations (academic milestone self-efficacy); their confidence in successfully completing their core requirements in the engineering program; and their interests, anticipated outcomes, and emotional states. Academic milestone self-efficacy had the strongest influence on cumulative GPA than all other factors including ethnicity and gender. The researchers concluded self-efficacy trumps prior performance and background factors in predicting success: “Our findings are certainly suggestive that academic self-efficacy, in particular, mediates the effects of prior academic achievement, stress, strain, coping, and gender and ethnicity on college-level academic achievement” (p. 13).

The Hackett study, however, comprised only engineering students and thus may not be generalizable across the universe of students. Moreover, African Americans accounted for a small percentage of the sample and were subsequently removed from the

final statistical analysis. The study did however reveal lower average self-efficacy beliefs among Mexican American students than Caucasians, a seemingly consistent finding for other racial minorities as the following study suggests.

Mayo and Christenfeld (1999) measured self-efficacy beliefs among racial minority (20 Hispanic, 6 African American, 6 Filipino, 1 Native American) and majority freshmen attending a major California university. They found that racial minority male participants expected to do more poorly as individuals on a cognitive task than the average undergraduate student. Interestingly, minority males also expected members of *their reference group* (all minority males) to do more poorly than all other undergraduates. This low expectancy evaluation of the subgroup as individuals *and* as a reference group was classified by Mayo and Christenfeld as *We can't, and I really can't*. In contrast, the majority males adopted a self-perception that the researchers labeled *I can and we can*. These informative findings seem to agree with the *defensive pessimism* goal-setting strategy that African American students adopted in the study discussed earlier (Brower & Ketterhageng, 2004). By contrast, White students in that study adopted a goal orientation that was characterized as *strategic optimism*.

Mayo and Christenfeld posit that minority students accepted the stereotyped view of their reference group as being unlikely to succeed. Here again, African Americans comprised a small percentage of the sample making it difficult to disaggregate the findings by gender within race. Thus, these studies offer little insight into the possible effects of self-efficacy on achievement specifically for African American males, though we can draw an inference by juxtaposing three suppositions that stand on reasonably sound empirical grounds.

First, studies consistently report lower self-efficacy among racial minority undergraduates, including Black males⁹. Second, academic self-efficacy is consistently associated with achievement-related behaviors and outcomes. Therefore, that Black males tend to have lower levels of perceived self-efficacy could explain the performance disparities of this subgroup in higher education. Finally, there is reason to believe self-efficacy beliefs mediate the positive association seen earlier between faculty interactions, Academic Integration, and achievement for Black males. Highly self-efficacious students are likely to become more academically integrated in the institution than a student with low self-expectancy. For example, entering graduate students reported having higher self-efficacy when they *expected* positive interactions with faculty (Santiago & Einarson, 1998). The evidence of a positive link between self-efficacy and Academic Integration is what this dissertation hopes to explicate for undergraduates and African American males.

Another study sought to determine if academic self-efficacy, as operationalized by the four sources of self-efficacy gleaned from college essays, were better at predicting first-year college grades than high school GPA and SAT scores. Indeed, Combs (2001) came to a similar conclusion that Hackett and her colleagues discovered. She found that

⁹ The relative level of self-efficacy between minority and non-minority students does not necessarily hold for minority graduate students, however. For instance, minority graduate students enrolled at a Midwest research university reported having significantly higher academic self-efficacy than their White counterparts, despite entering with lower GRE scores and self-ratings of undergraduate preparation (Santiago & Einarson, 1998). The authors explain this dissonance by suggesting that their admission to a selective graduate program adds sufficient validation to their expectation that they will complete their degree requirements. In other words, they may have entered with heightened self-efficacy beliefs derived from their admission (an external measure of accomplishment).

strength of academic self-efficacy was the strongest predictor of first-year college performance for 140 high-achieving African American students attending predominantly White research institutions, while the combination of HS GPA and combined SAT scores were not significant in predicting performance for this sample. “Thus, strength of self-efficacy (45% of the variance) may be more important to the prediction of the college performance of African American students than high school GPAs and SAT scores, which have been heavily relied upon by admissions committees for decades” (p. 97).

Self-Efficacy and Socioeconomic Status

Studies have shown that students of all races who come from families with higher parental education and income levels graduate at higher rates and earn better grades even after controlling for precollege performance (Bowen & Bok, 1998; Pascarella, 1985). The effect of socioeconomic status (SES) on graduation rates, however, is stronger for Blacks than on Whites (Bowen & Bok, 1998). After accounting for high school grades and SAT scores, the difference in graduation rates for Blacks in the high SES category was as much as 15 points higher than that of the low-SES Black students, whereas the difference was only 8 percentage points for White students. The researchers contend that students from lower income families may be less academically prepared for the rigor of college due to limited access to high-quality schools and other educational resources (Bowen & Bok, 1998).

An alternative explanation is also worth noting. Low-income students may experience greater financial stress, which in turn could impact academic performance. In one study of minority and low income New England college students, the retention rate of the sample was higher for students receiving larger financial aid awards (Georges,

1999). Moreover, the type of award seemed to matter as well. A \$1,000 shift in aid from loans to grants was associated with a 14 percent higher graduation probability.

For Black students, aid also matters. In a study of approximately 9,000 freshmen and sophomores enrolled full- and part-time in Indiana's public colleges, African American *freshmen* were more likely to persist to the sophomore year if they received aid (grants, loans, or other packages), though the study did not control for measures of income or wealth (St. John et al., 2004). Still, Black sophomores who received aid had higher persistence than non-aid Black students.

These studies suggest that both the amount and type of aid awarded to Black college students has an effect on persistence. Logically, therefore, since family income positively correlates with persistence, and Black students are disproportionately from families with lower incomes than their White counterparts, then variation in socioeconomic status (SES) could explain at least some of the disparity in collegiate outcomes. However, a more complex dynamic is suggested by Santiago and Einarson (1998). In their study of graduate students, they found that students who were most concerned about funding reported lower self-efficacy. It is possible, therefore, that financial stress could have an indirect effect on performance by lowering self-efficacy. Though this conjecture should be proven with a path analysis, its inference that increasing a student's *belief* in his capabilities *despite* his low financial status introduces an intriguing possibility for intervention.

Self-Efficacy and Race

Some studies have attempted to understand the moderating effects of race on academic self-efficacy with mixed results. An early investigation sought to identify the

relationships between racial identity, self-efficacy, and the academic progress of Black undergraduates in a randomly-selected sample of 196 African American male (115) and female (91) students majoring in computer science or engineering (Williams & Leonard, 1988). The participants attended a large, eastern, land grant university. Students who scored high on self-efficacy scores achieved greater academic progress than those who scored lower. However, though 81 percent of the sample reported a highly Internalized racial identity, suggesting a positive self-concept and an acceptance of other groups, racial identity attitudes did not influence academic progress in the modeling.

A more recent study found otherwise. In a small study of 120 African American male college students enrolled at Texas Southern University, those who possessed positive attitudes about his race, “and the White majority vis-à-vis the Black experience” (p. 1) tended to also have a heightened sense of academic self-efficacy (Okech & Harrington, 2002). The study, however, was conducted at a predominantly minority institution and did not measure achievement (GPA) as an outcome. Still, a positive relationship between Black racial identity and self-efficacy introduces a complex psychosocial dimension to understanding how self-efficacy can be linked to the achievement of Black males. These linkages — self-efficacy, racial identity, and performance — will be explored later in this analysis. Suffice to say that race raises a potential moderating role in effort motivation and, by derivation, the differential experiences of Black males in higher education. I thus turn to this psychosocial dimension.

Identity

There is general consensus among researchers and theorists studying identity development that by adolescence, persons have acquired an awareness of the attributes that distinguish groups (e.g., skin color, languages, and academic posture) (Phinney, 1993; Rotheram-Borus, Dopkins, Sabate, & Lightfoot, 1996). Adolescents construct opinions about their reference group and out-groups, and behave and set expectations accordingly. The strength of the peer or reference group to shape an individual's identity is related to the position of the reference group within the dominant culture (Ogbu & Simons, 1988).

According to Erikson, a person's identity is embedded in social, cultural, and historical contexts (Tatum, 1997). Minorities of color are typically not able to *choose* an identity, but rather are pressed to internalize one by societal signals due to experiences with, and perceptions about discrimination and prejudice (Phinney & Rosenthal, 1992). For dominated groups, the construction of individual identity is constrained by reference group norms and "group-prescribed expectations" born out of collective experiences (Hemmings, 1998, p. 336).

Identity Influences Behavior

For many Black males, discriminatory behavior and attitudes from larger society imposes an identity that makes his race and gender salient to him (Phinney & Rosenthal, 1992). This salience in turn prescribes acceptable behaviors. Vygotsky summarizes a process link between society, identity, and behavior by asserting that identity is derived from social interactions, which gives voice to inner narratives. These narratives in turn influence behaviors (Wertsch, 1989). Even in late stages of adolescent development such

as his college years, the African American male, like most college students, is confronted with the decision to accept or reject the prevailing norms of his reference group. Seeking to attach himself to a “role identity,” the pursuit becomes a driver for present-day action (Flores-Gonzalez, 2002, p. 16).

Flores-Gonzalez’ “role-identity” model offers a powerful interpretive framework for explaining the influence of identity on behavior. A role-identity is a “self-definition or an understanding of who one is as a result of occupying a particular role or social category” (p. 14). Based on her work with Latino students, Flores-Gonzalez found that students who successfully develop a “school-kid” role identity (Flores-Gonzalez, 2002) are more likely to persist in school and achieve academic success. These students respond favorably to the expected rules, values, behaviors, and norms of the school. Their selected role identity is affirmed by 1) social appropriateness of the role; 2) rewards; 3) social support given; 4) performance; and the 5) presence of identity affirming or threatening events. Applying this schema, when high achieving African Americans construct a positive academic identity — an “academic self” — that is consonant with their racial and gender identity (Brookins, 2000; Noguera, 2003), it is likely the school climate, adults and/or peers in their school context positively sanction their role identity.

Identity Influences Performance

Academic identity development is made more complicated for minorities, particularly visible minorities, who battle negative stereotypes about their intellectual capacity (Howard & Hammond, 1985). For African American males who identify with the academic domain, “each engagement in intellectual competition carries the weight of a test of one’s own genetic endowment and that of black people as a whole” (p. 330). Consequently, to avoid proving the rumors true, Black students might steer clear of

certain “arenas of competition,” or perform more poorly than if the racial evaluation were lifted.

Steele (1999) has uncovered a social-psychological effect he labels “stereotype threat” that results in suppressing intellectual functioning of the group under the threat. His theory, which has been empirically proven, offers a plausible explanation for the “overprediction” phenomenon that occurs when Black students perform more poorly in college than their test scores would predict (Bowen & Bok, 1998). Essentially, when a school-identified African American finds himself in a situation where a negative stereotype threatens to reduce him to, or be judged by a relevant stereotype, then this situational threat can undermine his performance in the domain. The students who decried the “myth of homogeneity” in the Brown (1995) study exemplified this response. With chronic underperformance, the student may pull back or disidentify with the domain, which Steele defines as “a reconceptualization of the self and of one’s values so as to remove the domain as a self-identity, as a basis of self-evaluation” (Steele, 1999, p. 94). The resultant identity reformulation—this disidentification—lowers his self-efficacy in the domain, leading to task avoidance behaviors such as lowered effort, reduced persistence, or welcomed diversions that ultimately have deleterious effects on performance. On the other hand, Black males who possess positive attitudes about his race tend to have a heightened sense of academic self-efficacy (Okech & Harrington, 2002). Universities can focus on fostering a positive racial identity progression, a topic which will be taken up in the next section.

Achieved Identity, Crossing Borders, and Achievement

African American males attending PWIs may experience a “disjunction” between familial cultural norms and that of the institution (Jones, 2001), a dissonance that in turn

could hinder performance. Assuming racial composition is a proxy for culture, one study found that the greater the cultural dissonance (i.e., the difference in racial makeup between a Black student's high school and college), the less well the student performed in college (Davis, 1994). Likewise, when there was a match in racial composition between the home community and the college, the respondent was more likely to do well academically. As schools become more segregated (Orfield, Frankenberg, & Lee, 2003), the potential racial and cultural disjunction is likely to get worse.

If a Black male is unprepared to transition smoothly into the cultural milieu of the college and university, a distracting focus on decoding the social or racial incongruence can shunt cognitive energy away from academic pursuits (Bowen & Bok, 1998). Thus, it is not surprising that Bowen and Bok found that some Black students "reported to have lost their academic focus by devoting too much emotional energy to concerns about what other people were thinking and feeling about them" (p. 83).

Successful students of color attending PWIs utilize strategies that enable them to adeptly perform "the balancing act" of "negotiating strategically between multiple social spaces" (Phelan et al., 1998, p. 146). These students subsequently learn to "code switch" in one of two ways. They may *situationally* alter their behaviors, speech, and other interaction patterns to conform to prevalent patterns of behavior within the minority or majority contexts, or they construct a blended identity that culls elements from each context that celebrates both the school and home environments.

African Americans who do well in predominantly White settings learn to traverse the cultural borders between their different worlds by utilizing either of the two strategies (Phelan et al., 1998). Using racial identity stage theory, I argue that the Black male's

individual and reference group identity *governs* his ability to function within, and transition across school and home boundaries.

Racial Identity Attitudes

A Black male attending a predominantly White institution (PWIs) responds to perceived university policies and practices in ways that could be dictated by his ethnic identity. His response in turn influences his decision to persist. Indeed, one of the factors to which the Black males attribute high dismissal rates among their reference group is allowing situations, such as being the only Black person in class, to “get to them” (Hall & Rowan, 2001). Here, the racial salience of the study participants had an effect on their experiences which resulted in high attrition rates, echoing Sedlacek’s (2004) discovery that the ability to successfully handle racism when it occurs is a predictor of persistence.

Black students who achieve a certain degree of collegiate success have better coping strategies (Neville, Heppner, & Wang, 1997) and report lower levels of psychological stress (Neville & Lilly, 2000). Okech and Harrington (2002) linked psychological stress triggered by racial stimuli to degrees of Black consciousness. “Black consciousness levels and subsequent perceptions of the cause of their individual conditions determine how African Americans view themselves and the outside world” (p. 2).

Helms (1990) amended Cross’ (1971, 1978) five-stage racial identity model that he termed “nigrescence” — the process of becoming Black (Table 2). In this formulation, each stage reflects distinct cognitive templates by which an African American views himself with respect to others and institutions (including schools). The attitudes along the continuum represents a maturation process toward achieving a positive racial group

orientation (Neville & Lilly, 2000), a progression from a least healthy White-defined or Eurocentric world view to a positive self-defined identity (Parham & Helms, 1985). The African American males' response to racial stimuli, his orientation toward large institutions such as his university, and his relations with others both within and outside his reference group could be shaped by the progressive levels of sophistication along the racial identity range (Neville & Lilly, 2000).

Table 2
Black racial identity states (Helms, 1990)

Stages	General Theme
Pre-encounter	Idealization of Whiteness/ Denigration of Blackness
Encounter (Events or Experience)	Consciousness of race
Immersion-Emersion	Idealization of Blackness/ Denigration of Whiteness
Internalization/Commitment	Racial transcendence

Pre-encounter Stage

Blacks in the Pre-encounter stage range from low-salience race-neutral individuals for which race plays an insignificant role in their everyday lives, to an anti-Black attitudinal pattern in which individuals have internalized racist stereotypes and have either actively abandoned Blacks as a reference group or behave in such a way as to hurt other Blacks (i.e., gang membership) (Cross, 1991). The Pre-encounter viewpoint is usually a person's first identity that results from years of socialization by family, friends, neighborhood, and school associations. Those in the Pre-encounter stage of racial identity development are described by Cross (1978) as persons who have attitudes toward their

race that are conditioned by a Eurocentric world view in which the White perspective and society are idealized. Black males in this stage may also think and behave in ways that denigrate a Black frame of reference. Thus, the Pre-encounter Black male considers Whiteness and White culture as superior to Blackness and Black culture and consequently may trigger his internalized racist attitudes each time he looks into the mirror. Though Pre-encounter attitudes transcend class, class status might affect how these attitudes are expressed (Cross, 1991; Helms, 1990).

Encounter Stage

The Encounter stage is one in which a person begins to question his self-concept because of a dramatic event or series of experiences (Cross, 1971, 1978). Cross (1991) notes the murder of Dr. Martin Luther King, Jr. “sent thousands of Pre-encounter Negroes on a search for a deeper understanding of the Black Power movement” (p. 199). For middle class Blacks that have avoided racial incidences, the encounter might occur in college or on the job, whereas for low-income males, more often than not, an encounter with the penal system is the catalyst. Cross also suggests the possibility that the Encounter stage may not be triggered by a single event, but a series of episodes that have a cumulative effect on challenging the individual’s world view. In either case, whether a single event or a series of episodes that trigger the investigation, a person in this stage becomes receptive to different interpretations of what it means to be Black.¹⁰ It catalyzes a testing period in which the African American cautiously seeks to validate new

¹⁰ Here, Cross does not make a distinction between Black American, African, Afro-Caribbean, or Afro-Latin. His concept of “Black” is entirely an African American construct.

perceptions (Cross, 1971). At the end of this stage, a person makes a decision to attach himself to a Black racial identity and is fueled by an emergence of Black pride.

Immersion-Emersion Stage

The third stage, Immersion/Emersion is what Cross (1978) describes as the most remarkable stage.

[The Immersion/Emersion stage] encompasses the most sensational aspects of Black identity development, the vortex of psychological metamorphosis, the period of transition in which the struggle to destroy all vestiges of the 'old' perspective occurs simultaneously with an equally intense concern to clarify the personal implications of the 'new' frame of reference (p. 17).

In the first part of this stage, the person *immerses* himself in the Black experience and withdraws from Whites as a means of developing his new identity. His actions are considered severe and abrupt while he attempts to separate himself from what he has known in recent memory while seeking to adopt a new though undefined persona. To compensate for this future uncertainty, the Black male in this stage erects simplistic and romanticized images of the new self, almost glorifying Blackness while also denigrating Whiteness. He is also drawn to symbols of the new idealized identity (clothing, hairstyles, music) while rejecting representations associated with Whites and his old views. The Black high school students observed by Fordham and Ogbu (1986) who embraced an oppositional stance against education may have been located in this stage. The level of anger at Whites for discrimination experienced by Blacks is elevated in this stage while he attempts to assuage his own guilt about his former views. His social relations become dichotomized, only choosing associates or joining organizations that are "down with the cause." His "blacker-than-thou" attitudes lead to labeling, name-calling, or generally passing judgment on a person's levels of Blackness, thus straining if not

severing relationships. During this stage, Black literature and art are consumed, often accompanied by a burst of creative energy to write and create rap music, poetry, essays, or plays. Interestingly, Cross (1978) notes that men tend to experience a more intense Immersion episode than women, a gender distinction he did not find in other stages.

In the second phase of this stage, the Black male begins to experience an *emersion* or a leveling-off period from the emotionality, “either-or,” blacker-than-thou mentality. The process may be triggered by a face-to-face encounter with a role model who exhibits a more advanced state of racial identity development. Age also plays a factor as the individual becomes more critical and less idealistic in his thinking. Here, he realizes that his view of Blackness was highly romanticized and lacking nuance. He may at this point pull away from groups that maintain a dichotomized view and seek new associations that advance a more complex and substantive understanding of Black issues. At this point, the Black male is ready to begin *internalizing* his new identity.

Internalization/Commitment Stage

In the final Internalization stage, a person resolves his conflicts with the old and new self and achieves a sense of inner security with his racial identity. His Blackness remains salient, but it is tempered by more “open, expansive, and sophisticated” (Cross, 1991, p. 211) conceptualization of Blackness. He may reconstitute his personality, style, and self-concept into a multi-stem identity that is bicultural or multicultural. Thus, he is willing to renegotiate his views and relations with members of other races, at once embracing elements of Blackness and Whiteness. More settled in his identity, he can concentrate on meaningful activities that seek to benefit the group (*Commitment*).

Psychological and Emotional Links to Racial Identity Stages

Differences in psychological functioning among Blacks attending PWIs correlate with stages of “Black consciousness” (Okech & Harrington, 2002). For instance, Neville and Lilly (2000) found Black students who exhibit high Immersion-Emersion (pro-Black/anti-White) attitudes also lacked social confidence and as a result tended to either avoid socially stressful situations or suppress their emotions. Here, their behavior supports Howard and Hammond’s (1985) assertion that Black students battling “rumors of inferiority” tend to avoid “arenas of competition.” Even more destructively, the Immersion/Emersion status was found in another study of 80 Black students to be related to immature “acting out” or “socially undesirable” defenses (Nghe & Mahalik, 2001).

Pre-encounter attitudes have been linked to greater feelings of inferiority, inadequacy and anxiety in Black males, while Immersion/Emersion attitudes in the same study were associated with emotional issues which impaired academic focus (Campbell, 1996). Immersion-Emersion attitudes are also associated with greater anxiety and anger than the other stages, but show similar emotional levels to the Pre-encounter attitudes (Parham & Helms, 1985).

Racial Identity and Social Integration

Racial identity attitudes may explain why some African American males fail to cross racial lines in predominantly White settings, while others maintain high levels of peer cohesion with White students and faculty (Davis et al., 2004). In interviews with Black males, Davis and his colleagues discovered a correlation between racial identity attitudes and peer cohesion with White students and faculty. Regarding peer experiences, the Black students ranged in their beliefs that attempts to connect with White students were negatively sanctioned by their peer group (Pre-encounter); or rejected by the

dominant culture (Immersion/Emersion). Respondents who fell in the Internalization stage were found to selectively appreciate individuals from both groups.

Offering their solution to fostering positive racial identity development, Taylor and Howard-Hamilton (1995) suggest that development could be catalyzed by increasing campus involvement for Black males. In their study of 117 African American males attending 10 predominantly White universities, they found that students who were most involved on campus also scored higher on racial identity development. Specifically, Black males in Greek-letter orientations embraced a stronger, more positive sense of self-esteem and racial identity than non-Greek members. It is plausible, however, that racially internalized Black males could have had a proclivity toward joining Greek-letter organizations on these campuses, a direction of causality which was never critically examined in this study. Still, the correlation that was discovered between participation and higher racial identity levels could inspire programming that brings disparate groups together to spur positive cultural identity development for African American men on predominantly White campuses.

Racial Identity and Achievement

Few studies have linked racial identity attitudes with collegiate achievement for Black males. Two smaller studies offer circumstantial evidence of a positive association. In their qualitative study of students and parents, Hrabowski and his colleagues (1998) found that high-achieving African American males possessed a “positive racial identification and positive male identification,” though no comparison was made to low-achieving students. Johnson (1993), however, discovered greater racial transcendence among the most successful of the 229 Black males enrolled at the University of South Carolina. He concluded his dissertation study with the following declaration that at once

echoes Hrabowski, Cross' Internalization stage, and cultural border crossing as discussed earlier:

The academically successful African American male student exhibited high levels of academic self-concept, verbal acuity, and ranked relatively high in his graduating class. Moreover, he was able to work in a culturally diverse environment, indicating his ability to culturally assimilate (p. 116).

The positive relationship between racial identity attitudes and academic achievement however is not consistently affirmed by research. Campbell and Fleming (2000) found no correlation between racial identity attitudes and GPA among the 141 Black male college students in their study. The sample comprised students who attended a largely minority urban university and thus their findings can not be generalized to PWIs. As noted earlier, Black students may respond differently in environments when they are in the majority.

However, Campbell (1996) also failed to find a link between racial identity attitudes and GPA in a statistical examination of 129 African American males attending City College of New York. Racial identity attitudes did however statistically play facilitative roles by influencing an important achievement-related behavior. Highly internalized students were positively linked to the quality of study habits employed, while African American males exhibiting Immersion, Pre-encounter and Encounter attitudes had less effective study habits. In this study, the quality of study habits was the strongest predictor of GPA.

One explanation is that the racially internalized male has more motivation because he has a resolved and uncomplicated attitude about his college and his own academic pursuits. The motivation could be reflected in better learning strategies. Secondly, with the intensity of his pro-Black thoughts leveled off, the internalized male

has more mental energy that can be devoted to intellectual pursuits, which could include seeking to improvement his learning strategies. Finally, he has access to a larger more diverse social radius from which he can pick up more efficient habits and techniques.

What is known from racial identity theory is that Blacks who have resolved their racial identity no longer look solely to their reference group for appraisal but rather, they are motivated by what's uniquely best for them as individuals.

Summary: Toward an Integrated Model

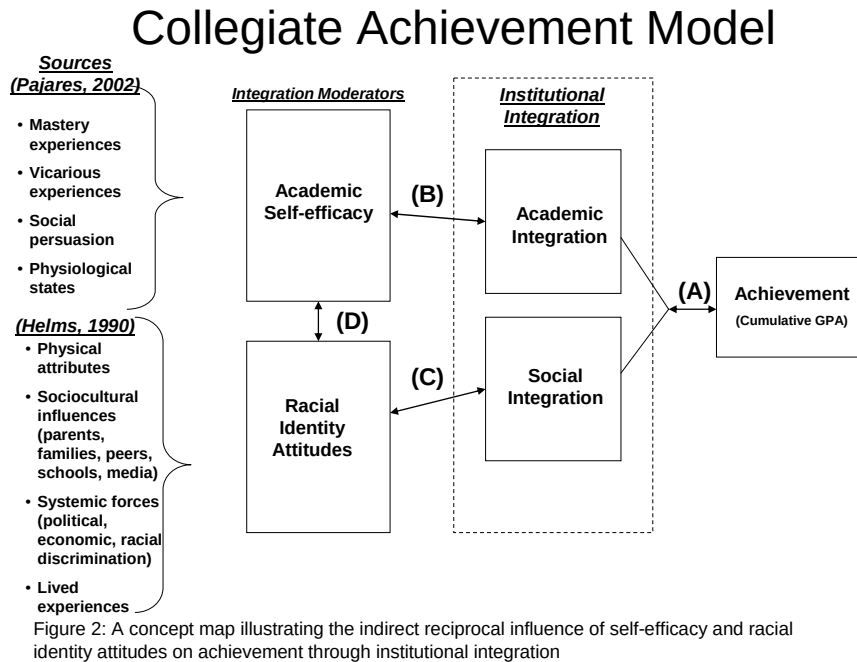
This chapter attempted to outline the prevailing in-college factors that the contemporary literature has associated with the achievement of Black males in higher education. Tinto's model of institutional integration offered a conceptual lens through which I analyzed these success factors. In short, those who integrate academically and socially are more successful, though the relative importance of academic or Social Integration is not clear for Black males (Donovan, 1984; McCauley, 1988; St. John et al., 2004). Moreover, the literature is not clear about the specific motivational and psychosocial processes that may foster or hinder their campus integration. For example, the prevailing explanations leave unanswered the large within-group variation in college success among African American males who share common classrooms and residential spaces.

I have attempted to extend Tinto's (1993) argument that in-college perceptions and experiences may interact with personal attributes and attitudes by suggesting that perceived self-efficacy and racial identity attitudes cause African American males to respond differently to academic and social challenges on campus. While there is evidence that these theories could individually explain some of the variation in achievement, largely missing from the literature are comprehensive frameworks that combine more than one body of research to increase our understanding of African American male achievement (Johnson, 1993; Okech & Harrington, 2002; Pascarella et al., 1987; Santiago & Einarson, 1998; Thile & Matt, 1995). Rarer still are studies that integrate more than two of these theories. I hypothesize that a Black male student who successfully integrates into the milieu will have a heightened sense of self-efficacy (i.e., confidence in his academic capabilities), and also possesses a healthy racial self-concept. Figure 2

illustrates the hypothetical relationships between the three intellectual domains that this dissertation tests.

Figure 2:

A conceptual model linking self-efficacy, racial identity, institutional integration and achievement of Black males in higher education



This model extends Tinto's theory of institutional integration in two directions. First, the persistence literature thoroughly examines factors that influence freshman promotion or graduation rates (Donovan, 1984; Hyatt, 2003; Leppel, 2002; McCauley, 1988; St. John et al., 2004), but it lacks comprehensive empirical links to cumulative or final GPA as outcome. Doing so flips the conversation from academic survival (persistence) to understanding how and why high achievers thrive. Students with higher GPAs persist in college and graduate with greater satisfaction about their experience than low-achievers (Donovan, 1984; St. John et al., 2004). Moreover, cumulative GPA predicts graduate education and income (Bowen & Bok, 1998). Thus, this dissertation

aims to extend the prevailing theories by testing whether GPA, rather than persistence, can be explained by levels of institutional integration (**Link A in Figure 2**).

Frequent and positive faculty interactions are crucial for increasing Academic Integration, which may in turn translate into better outcomes. Only a handful of researchers, however, have examined the relationship between self-efficacy and achievement for Black male collegians (Okech & Harrington, 2002). While self-efficacy has been linked to math course intentions (Gainor & Lent, 1998), adaptive coping strategies (Phinney & Haas, 2003), and higher performance expectations (Mayo & Christenfeld, 1999) for African American students, fewer studies (Peterson, 1993) have examined a direct pathway between self-efficacy and Academic Integration (**Link B**). I hypothesize that those who have strong academic self-efficacy beliefs are more likely to exercise their agency in reaching out to faculty (Santiago & Einarson, 1998). Studies have shown that self-efficacy beliefs are associated with pro-social behaviors that may indirectly foster academic integration (Gainor & Lent, 1998; Morris, 2004; Peterson, 1993; Phinney & Haas, 2003). Theoretically, therefore, that by raising self-efficacy levels, institutions of higher learning can increase the prospect that Black males will engage more fully with faculty. This is a significant research gap that this dissertation hopes to fill.

Humans do not respond uniformly to the same environmental stimuli because of individual variation (Bandura, 1997). For Black males, discriminatory behavior and attitudes from larger the society imposes an identity that makes salient their race and gender (Phinney & Rosenthal, 1992) yet their response to these stimuli in an academic context vary by the individual. This dissertation hypothesizes that the response to their academics is framed by their racial identity attitudes. Specifically, it theorizes that

African Americans who have mature, positive racial identities do well in predominantly White settings by learning to traverse the cultural borders between their different worlds (Phelan et al., 1998) (**Link C**). It also suggests that Black males who exhibit strong Immersion-Emersion attitudes reflecting their intense search for Blackness have poorer peer cohesion and thus do more poorly in college. If proven, institutions can help Black males become more socially integrated by fostering a positive racial orientation (Neville & Lilly, 2000) that celebrates “a diversity of subcultures or communities each with its own social and intellectual lifestyle” (Tinto, 1993, p. 59).

Finally, Okech and Harrington’s (2002) discovery of a positive association between a measure of Black consciousness and academic self-efficacy (**Link D**) is worth noting, though it is unclear how this association influences achievement. Some scholars (Erikson, 1968; Csikszentmihalyi & Larson, 1984) studying adolescent development maintain that mastery experiences (a source of self-efficacy) can shape identity, or “a pattern of thought and volition that defines the self” (Csikszentmihalyi & Larson, p. 8). High achieving African Americans learn to reshape both their self-concept and relationship with their reference group to accommodate their own academic expectations (Barclay, 2001; Brookins, 2000). A Black male’s perceived academic self-efficacy could thus be the moderating factor between adopting self-defeating behaviors dictated by the prevailing reference group norms (Ogbu, 1988; 1990) and achieving a secure sense of himself as an ethnic group member (Phinney & Rosenthal, 1992). I intend to prove this link.

Chapter 3: Method

Research Design

I conducted a statistical study to test the hypothesis that African American male undergraduates in predominantly White institutions who score higher on scales of self-efficacy, racial identity attitudes, and levels of institutional integration also score higher on measures of achievement. The purpose of the design was to correlate the scale scores with cumulative grade point averages of Black males enrolled full-time as sophomores and above attending research universities. The data were collected using a cross-sectional survey that comprised a battery of instruments and additional questions intended to solicit information about the parents, family, and academic performance of the respondents.

Sample of Sites

In January, 2006, I invited all member institutions of the National Association of Multicultural Engineering Program Advocates (NAMEPA) to participate in the study¹¹. An invitation was emailed to a distribution list that comprises the NAMEPA engineering program administrators at 94 U.S. research universities. Six research universities offered to participate. The five that were chosen were large research universities that comprised a convenience sample for this study¹². Table 3 presents the undergraduate enrollment and frequency of survey responses from each of the five institutions.

¹¹ I am a member of NAMEPA as is my host institution, one of the five participating universities.

¹² The sixth institution was a smaller regional university that offered to participate late in the recruitment cycle.

Table 3
Response frequency by university

University (Undergraduate Enrollment)	<i>f</i>	%	Cum %
University 1 (4066)	44	23.2	23.2
University 2 (14,492)	52	27.4	50.6
University 3 (23,002)	25	13.2	63.8
University 4 (13,401)	26	13.7	77.4
University 5 (21,567)	43	22.6	100.0 ¹³
Total	190	100.0	

Universities 1 and 2¹⁴ are private research institutions located in the northeast, while the remaining three are public universities whose campuses are located in the south. Two of the participating universities (Universities 4 and 5) are in the mid-Atlantic region, and University 3 is located in the southwest.

Sample of Students

A total of 1,498 African American males across the five research universities were invited to participate in the study by email, giving every enrolled Black undergraduate male who was beyond his freshman year an equal chance to participate.¹⁵ Freshmen were not included because they had not established a stable cumulative GPA

¹³ The total percentage was rounded to the nearest whole number.

¹⁴ I used pseudonyms (University 1 through 5) to protect the identity of the universities.

and, in some cases, had not declared a major. I was most interested in students who had declared a major because of the known association between academic self-efficacy and having declared a major (St. John et al., 2004).

A total of 201 students, or approximately 13 percent of the sample frame completed the survey. Eleven cases were eliminated because they did not meet the sample criteria. Concerns about the low response rate led to an examination of the respondents to ascertain whether the sample was representative of all Black males at the participating institutions. The research design could not rule out the possibility that there were systematic differences in unobservable traits (such as self-efficacy or racial identity attitudes) between responders and non-responders. However, to mitigate this possibility, I tested the differences in observable traits between responders and non-responders. A t-test comparing the respondents to all Black males in the sample frame at one university in which 23 percent had responded revealed no significant difference in cumulative GPA [$t(163)=-.917, p=.36$], family income [$t(163)=.326, p=.745$], and year in college [$t(149)=-1.103, p=.272$]¹⁶. The findings suggest that there were no differences between respondents and non-respondents on observable characteristics. That is to say stronger students, older students or those from wealthier families were no more (or less) likely to respond to the survey invitation than the average Black male student at this institution,

¹⁵ Though my contacts typically comprised engineering program administrators, all enrolled African American males beyond their freshman year— not just the engineering majors — were invited to participate.

¹⁶ Because an anonymous survey instrument was used, testing responders against non-responders was not possible. Comparing the demographics and grade point averages of responders against all students in the sample frame was the best alternative.

thereby reducing the possibility of response bias. I subsequently extend this assumption of generalizability to respondents from all five schools.

Instrumentation

Three instruments were combined to create a 65-item web-based questionnaire for this study. The integrated survey instrument is included in Appendix A.

Academic Self-Efficacy. I integrated the *Self-Efficacy for Academic Milestone Scale* (AMS) developed by Lent et al (1986) that rates confidence in students' ability to achieve specific academic objectives. The instrument was developed using a sample of male and female undergraduates considering science and engineering majors. It consists of 12 items rated on a 10-point scale, ranging from 0 (*no confidence*) to 9 (*complete confidence*). Lent, Brown, and Larkin (1997) and others (Hackett et al., 1992) report internal consistency ratings for this instrument ranging from .88 and .95. Validity studies show the scales correlate positively with academic performance (Hackett et al., 1992; Lent, Brown, & Larkin, 1986; Lent et al., 1997). I tailored several items to reflect the grading scale (4- or 5-point scale) and core institutional requirements for each university. These aesthetic changes did not violate the psychometric integrity of the instrument (Rudestam & Newton, 2001). In the current study, the subscale was very reliable ($\alpha=.82$).

Racial Identity Attitudes. I also integrated the short form of the Black Racial Identity Attitude Scale (RIAS-B) (Helms, 1990; Parham & Helms, 1981). The RAIS-B is the most widely used instrument for measuring Black racial identity attitudes (Abrams & Trusty, 2004; Campbell & Fleming, 2000; Cheatham, Slaney, & Coleman, 1990; Neville et al., 1997; Neville & Lilly, 2000; Nghe & Mahalik, 2001; Wilson & Constantine,

1999). The short form is a 30-item scale developed on a sample of African American male and female college students to measure the strength of the attitudes of four of the racial identity stages originally defined by Cross (1971): Pre-encounter, Encounter, Immersion-Emersion, and Internalization (Helms, 1990). Responses to the items are made on a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). Psychometric analyses conducted on the short form yield reliability coefficients ranging from .50 for Encounter, to .79 for Internalization subscales (Helms, 1990). More recent studies estimated alpha coefficients that range from .27 for the Encounter subscale, to .86 for Pre-encounter scale. The author suggests that the low reliability on the Encounter subscale is due to “the dynamic changeable nature of these attitudes” (p. 44). The scales have accurately predicted preference for White or Black counselors (Parham & Helms, 1981), and correlate with theoretical racial identity development scales. The present study yielded moderate to low reliability estimates on the four subscales: Pre-encounter ($\alpha=.58$), Encounter ($\alpha=.44$), Immersion/Emersion ($\alpha=.69$), and Internalization ($\alpha=.66$). I dropped the Encounter scale from subsequent analyses because of its low reliability estimate.

Institutional Integration. I used two subscales, *Peer-Group Interactions* and *Interactions with Faculty* of the Institutional Integration Scale (IIS), (Pascarella & Terenzini, 1980), a 34-item instrument that measures five facets of institutional integration. Responses were recorded on a 5-point scale with Likert-like response options ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The IIS is based on Tinto’s (1975) theoretical framework to assess student self-reported levels of Social and Academic Integration. Pascarella and Terenzini (1980) report high reliability estimates of 0.84 and 0.83 for *Peer Group Interactions* and *Interactions with Faculty* respectively.

Despite the lower reliability coefficients than has been reported in the literature [Peer-Group Integration¹⁷ ($\alpha=.72$): Interactions with Faculty ($\alpha=.52$)], the high reliability measured by the authors on general college populations, and later confirmed by others for first-year students (French & Oakes, 2004) justified keeping the scale scores in the subsequent analysis.

Additional Demographic and Achievement Information. In addition to the battery of existing instruments, I added several questions to solicit information about the student's family background and high school and college performance. Responses to these questions supplied data for the key outcome variable (cumulative GPA) and control parameters (family income, parent education, and pre-college performance), all of which were critical for the subsequent analysis.

Procedures

A faculty member or senior administrator on staff at each school, hereafter referred to as the university official, obtained the email addresses of all full-time enrolled African American males who were sophomores and above. The addresses were supplied by the university registrar. To protect the identity of the respondents, the administrator or faculty solely possessed student email addresses and did not share them with me.

The university official sent an email invitation to all African American males on the list. The invitation contained a unique URL that, when clicked, linked directly to the web-based survey. (A sample email invitation is included in Appendix A.) The voluntary participation of the respondent served as their consent.

¹⁷ Throughout this thesis, I use Social Integration to refer to the *Peer Group Interaction* scale, and

The online survey was built using Harvard University's Poll Tool, which was configured to return responses anonymously. The survey was not password protected and thus was accessible to anyone who received the URL link. To more easily track response rates and to reflect unique core requirements being opinioned, each institution was given an exclusive survey and URL.

The university official sent one or more follow-up emails between one week and one month after the initial invitation. Because the responses were anonymous, the follow-up emails were distributed to the full list of Black males. Each follow-up notice contained the unique URL that linked to the online questionnaire. (See sample in Appendix A).

The online survey was administered at four of the five universities between February 28 and May 19 of 2006. The fifth school administered the survey during two summer semesters between June 12 and July 13¹⁸. The surveys were administered after the first-semester exams were given on all campuses. Bandura (1986) maintains that self-efficacy ratings are most meaningful after the subjects receive feedback about recent performance. No incentives were offered to increase participation because of the anonymity of the respondents.

Academic Interaction for the *Interactions with Faculty* scale.

¹⁸ At this institution, all students are required to enroll in one of two summer semesters and thus all enrolled African American males that met the criteria were invited to participate.

Data Analysis

Measures

The following table contains the list of variables that I used in the analysis.

Table 4
List of variables for data analysis

Variable Name	Description
Outcome Variable	
CUMGPA	Cumulative GPA self-reported ¹⁹ by the participant on a four-point scale. Five-point GPA scores were converted to the four-point scale. To mitigate the effects of grade variability across institutions, dummy variables for each institution were created (see below).
Control Variables	
YEAR	Participant's year in school.
HSGPA	Self-reported unweighted high school GPA on a scale of 1 to 100. High school grades reported on a 4.0 scale were converted to the 100 point scale.
COMSAT	Self-reported combined score on highest SAT I (math and verbal) scores. Reported ACT scores were converted to SAT scores by comparing percentiles of English/Verbal and Mathematics scores ²⁰ .
INCOME	Ordinal variable of family income in \$25,000 ranges (1= <\$25,000; 2=\$25,000-\$49,999; 3=\$50,000-\$74,999; 4= >\$75,000)
EDLVL_H	A continuous variable representing the number of years of education achieved by the parent with most education.
University 1-5	Dummy variables for each university to account for grade variation.
STEM	Dummy variable indicating whether a student majored in at least one Science, Technology, Engineering, or Mathematics discipline.
Question Predictors	

¹⁹ Studies have shown high correlations of between .70 and .88 between self-reported and actual GPA for college students (Goldman, Flake, & Matheson, 1990; Hishinuma et al., 2001).

²⁰ For instance, an ACT mathematics score of 20 places the student in the 55th percentile, which equates to an SAT I Math score of 530, which falls in the 55th percentile of all SAT test takers (ACT, 2006; Board, 2000).

ASE	Measure of academic self-efficacy using the academic milestone self-efficacy scale (AMS). Scores were calculated by dividing the sum of the responses by 12 (the number of items).
PREENC	Racial identity attitudes of the four subscales scales (Pre-encounter, Encounter, Immersion-Emersion, Internalization) using the short form of the Racial Identity Attitude Survey (RIAS-B). Scores are the mean of the responses for each subscale (PREENC: 9 items; ENCTR:4 items; IMM-EM:8 items; INTERN:9 items).
ENCTR	
IMM-EM	
INTERN	
AI	Measure of Academic Integration using the Institutional Integration Scale (IIS). The variable is calculated by averaging the scores over the five items after recoding negatively worded items.
SI	Measure of Social Integration using the Institutional Integration Scale (IIS). Scores were calculated (after recoding) by dividing the sum of the total by seven (items).

The responses were analyzed using *Statistical Package for the Social Sciences (SPSS) 14* for Windows Graduate Student Version.

Statistical Analysis

I began my analysis by conducting an independent samples t-test to determine if respondents were statistically different on demographic and performance characteristics than the average Black student at one university. The test compared the mean reported grade point average, year in college, and family income to those of the whole sample frame at University 1. This statistical test was employed to determine if there were demographic characteristics that caused some to respond (or not), a standard concern when response rates are low.

The descriptive statistics (mean, median, standard deviation) for each variable were subsequently examined to identify potential errors in the data set. I also inspected the univariate box plots for possible outliers, and the histograms and normal probability plots (Normal Q-Q plot) to assess the normality of the distributions for each variable. These graphs are used to determine if the assumption of normality in the data distribution

was violated. Many of the statistical tests that follow assume normally distributed scores for the variables.

I reviewed scatter plots to observe the strength and direction of the relationships between my dependent variable (cumulative GPA) and the major question variables. The scatterplots also confirmed that the bivariate relationships appeared linear.

I subsequently ran a Pearson product-moment correlation analysis to estimate the strength and direction of the linear relationships between cumulative GPA, academic self-efficacy beliefs (ASE), levels of institutional integration (AI and SI), racial identity attitudes (PREENC, ENCTR, IMM-EM, INTERN), and the control variables. Positive significant correlations between variables could support my hypothesis that racial identity attitudes and self-efficacy beliefs influence Academic Integration and Social Integration, the two dimensions of institutional integration (Figure 2). Positive correlations could also suggest that the variables measure the same construct (multicollinearity), a phenomenon that could permit increased parsimony by reducing the number of variables by substitution in the subsequent structured regression equation modeling.

I conducted multiple regression analyses to estimate the strength and direction of the unique contribution of academic self-efficacy, racial identity subscale scores, and academic and social integration scores on cumulative GPA while controlling for all other factors. As table 4 illustrates, I used cumulative GPA as the dependent variable, the scale scores as question predictors, and the demographic and pre-college variables as controls. I hypothesized that the generalized regression model containing main effects would take the following form:

$$\text{CUMGPA} = \beta_0 + \beta_1 (\text{ASE}) + \beta_{2a-d} (\text{RIA}) + \beta_3 (\text{AI}) + \beta_4 (\text{SI}) + \beta_{5a-g} (\text{Control Variables}) + \epsilon$$

where,

- β_0 is the constant.
- β_1 is a coefficient that estimates the effect of academic self-efficacy (ASE: a question predictor) on cumulative GPA, while holding constant all other factors.
- β_{2a-d} are the coefficients that estimate the direct effects of each racial identity attitude on cumulative GPA.²¹ Racial identity attitudes are question predictors.
- β_3 is the coefficient that estimates the direct effect of Academic Integration (AI: question predictor) on cumulative GPA.
- β_4 estimates the effect of Social Integration (SI) on cumulative GPA. SI is a question predictor.
- β_{5a-g} estimate the direct effects of year (a), STEM major (b), undergraduate enrollment (c), high school GPA (d), the combined SAT score (e), family income (f), and parent educational attainment (g) on achievement, all of which are control variables.
- ϵ are the individual-level residuals that are independent and random

To reduce the possible effects of “within-school” grade variation across participating institutions, I also created a series of dummy variables associated with each university, though these factors did not prove to be statistically significant and were

²¹ The regression coefficients estimate the effect of the associated variable on cumulative GPA while holding others constant, a statement which was unnecessary to repeat.

subsequently dropped from the analysis. In addition to the fixed effects, I tested for interactions that would support my hypotheses, namely

- The most racially internalized African American male students would be more socially integrated on campus and have higher cumulative GPAs, possibly at different levels of Social Integration;
- The less internalized (high Pre-encounter or Immersion-Emersion) students would be less socially integrated and have lower GPAs, though the effect might be moderated at varying levels of racial attitudes;
- Students with high academic self-efficacy would have high academic performance at varying levels of academic integration.

I also tested for two-way interactions between several of the control and question variables. For instance, an examination of the bivariate table revealed moderate correlations between racial identity and parent education levels.

To estimate the final regression equation, I used a structured equation modeling method (Maximum Likelihood) that first estimated the variables as a conceptual group (e.g., all racial identity subscale scores) to separately estimate the effects of each conceptual category on cumulative GPA.

To test if there were differences in academic self-efficacy, racial identity attitudes, and institutional integration between high- and low-performing Black males, I conducted an independent samples t-test for respondents above and below the median GPA (3.0). Johnson (1993) found a significant difference in Black consciousness ratings among high- and low-achieving males. I repeated the analysis for those majoring in science, technology, engineering and mathematics (STEM) fields versus non-STEM majors. Finally, I conducted a one-way analysis of variance (ANOVA) to compare racial

identity, academic self-efficacy, and institutional integration scores across the five universities.

Validity

Threats to reliability and validity of the survey instrument are possible but unlikely. Only cosmetic modifications were made to the Academic Milestone Self-efficacy scale (AMS) which did not appear to affect its psychometric integrity. With the exception of the Racial Identity instrument (RIAS-B), reported internal consistency of the instruments fell within an acceptable range. Studies that used the RIAS-B scale also report moderate reliability of the Internalization and Pre-encounter subscales, and low reported reliability for the Encounter subscale. For this study, the Encounter subscale returned low Chronbach's alpha reliability and thus was removed from the subsequent analysis.

Low response rates threaten data reliability because it could indicate response bias in the sample. It is not known, for instance, if there are characteristics of the study that cause a particular subgroup to respond, therefore threaten the generalizability of the results. Web surveys, on average, yield lower response rates (less than 21%) than mailed (and a combination web and mail) questionnaires (Schonlau, Fricker, & Elliott, 2002). Moreover, men typically respond to surveys at lower rates than women, and African Americans less than Whites and Asians (Underwood, Kim, & Matier, 2000). This study thus targets a subpopulation — African American males — that historically returns low survey response rates. Incentives have been generally proven to be effective at increasing response rates (Best & Krueger, 2004), but the anonymity of the research design precluded this option. Moreover, the wide geographic and class distribution (sophomores plus) precluded an in-person administration of the survey to a captive audience.

This study attempted to mitigate data reliability questions by showing there were no statistical differences between respondents and the average enrolled Black male student on measurable student characteristics at one university. While it assumes that these findings generalize to all five institutions, this was not empirically tested.

Finally, as an administrator at one of the universities included in the study, I took steps to conceal my identity during the survey administration to mitigate the possibility of response bias or triggering socially-desirable responses from my current and former students. To survey these students, a senior administration official distributed the introductory and follow-up emails over his signature. Thus, concerns about response bias owing to recognition of the researcher were assuaged.

Chapter 4: Results

Missing Data

The variables with the largest share of non- or incomplete responses (approximately 10 percent) were those measuring SAT I scores as Table 5 indicates. However, missing values from items measuring self-efficacy, racial identity, and institutional integration were small (less than 2 percent). An inspection of the data file revealed no visible pattern for non-responses; the missing values were randomly scattered across the respondents. In addition, a review of the descriptive statistics after records with missing values were dropped revealed no substantial difference in the means.

To avoid a substantial reduction in sample size that would result from *listwise* deletion, I chose not to eliminate all cases with missing values but instead employ *pairwise* deletion in the bivariate analysis. Pairwise deletion dynamically excludes a case only if a variable is missing data required for a specific analysis. This method is typically employed when there are concerns about the sample size, as is the case with this present study.

However, for the subsequent regression modeling, I used the *listwise* deletion method to ensure that the goodness-of-fit tests that were employed while building the final regression model would have consistent *n* sizes. By doing so, I mitigate the possibility that changes in the goodness-of-fit were not a function of fluctuations in the sample size but rather of better estimates.

Demographics

The following table presents a summary of the sample characteristics.

Table 5
Means and standard deviations of the variables used in the data analysis

	N	Missing	Mean	Median	SD
Cumulative GPA	187	3	2.97	3.00	.528
Year in College	185	5	3.31	3.00	1.09
STEM Major	190	0	.74	1.00	.439
HS GPA (unweighted)	175	15	88.66	90.00	9.21
SAT I Math	173	17	634.65	620	87.81
SAT I Verbal	173	17	604.39	600	88.97
Mother's Educational Level	190	0	16.05	17.00	3.45
Father's Educational Level	184	6	15.54	15.00	4.20
Family Income ^a	186	4	2.83	3.00	1.11
Academic Self-Efficacy	190	0	7.94	8.25	.97
Academic Integration	189	1	3.27	3.20	.69
Social Integration	190	0	3.61	3.71	.69
Pre-encounter	190	0	1.90	1.89	.48
Immersion-Emersion	188	2	2.39	2.37	.60
Internalization	189	1	3.91	4.00	.51

^a Family income categories were banded into \$25,000 ranges (1<\$25,000; 2=\$25,000-\$49,999; 3=\$50,000-\$74,999; 4>\$75,000)

The average respondent was almost a third of the way through his junior year (3.31 years) majoring in science²², earning a collegiate grade point average of 2.97. He arrived at his university with a B+ average (unweighted high school GPA=88.66) and a combined SAT score of about 1240, placing him nationally in the 84th percentile among

²² Seventy-four percent of the sample majored in at least one science, technology, engineering, or mathematics (STEM) discipline.

SAT test takers (ACT, 2006; Board, 2000). His parents on average have attended some college while his mother had slightly more education (16.05) than his father (15.54). The average annual family income fell on the high end of the \$25,000 - \$50,000 range (2.85).

The respondents collectively reported high levels of self-efficacy (7.94), possibly reflecting the highly-selective colleges and student populations from which the respondents were sampled. Moreover, while the average student reported positive Social Integration scores (3.6), the quality of their interaction with faculty was less strong (3.27), averaging only slightly higher than a neutral response (3.0 on a 5-point scale). The group on average was highly internalized (3.91), “agreeing” to most of the statements associated with a racially mature respondent. Once again, it may be that the selective nature of the sampled population has largely reconciled their racial identity vis-à-vis their White classmates.

Table 6 presents the distribution of the sample across the five institutions surveyed.

Table 6

Means and standard deviations of racial identity attitudes, academic self-efficacy, institutional integration, family, and achievement measures by university

	University 1		University 2		University 3		University 4		University 5	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Cumulative GPA	3.06	.51	2.93	.58	3.07	.51	2.95	.47	2.88	.53
Year in College	3.02	.85	3.06	.89	3.44	1.04	3.19	.80	3.97	1.46
STEM Major	.95	.21	.56	.50	.64	.49	.42	.50	1.00	0.00
HS GPA	94.63	5.48	83.46	10.57	88.03	7.21	91.06	7.21	88.09	8.79
SAT I Math	722.95	55.00	580.44	74.71	589.09	66.33	623.60	75.88	630.14	73.62
SAT I Verbal	669.09	65.52	573.11	83.225	594.09	79.92	624.40	82.37	558.11	84.23
Mother's Ed Level	17.14	3.56	15.65	4.37	14.88	2.96	16.54	2.49	15.79	2.53
Father's Ed Level	16.81	3.49	14.92	4.73	14.50	2.77	15.62	4.71	15.56	4.40
Family Income	2.77	1.19	2.76	1.04	2.68	1.31	3.12	.971	2.91	1.04
Acad. Self-Efficacy	8.04	.85	7.90	.84	8.18	.76	7.81	1.02	7.80	1.28
Academic Integration	3.35	.69	3.24	.72	3.38	.71	3.27	.67	3.16	.65
Social Integration	3.89	.55	3.47	.72	3.48	.52	3.59	.91	3.58	.66
Pre-encounter Stage	1.87	.51	1.98	.49	1.85	.54	1.81	.47	1.93	.40
Imm-Emersion Stage	2.20	.54	2.41	.67	2.55	.67	2.38	.59	2.49	.51
Internalization Stage	3.83	.58	3.90	.52	3.93	.44	3.84	.45	4.00	.50

Students in the sample who attend Universities 1 and 3 earned the highest grade point average on a 4.0 scale (3.06 and 3.07 respectively), while the average University 5 respondent on average had the lowest mean GPA (2.88). Not surprisingly, the average University 1 student also had a strong high school average (94.63) and SAT scores (math: 723; verbal: 669) while their parents had the most education (mother: 17.14 years; father: 16.81 years). The positive associations between collegiate achievement and HS GPA, SAT scores, and parent education agrees with the literature (Bowen & Bok, 1998; Johnson, 1993).

However, the same does not hold for students attending University 3, who also performed academically well (their grades are the highest in the sample), but who arrived at college averaging near the bottom of their peers on pre-college measures of achievement. Even more curiously, University 3 male students come from families with the least parent education and family income on which basis one would predict poorer performance than that which is observed. One explanation may be that University 3 respondents on average were older and thus were taking more elective classes where students tend to be more motivated to learn the material. Indeed, an Analysis of Variance (ANOVA) test found that Black males attending University 3 statistically had more seniors in the sample. However, this argument loses its strength when University 5 students are considered, who also statistically had more seniors and yet had the distinction of having the lowest GPA of their peers.

A more informative explanation emerges when one examines the mean scores of the attitudinal variables. Interestingly, University 3 students carry the distinction of consistently scoring at or near the highest or lowest on measures of academic self-efficacy, institutional integration, and racial identity attitudes. Black males at University 3 scored highest on academic self-efficacy, Academic Integration, and Immersion-Emersion scores, but lowest on Social Integration, pre-encounter and Internalization scales. It is possible that their heightened self-efficacy and quality faculty-student interactions mitigates the pre-college measures that would have predicted lower collegiate achievement, an important deterministic relationship proposed by this study.

Yet, the average respondent at University 3 also rated themselves lowest on the Social Integration scale (3.48) relative to his peers, a full 0.41 points lower than the highest SI ratings reported by University 1 students, and the difference is statistically

significant [$F(4,189)=2.72$, $p=.031$]). An inspection of the enrollments (Table 3) suggests one explanation. University 1, whose students recorded the highest mean SI score, has the smallest undergraduate body, while University 3 has the largest undergraduate enrollment at the time of the survey. It is plausible that University 3's SI rating is in part explained by its large undergraduate enrollment, thereby supporting Pickering's theory that smaller institutions are better at fostering primary peer relationships (Pascarella, 1985), an argument that I supported earlier.

Table 6 provides additional evidence that challenges the prevailing views in the literature about Black males. As stated, University 5 students earned the lowest grades in the sample (2.88), but came to college with higher high school grades and math SAT scores than the average University 2 student, who ranked the lowest on these two measures. Yet, the average University 2 student reported a cumulative GPA only slightly below the aggregated mean (2.97), which further challenges the aforementioned association between pre-college and collegiate achievement for University 2 and 5 students. Finally, University 4 students come from the most affluent backgrounds and yet only earn a cumulative average in the proximity of the aggregate mean of the sample (2.95).

While these comparisons are fodder for conjecture, I must pause to note that only differences in year in college [$F(4,186)=5.793$, $p<.001$], high school GPA [$F(4,174)=10.553$, $p<.001$], and SAT math [$F(4,172)=27.504$, $p<.001$] and verbal scores [$F(4,172)=12.895$, $p<.001$] are the aforementioned factors that differ significantly across

the schools in this sample. Though there are differences in parent education and family income within the sample, these differences do not reach significance at the .05 level²³.

Unfortunately, the nature of the survey design prevents a thorough within-university exploration into the plausible explanations for these findings. In particular, the small school samples limit a meaningful statistical investigation into University 3's unique student characteristics and attitudes, though future studies could follow this line of inquiry. More informatively, a qualitative investigation might identify important structural and cultural factors that explain the distinctiveness of Black males attending University 3.

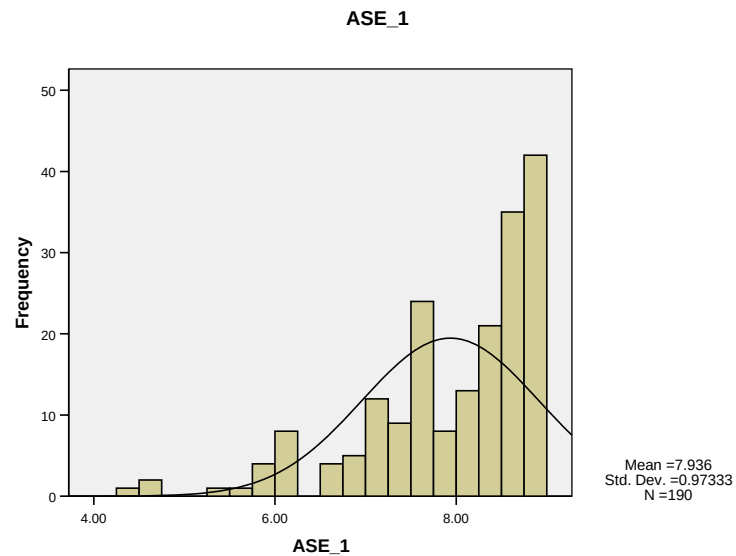
Checking the Assumptions

An examination of the univariate statistics for the dependent and question variables revealed only academic self-efficacy scores and high school GPA appeared to violate the assumptions of normality. Certain statistical tests including Pearson correlation and Analysis of Variance (ANOVA) operate on the assumption that the distribution of scores follow a normal distribution. An inspection of the histogram in Figure 3 reveals a large negative skew in the distribution of academic self efficacy scores. A similar shape was found for HS GPA.²⁴

²³ The difference in share of STEM majors [$F(4,189)=16.405, p<.001$] and Social Integration scores [$F(4,189)=2.717, p=.031$] were the only other scores that reached a level of significance across schools. However, the mean score difference in Mother's Education between University 1 ($M=17.14, SD=3.56$) and University 3 ($M=14.88, SD=2.96$) approached significance [$F(4,199)=2.22, p=.068$].

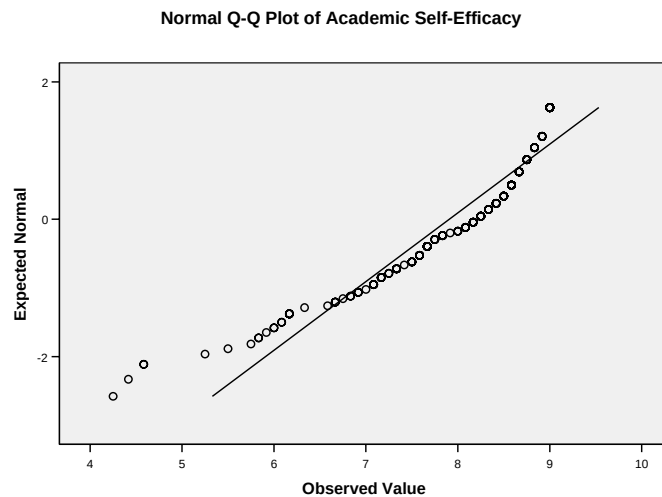
²⁴ I conducted a similar transformation and analysis for HS GPA that I am illustrating for academic self-efficacy, and achieved similar results. I have thus chosen to show my analytical approach for just academic self-efficacy.

Figure 3
Histogram of Self-Efficacy scores



The normal probability plot (Figure 4) which charts the observed value of Academic Self-Efficacy against that which is expected for a normal distribution suggests that the distribution of self-efficacy scores is “almost normal.”²⁵

Figure 4
Normal Probability Plot for Academic Self-Efficacy Scores



²⁵ A reasonably straight line would suggest a normal distribution (Tabachnick & Fidell, 2007).

Likewise, the relative proximity of the mean (7.94) and median (8.25) suggest the distribution of ASE scores have some normal properties. In addition, while an examination of the box plot showed five outlier cases, these cases do not exert much influence on the mean as indicated by the small delta between the 5% Trimmed Mean statistic²⁶ and the overall average ($M_{all}=7.94$; $M_{5\% \text{ Trimmed}}=8.02$). Still, to investigate the impact of transforming academic self-efficacy scores to closer resemble a normal distribution, I modified them using a Reflect and Inverse transformation.²⁷ I subsequently tested the effect of the transformation by performing the Pearson correlation, multivariate regression, and independent samples t-tests both with and without the transformation. The conversion did not substantially change the results. Thus, for ease of interpretation, the remaining analysis is reported using the untransformed academic self-efficacy scores²⁸.

²⁶ The 5% Trimmed Mean results from removing the top and bottom 5 percent of cases. It is useful to determine the influence of extreme cases on the mean.

²⁷ The Reflect and Inverse transformation is typically employed when the shape of the distribution has a large negative skew. ASE was transformed using the following formula: $ASE_R_I = 1 / (K - ASE)$, where K = the largest value (9) +1 (Tabachnick and Fidell, 2007).

²⁸ There is considerable controversy in the literature about whether to transform variables when a non-normal distribution is encountered (Tabachnick & Fidell, 2007). Transformations increase the difficulty of interpretation, yet they may yield results that are more statistically robust. In the current analysis, there were inconsequential differences between the transformed and non-transformed scale score on salient statistical tests.

The Relationship between Self-Efficacy, Racial Identity, Institutional Integration and Achievement

The major hypothesis of this study holds that Black males attending research universities who reported heightened self-efficacy, racial identity attitudes, and levels of institutional integration would score higher on measures of achievement than Black males who scored lower on these scales. To answer this question, I pursued two analytical approaches. First, I sought to identify the factors (if any) that uniquely correlated with achievement across the aggregate data set. The second step was to divide the dataset into high achievers and those who performed less well to determine if there were statistical differences in the reported levels of self-efficacy, institutional integration, and racial identity attitudes between the two groups.

Bivariate Analysis

If my hypothesis held, cumulative GPA would be positively correlated with self-efficacy, Academic and Social Integration, and significantly linked (either positively or negatively) to one or more of the racial identity stages. An inspection of the bivariate scatterplots revealed no curvilinear²⁹ (non-linear) relationships between cumulative GPA and any of the independent variables.

Table 7 presents the means, standard deviations, and estimated bivariate correlations for all control and question variables measured in this study.

²⁹ A non-linear relationship would have required a transformation of one or more variable.

Table 7

Means, standard deviations, and Pearson correlations for African American males on demographic, performance, and attitudinal variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Cumulative GPA	1												
2.Year in College	.085	1											
3.HS GPA	.262**	.066	1										
4.Combined SAT	.398***	-.083	.411***	1									
5. Parent Ed Level	.025	-.009	.110	.353***	1								
6.Family Income	.052	.028	.004	.134~	.288***	1							
7. Self-Efficacy	.445**	.142~	.109	.293***	.079	.002	1						
8.Social Integration	.084	-.081	.205*	.220**	.153*	.199**	.069	1					
9.Acad Integration	.268***	.072	.098	.141~*	-.024	.040	.182*	.259***	1				
10.Pre-encounter	-.028	.054	-.004	.035	-.041	.136~	-.006	-.008	.061	1			
11.Immersion-Em	-.046	-.072	-.248**	-.227**	-.243**	-.233**	-.123~	-.376***	-.074	-.181*	1		
12.Internalization	-.102	-.093	-.113	-.225*	-.067	-.128~	-.129~	-.006	.004	-.403***	.471***	1	
13. STEM Major	-.094	.113	.139~	.179*	.039	-.032	-.001	.002	-.106	-.021	-.040	-.014	1
Mean	2.97	3.31	88.66	1239.05	17.01	2.83	7.94	3.61	3.27	1.90	2.39	3.90	.74
SD	.53	1.09	9.21	149.97	3.29	1.11	.97	.69	.69	.48	.60	.51	.44

~ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Cumulative GPA. As Table 7 indicates, of the question variables, only academic self-efficacy ($r = .445$, $p < .001$) and Academic Integration ($r = .268$, $p < .001$) significantly correlated with collegiate GPA at the .05 level. This is a major finding that agrees with both Bandura (1997) and Tinto (1993), and also confirms a hypothesis of this dissertation. African American male students who are confident and satisfied with their opportunities to interact informally with faculty (and who have closer ties with faculty) perform better than students less confident or who rate more poorly the quality of their interactions with faculty.

The results also suggest that that self-efficacy may facilitate the quality of faculty interaction. Table 7 shows a weak but positive and significant correlation between self-efficacy and Academic Integration ($r = .182$, $p = .013$), which could mean that confident students are more apt to approach faculty, or strong faculty ties increase academic confidence. Either way, that both Academic Integration and self-efficacy positively correlate with grades is an important finding.

In addition to the positive link between academic self-efficacy, Academic Integration and GPA, combined SAT I score ($r = .398$, $p < .001$) and high school GPA ($r = .262$, $p < .001$) were also found to be positively linked to collegiate GPA. It is logical that African American males with stronger high school records also performed reasonably well in college.

Racial Identity Attitudes. None of the racial identity scores significantly correlated with cumulative GPA. However, the bivariate analysis suggests that racial identity attitudes may indirectly moderate achievement and certainly influence the quality of the collegiate experience. For instance, in the present bivariate correlation analysis

(Table 7), Social Integration was negatively associated with Immersion-Emersion scores. African American males who scored higher on the Immersion-Emersion subscale reported significantly lower scores on the Social Integration scale ($r = -.376, p < .001$). Thus, Black males who have adopted an exclusive investigation of their racial identity — often associated with an emotional withdrawal into a Black world — are also less likely to have developed close personal peer relationships or have met students who share their values.³⁰ This finding confirms my hypothesis that certain racial identity attitudes influence social integration into the campus mainstream. However, neither Immersion-Emersion nor Social Integration separately were found to significantly correlate directly with achievement.

Academic Self-Efficacy. In addition to cumulative GPA and Academic Integration as discussed above, combined SAT scores ($r = .293, p < .001$) was significant and positively related to Academic Self-Efficacy. Here, it is not surprising that SAT scores provide an enormous confidence boost given its premier status and universal application. Higher SAT scores could provide validation of a student's ability to succeed at the university, as was posited by Santiago & Einarson (1998) who found high self-efficacy ratings among Mexican American engineering graduate students. The researchers suggest that *admissions* to the graduate school provided these minority students with sufficient external validation of their abilities, much similar to the hypothesized effect of high SAT scores in the current study.

³⁰ The Social Integration construct comprises seven statements with which the respondent is asked to agree or disagree including whether he has developed close personal relationships, the ease with which he has made friends, and whether or not most students on campus share his values. The survey questions are included in Appendix A.

Institutional Integration. In addition to the negative correlation between Social Integration and Immersion-Emersion racial identity attitudes discussed earlier, students who were more socially integrated came from affluent families ($r = .199$, $p = .006$) whose parents had more education ($r = .153$, $p = .035$). Not surprisingly, these students also did better in high school ($r = .205$, $p = .007$) and had higher combined SAT scores ($r = .220$, $p = .004$). Once in college, these more socially integrated Black males formed stronger ties with their faculty ($r = .259$, $p < .001$) than their less connected brethren. These findings suggest that perhaps the greater social and cultural capital (Carter, 2003b) associated with class may make it easier for the Black male student to connect with faculty and peers. The corollary is more troubling. Less well-off Black males have greater difficulty making connections with their peers at predominantly White research universities.

To summarize, the most academically successful Black males attending predominantly White research institutions report high levels of self-efficacy and have better relationships with their faculty. Moreover, academically integrated students also have high self-efficacy scores, a correlation that confirms an important hypothesis, that the more confident students are more likely to approach faculty (or be approached by faculty). It may also mean that students with strong faculty connections become more confident in their academic abilities.

Those who perform well also tend to be students with stronger pre-college achievements with higher SAT scores and high school grades. Racial identity attitudes did not significantly correlate directly with collegiate GPA, however, there is evidence that these attitudes may indirectly moderate the quality of collegiate experience by influencing levels of Social Integration and participation on campus. Finally, the more institutionally integrated Black males tend to come from wealthier families whose parents

earned more education. These links between collegiate success and family background could reflect how cultural capital translates into a favorable college experience, or more poignantly by contrast, the greater social challenges that low-income and first generation college students must overcome.

The bivariate relationships discussed above test the strength and direction of the linear relationship between two variables. However, this analysis applies no statistical controls for other variables. Other variables may influence the two variables and artificially inflate their associations. I will now turn to the results of the regression analysis that statistically removes the influence of confounding variables to determine if these relationships hold.

Multiple Regression Analysis

I systematically fitted a taxonomy of nested multiple regression models containing my control and question variables to estimate their effect on cumulative GPA. I began by building a base model that included all control and question variables with no interaction terms. I then added groups of interactions that were suspected to have an effect on the dependent variable by their moderate intercorrelations³¹ or to test my hypotheses. I then compared the goodness-of-fit of each subsequent model using the change in R^2 statistic between the models. Appendix B contains the taxonomy of fitted models.

The plot of the standardized PRESS residuals versus the predicted values of cumulative GPA for the final model gave no indications that the assumptions of

³¹ Though these terms were correlated, their coefficients were not too high as to cause multicollinearity, considered to be $r=.9$ and above (Tabachnick & Fidell, 2007).

normality and homoscedasticity had been violated. As evidenced in Figure 5 below, the variance of the residuals was reasonably equal (homoscedastic) and linear across the range of predicted values for GPA; there were no apparent outliers that deleteriously influenced the fitted equation (extreme on Y)³². Finally, I discovered no offending cases that had high leverage data points (extreme on X) by examining the Cook's Distance statistic produced by the final model.³³.

³² Tabachnick and Fidell (2001) define outliers as cases that have a standardized residual more than 3.3 or less than -3.3. Since all cases fall within this range, I concluded that none of the cases had an undue influence on the results.

³³ The maximum value for Cook's D for all 190 cases was .080, substantially short of the value (above 1.0) in which there may be a potential problem (Pallant, 2005).

Figure 5

Scatterplot of standardized residuals for the final regression model

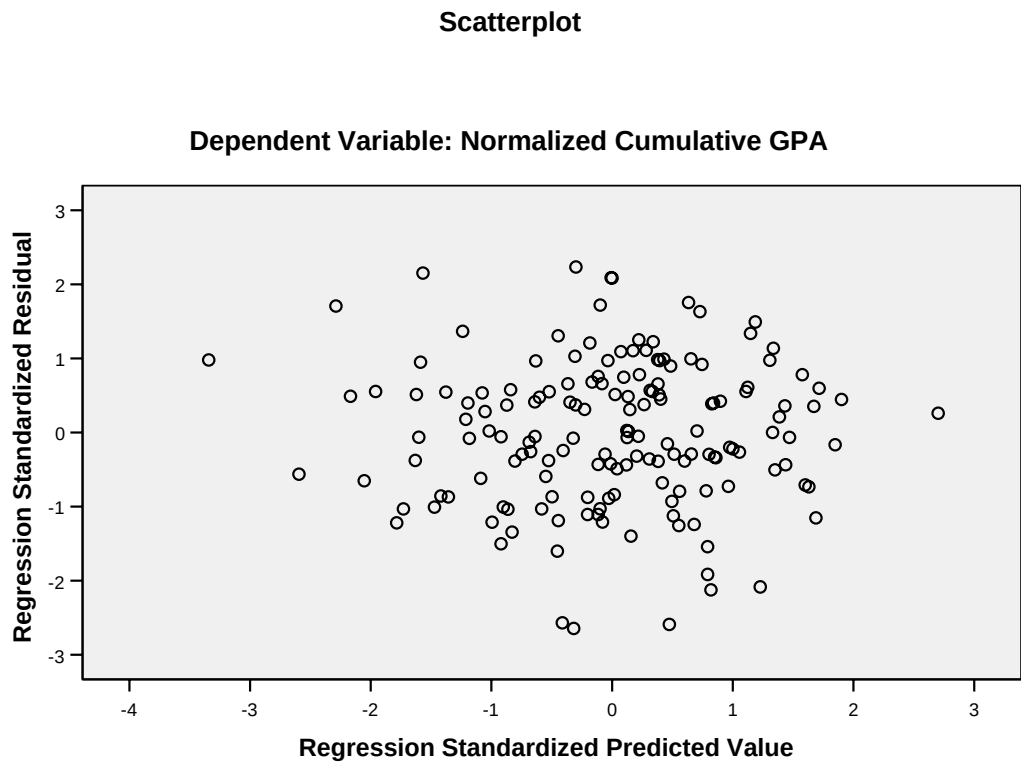


Table 8 contains the results of the multiple regression analysis of academic self-efficacy, institutional integration, and racial identity attitudes on academic achievement from the final fitted model. Forty-two percent of the variance³⁴ in cumulative GPA is explained by this model [Adjusted $R^2 = .372$, $F(11,158) = 9.492$, $p < .001$].

³⁴ The R^2 statistic reports the amount of variance in the dependent variable (cumulative GPA) that is explained by the combination of independent variables. However, in small sample studies, the R^2 statistic can be sensitive to the number of variables. The more variables in the model, the higher the R^2 statistic. Thus, from this point on, I will report the Adjusted R^2 statistic which corrects for the number of variables in the model and provides a better estimate of the true population value.

Table 8

Multiple regression analysis of the effects of self-efficacy, institutional integration, and racial identity attitudes on achievement of Black males attending research universities

Independent Variable	β	Beta	<i>t</i>	<i>p</i>
Constant	3.609		2.194	.030
STEM Major	-.226	-.187	-2.83	.005
HS GPA	.012	.205	2.83	.005
Combined SAT I Scores	.001	.274	3.60	.000
Academic Self-Efficacy	.169	.291	4.34	.000
Social Integration	-1.07	-1.39	-2.77	.006
Academic Integration	-.067	-.086	-.308	.758
Immersion-Emersion	.663	.735	2.27	.025
Internalization	-1.55	-1.47	-3.39	.001
Social Integration x Internalization	.261	1.60	2.68	.008
Academic Integration x Internalization	.166	1.017	2.07	.041
Academic Integration x Imm-Em	-.181	-.851	-2.001	.047

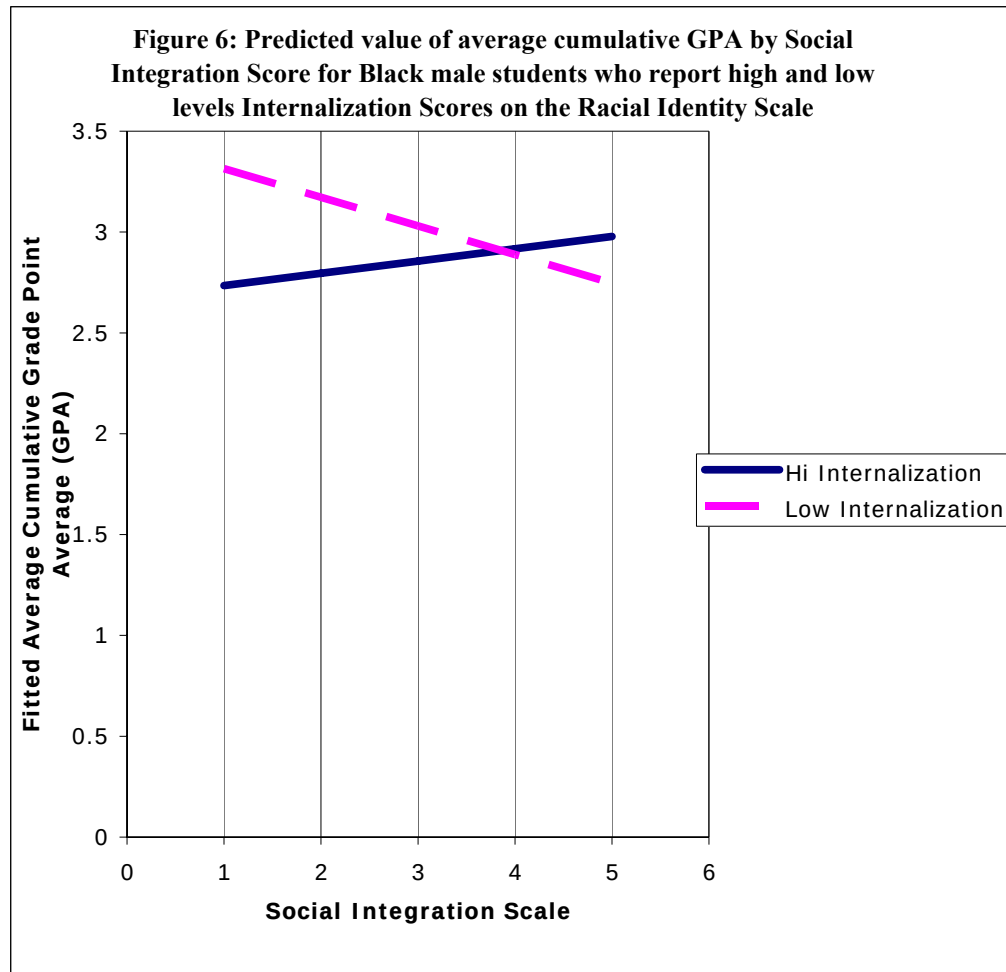
Note. $R^2 = .415$, Adjusted $R^2 = .372$ $F(16,142) = 9.492$, $p < .001$

Significant Main Effects on Achievement. Echoing the results of the correlation analysis, as Table 8 indicates, the main effects of academic self-efficacy, combined SAT score, and high school GPA had a significant and positive influence on cumulative GPA while accounting for all other factors. Of these, self-efficacy (Beta = .291, $t = 4.34$, $p < .001$) and combined SAT score (Beta = .274, $t = 3.60$, $p < .001$) had the strongest effect, followed by high school GPA (Beta = .205, $t = 2.83$, $p = .005$). Thus, the most academically successful Black males in college also scored higher on levels of self-efficacy, even after accounting for all other factors including their major, their HS GPA, and SAT scores. This supports the earlier finding, but with the statistical controls applied. In addition, Black males who come to university with strong high school records and test

scores are more likely to be the highest achievers. Neither income nor parent education factored into the equation.

New in this analysis is the influence of majoring in the life or physical sciences, mathematics, engineering or technology on GPA, which has a unique and weakly negative influence on achievement (Beta = -.187, $t = -2.833$, $p = .005$). On average, Black males in the STEM fields do more poorly than those majoring in non-STEM disciplines, holding other factors constant.

Significant Two-Way Effects on Achievement. I discovered a significant two-way interaction between Internalization and Social Integration subscale scores (Beta = .261, $t = 2.68$, $p = .008$), which suggests that Social Integration scores had a statistically different effect on GPA depending on the level of racial Internalization. To illustrate the impact of the two-way interaction on achievement, Figure 6 contains prototypical plots showing the relationship between Social Integration and GPA for two categories of students: those who scored high on Internalization scores (75th percentile), and those at the 25th percentile.



This figure shows that for Black males who score higher on the internalized stage of their racial identity, there is a positive relationship between levels of Social Integration and GPA, suggesting that for racially internalized males, higher achievement is associated with greater peer cohesion. Moreover, the figure illustrates that those who are most socially integrated *and* who are more resolved in their racial identity perform academically better than their peers who are also socially integrated but who are not as racially resolved. These findings support a major hypothesis of this study, that those students who are more advanced in their racial identity development also perform well in the academic context.

However, for Black males who score lower on the Internalization stage of their racial identity development, higher quality social interactions had a negative effect on their overall grades. This finding runs counter to the prevailing view that greater Social Integration is associated with persistence, though the latter was not directly measured. For these less racially transcendent students, it is entirely plausible that their peer interactions, albeit high quality, could largely comprise students who are likewise underperforming or who are within their race. The survey instrument did not distinguish the race of their peers when the respondents were asked to rate the quality of their interactions.

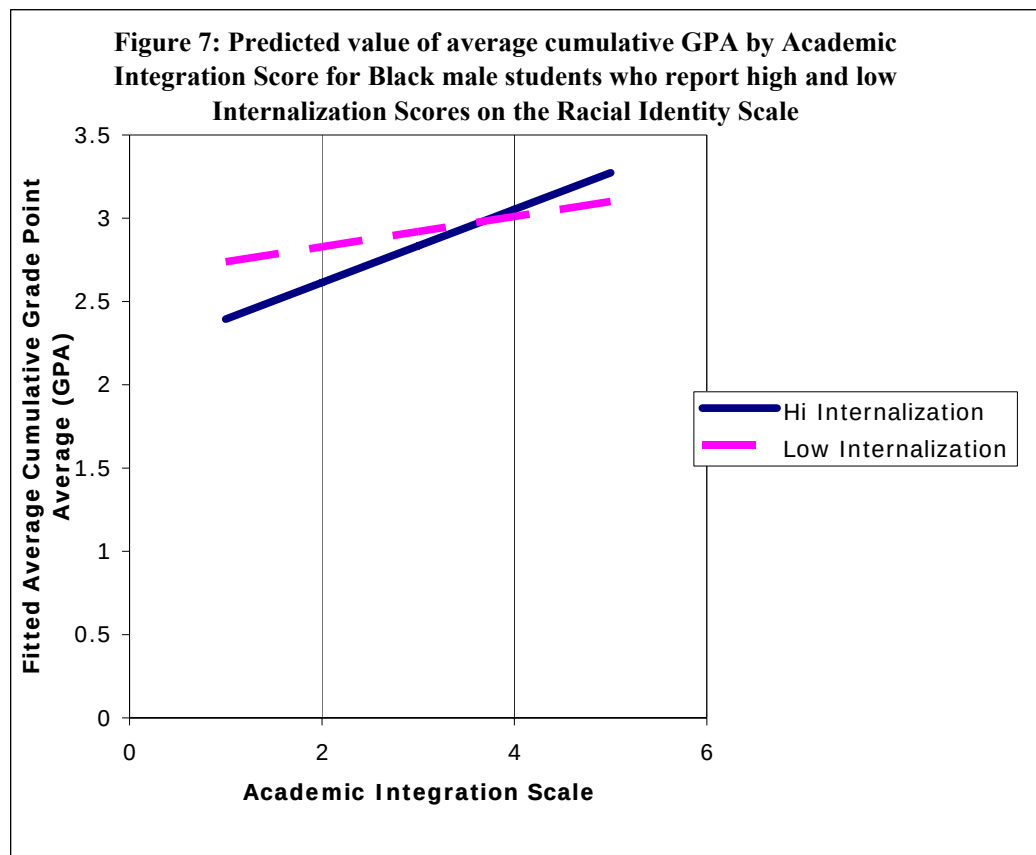
The peer effect could certainly be the mitigating factor when one considers another observation from Figure 6. Curiously, students who report having poor quality interactions with their peers and who have low Internalization scores on average perform better than all students, including the more racially internalized students at all levels of peer cohesion. Though these Black males scored low on racial Internalization, it is possible that the poor quality of their interactions, and their likely social isolation, may effectively buffer them from the deleterious effects of these peer influences on achievement. Still, this explanation does not tell us why the highly internalized student does so much more poorly at low levels of Social Integration relative to the less resolved Black male. These findings will be discussed further in the next chapter.

To summarize, the effect of Internalization on achievement varies with peer group interaction (Social Integration). This is an important finding that confirms a hypothesis of this study, though the direction of the theorized relationship between Internalization, Social Integration, and achievement is less straightforward than originally predicted. An internalized African American male — one who has a positive and stable Black identity

and who is more likely to have formed relationships that transcend race (Helms, 1990) — is associated with higher academic performance in predominantly White institutions.

African American males who are not internalized racially, that is they may have stronger Pre-Encounter or Immersion-Emersion attitudes, do more poorly with increasing levels of social integration. However, only at high levels of perceived peer cohesion does the racially resolved male do academically better than their counterpart. At low levels of peer cohesion, non-internalized Black males on average perform better.

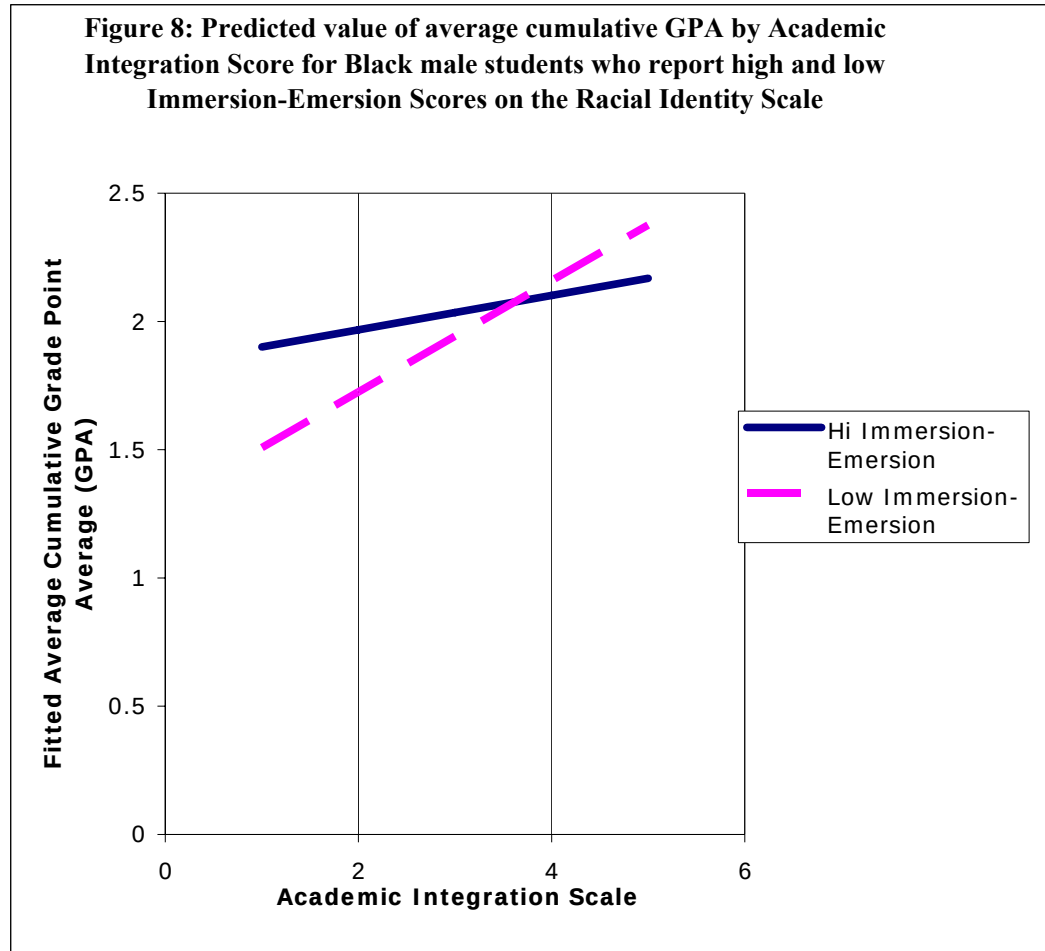
Figure 7 depicts the significant and positive two-way interaction between Academic Integration and Internalization scores, but the effect of Academic Integration on achievement is far greater than that for Social Integration for both highly resolved and racially diffused African American males.



Young men with high Internalization scores who report having a strong relationship with faculty (a 4 and 5 on the Academic Integration scale) are associated with higher grades on average than their counterparts who report a low level of racial transcendence, but who also have strong relations with faculty. This finding supports my hypothesis and confirms earlier results that the quality of faculty-student relationships is linked to achievement. However, similar to the two-way interaction between Social Integration and Internalization discussed above, the relationship between Academic Integration and achievement for Black males is enormously complex. For students who are not racially internalized, higher levels of Academic Integration had a more moderate effect on achievement than for those who were racially internalized, though the GPA range for the less resolved students is only approximately 0.25, while that of the racially transcendent student at the 75th percentile mark is approximately half a GPA point. Some reasons why the racially internalized student on average performs more poorly than the Black male who reports both low levels of racial maturity and quality of faculty interactions will be discussed later.

In summary, Internalization appears to facilitate achievement. The more racially internalized the African American male, the greater the influence on achievement of having meaningful and high-quality interactions with faculty and peers. However, Black males who are not racially internalized do better when they are dissatisfied with the level of faculty interaction. Several explanations for this finding will be suggested later.

Finally, a significant two-way interaction was also discovered between the Immersion-Emersion subscale scores and Academic Integration, but the effect is the inverse of Internalization as illustrated in Figure 8.



Here, quality of faculty interactions seems to have a moderate effect on the achievement of Black males who score at the 75th percentile of Immersion-Emersion scores. Their high scores on the subscale reflect an intensive and emotional search for identity that appears to mitigate the effect of faculty engagement. On the other hand, there is a strong positive relationship for students who report low scores on the Immersion-Emersion subscale between achievement and the perceived quality of faculty interactions. Low Immersion-Emersion scores, which could mean higher Internalization or Pre-encounter scores, is associated with a world view that could more conceivably engage with faculty absent the skepticism associated with the Immersion-Emersion stage.

This important and yet complex relationship will be discussed later. I now turn to report the results of the high- and low-performing student analysis.

Group Differences: High- and Low-Performers

My second hypothesis is that high-achieving Black males will score significantly higher on measures of academic self-efficacy, academic and social integration, and certain racial identity attitudes than those who academically perform less well. To test the second hypothesis, I examined the differences between perceived levels of academic self-efficacy, levels of institutional integration, and racial identity attitudes between academically successful Black males in research universities (those above the median grade point average) and those who did more poorly. To answer this question, I conducted a series of t-tests that compared the mean scores of each question variables for the two groups. The results of this analysis are presented in Tables 8 and 9, which respectively show the descriptive statistics for each variable of the high and low groups, and the results of the t-test.

Table 9

Comparison of descriptive statistics of Black male students who perform above and below the median grade point average

	Cumulative GPA Group	N	Mean	SD	Std. Error Mean
Academic Self-Efficacy	>= 3.00	97	8.3162	.61836	.06278
	< 3.00	86	7.5039	1.09931	.11854
Social Integration	>= 3.00	97	3.6730	.68666	.06972
	< 3.00	86	3.5415	.70126	.07562
Academic Integration	>= 3.00	97	3.3897	.64120	.06510
	< 3.00	86	3.1186	.71382	.07697
Pre-encounter	>= 3.00	97	1.8603	.47717	.04845
	< 3.00	86	1.9289	.47720	.05146
Immersion-Emersion	>= 3.00	97	2.3170	.55729	.05658
	< 3.00	86	2.4462	.62265	.06714
Internalization	>= 3.00	97	3.8534	.53709	.05453
	< 3.00	86	3.9496	.47559	.0512

Table 10

Results of the Independent Samples t-test of mean differences between high and low performing African American male students

	t	df	p	Mean Difference	Std. Error Difference
Academic Self-Efficacy	6.0553	181	.000	.81228	.13414
Social Integration	1.280	181	.202	.13152	.06972
Academic Integration	2.706	181	.007	.27109	.06510
Pre-encounter	-.972	181	.332	-.06869	.04845
Immersion-Emersion	-1.481	181	.140	-.12921	.05658
Internalization	-1.276	181	.204	-.09623	.05453

Academic Self-Efficacy. There was a significant difference in academic self-efficacy scores between high achievers ($M=8.32$, $SD = .62$) and those who averaged

below the 3.0 median [(M=7.50, SD = 1.10, $t(181)=6.055$, $p<.001$)]. More successful Black males reported significantly higher levels of self-efficacy than their less academically successful peers. This agrees with earlier findings that academic self-efficacy has a significant and positive influence on achievement, even after controlling for family and academic background, levels of institutional integration, and racial identity attitudes. The latest finding also supports the main hypothesis of this study that academically stronger Black males have heightened self-efficacy.

Institutional Integration. Also agreeing with the results of the correlation analysis, high achieving Black males report stronger ties with faculty. These students reported significantly higher scores (M=3.90, SD = .64) on the Academic Integration scale than those whose cumulative grade averages fell below the mean [M=3.12, SD = .71, $t(181)=2.71$, $p=.07$]. Moreover, academically successful Black males are more socially integrated (M=3.67, SD = .69) than their peers but the difference was not statistically significant [M=3.54, SD = .70; $t(181)=1.280$, $p=.20$]. The magnitude of the difference was very small.

Taken together, African American males who do well in college have stronger ties with faculty and have heightened sense of self-efficacy, and these differences are significant. The high achievers also report better peer relations, but the difference is not statistically significant. While this study makes no claims of causality (*do confident students more aggressively reach out to faculty and thus have better outcomes, or are better students approached by faculty thus increasing their confidence?*), the differences in academic self-efficacy and Academic Integration between the two groups do affirmatively answer one component of the research question posed by this study.

Racial Identity. There were no significant differences in the mean scores between high- and low-achieving students on any of the racial identity variables at the .05 level though the results of the Immersion-Emersion scores warrant mention. Students on the low end of the grade distribution scored somewhat higher on the Immersion-Emersion scale ($M=2.45$, $SD=.62$) than the high performers ($M=2.32$, $SD=.56$), though the magnitude of the mean difference was not significant [$t(181)=-1.48$, $p=.140$].

Group Differences: STEM and Non-STEM Majors

The correlation matrix in Table 7 suggested that Black males in the sample who major in non-STEM fields on average do better than those who major in other more technical disciplines ($r= -.094$), though the correlation was not significant ($p=.200$). I thus sought to determine if there were differences in self-efficacy, institutional integration, and racial identity between those who study one or more of the STEM fields, and those Black males who do not. As Table 11 reveals, STEM majors do not statistically differ from non-majors on any of the attitudinal scales, though non-STEM majors in this sample report higher quality interactions with faculty ($M=3.4$, $SD=.69$) than non-STEM majors [$M=3.22$, $SD = .67$; $t(187)=-1.461$, $p=.146$], and the difference approaches significance.

Table 11

Results of the Independent Samples t-test of mean differences between African American male students who major in at least one STEM discipline

	t	Df	P	Mean Difference	Std. Error Difference
Academic Self-Efficacy	-.009	188	.993	-.09083	.16030
Social Integration	.022	188	.983	.00474	.11046
Academic Integration	-1.461	187	.146	-.17928	.10814
Pre-encounter	-.289	188	.773	.03597	.07875
Immersion-Emersion	-.541	186	.589	-.04939	.09448
Internalization	-.191	187	.849	-.04336	.08182

Chapter 5: Discussion

Factors That Influence Achievement

The first major hypothesis of this study holds that Black males attending research universities who report heightened self-efficacy, positive racial identity attitudes, and high levels of institutional integration would earn higher cumulative GPAs. This was indeed what I found, though the results revealed greater complexity than I had predicted. Second, I hypothesized that high-achieving African American males would have statistically higher perceived levels of academic self-efficacy, levels of institutional integration, and racial identity attitudes than those who did more poorly.³⁵ This hypothesis was partially supported.

In the section that follows, I discuss the results of the analysis that tested each hypothesis and located the findings within the context of the prevailing literature. For the hypotheses, I discuss each conceptual area, beginning first with self-efficacy, followed by institutional integration and racial identity.

Self-Efficacy

Academic self-efficacy was found to be the strongest predictor of achievement among all factors that were measured. The most academically successful African American males were also confident that they will be successful in college even after

³⁵ The second hypothesis — that high-achieving Black males are statistically different on the question variables than those who perform less well — is conceptually a crude version of the first which applies statistical controls to test the supposition that Black males who score higher on measures of achievement also score higher on the other factors.

accounting for their SAT scores, high school grades, college major, and their parents' education and income (Table 8). This finding in part supports my main hypothesis and validates several studies of college students that show academic self-efficacy to be a significant predictor of collegiate achievement (Bandura, 1997; Combs, 2001; Gainor & Lent, 1998; Pajares, 2002; Schunk, 1983).

Self-Efficacy and Academic Integration

The most efficacious African American male students also report having high-quality relationships with faculty and are satisfied with their opportunities to interact with them.³⁶ Regrettably, the inverse is also true; the least confident Black males have poorer faculty interactions.

The positive correlation between self-efficacy and faculty integration supports my hypothesized model (Figure 2, Link B) that self-efficacy may moderate the quality of faculty interactions. This important finding has an explanation rooted in social cognitive theory. Verbal judgments from influential people are a source of self-efficacy as was discussed in Chapter 2. It is possible that as students interact favorably with their faculty, the instructors in turn convey their high expectations and affirm their intellectual abilities, thereby building their self-efficacy. Steele's (2003) experiments have proven that Black students who received feedback that explicitly communicated high standards and ability affirmation were more responsive to academic feedback and became more

³⁶ It is not known if the perceived quality of faculty interactions were influenced by the race of the faculty members with whom the students interacted in this sample. Accounting for this demographic may provide future researchers with an explanation into why perceptions of faculty relationship vary by individual and across institutions.

motivated to do better. A willingness to improve one's learning strategies, and motivation to do so is evidence of an efficacious student.

Another explanation for the link between self-efficacy and faculty integration is suggested in the literature. Efficacious students tend to exhibit assertive behaviors that may be an advantage in the college setting, particularly as they engage faculty (Gainor & Lent, 1998; Morris, 2004; Peterson, 1993; Phinney & Haas, 2003). Specifically, confident students could be more likely to approach their faculty than students less confident in their abilities. Their academic self-confidence may empower them with the agency to overcome a reluctance to reach out for help, or just engage their instructors for deeper understanding.

In sum, these findings suggest that universities can directly improve the outcomes of African American males by raising their perceived levels of academic self-efficacy, which the literature suggests, is derived from one or more of the following sources:

1. **Mastery Experiences:** Students increase self-efficacy as they experience academic success (Schunk, 1983). This is the strongest source of self-efficacy (Pajares, 2002).
2. **Vicarious Experiences:** The success of a role model who possesses similar attributes is particularly helpful in raising self-efficacy beliefs, though watching a proxy fail could have a deleterious affect on self-efficacy (Pajares, 2002).
3. **Verbal Judgments or Social Persuasion:** Family, professors, peers, and others who offer verbal judgments about a student's capabilities can build up or tear down his perceived self-efficacy (Pajares, 2002), though it is

easier to weaken self-efficacy through negative appraisals than to raise it with verbal praise (Morris, 2004).

4. Physiological and Emotional States: Experiencing anxiety, stress, fatigue, and moodiness while undertaking a task may cause a student to judge his capabilities as vulnerable (Bandura, 1997; Pajares, 2002).

To summarize, self-efficacy beliefs are a strong predictor of the collegiate achievement of African American males attending predominantly White research universities. Likewise, perceived academic self-efficacy correlates positively with the perceived quality of faculty interactions, suggesting that self-efficacy beliefs could facilitate faculty contact (or vice versa), which in turn could influence achievement. These results confirm a component of the main hypothesis that Black males who report heightened self-efficacy earn higher cumulative GPAs.

Academic Integration and Internalized Racial Identity

As hypothesized, Academic Integration, or the quality of interaction with faculty, was significantly and positively associated with levels of achievement for Black males in this study. Generally, African American males who report stronger relations with faculty (*“since coming to this university, I have developed a close personal relationship with at least one faculty member”*) on average perform at higher levels (Table 7). This correlation empirically supports one element of Tinto’s (1993) Institutional Integration Theory which maintains that the extent to which a student positively responds to the intellectual challenges of a university, and integrates into the institutional milieu will be reflected in his persistence. For minority students, higher levels of faculty encouragement and lower levels of faculty discouragement have also been associated with persistence

(Donovan, 1984) and achievement (Hackett et al., 1992). These results also hold for African American males in the literature as well. For instance, both Davis (1994) and Allen (1992) discovered a link between achievement and Academic Integration for African American males attending both HBCUs and PWIs. In other words, Black males also benefit from greater faculty contact.

However, as the present study discovered, not all Black males benefit from higher perceived quality of faculty interactions (Academic Integration). For students who have a more internalized, positive racial identity, the effect of Academic Integration on achievement was greater than for African American males who were not as racially internalized (Figure 7). Referring to the latter, higher levels of faculty contact had a more moderate effect on achievement than for those students who had less racial maturity.

These more nuanced results suggest that Tinto's theory of institutional integration may have an embedded assumption of ethnic or racial synchrony between faculty and student. That is, White students making contact with White professors (or Black students interacting with Black faculty) gain the full benefit of greater integration. Based on my findings, this is not always true to the same degree for Black males attending predominantly White institutions. Only Black males who had achieved a greater level of cultural fluency (Internalization attitudes) benefited from meaningful faculty contact. Theoretically, these more internalized young men who were more stable in their identity would also be more cognitively and emotionally unburdened to concentrate on meaningful activities (Cross, 1991) such as making improvements in their study habits.

Still, this explanation fails to explain why students who were not as racially resolved and who reported poor quality of faculty interaction did academically better than their peers who were less sophisticated in responding to, or ability to manage, racial

stimuli (Nghe & Mahalik, 2001). Black males who reported very negative interactions with faculty who also were at the 25th percentile of their racial Internalization score on average earned a GPA of about 0.4 points *higher* than those who were more highly internalized. One possible explanation is rooted in the nature of identity. One's social identity is a "sense of belonging to an ethnic group and the part of one's thinking, perception, feelings and behavior that is due to ethnic group membership" (Phinney & Rosenthal, 1992, p. 147). Thus, the African American male's identity is a social construction that, with increasing interactions, forces him to play out his "role identity" (Flores-Gonzalez, 2002). The explanation of this psychosocial phenomenon is drawn from the "the theory of symbolic interactionism" (Lewin, 1936 in Douglas, 1998) which posits that behavior derives from the interaction between people and their environments. Isolated from contact, in this case from faculty, young men who are less racially resolved are not (or avoid being) reminded of their social status and therefore avoid triggering the "symbolic interactionism" and accompanying emotional distress that plays out when one's social identity is under threat (Steele, 1999).

These Black men who are not racially internalized and who are dissatisfied with the quality of faculty interactions seemed to have developed a coping strategy that works for them, particularly in this mostly technical sample. As will be discussed below, 74 percent of the sample majored in at least one STEM field, which comprise courses that typically do not foster social and emotional faculty-student interactions (Gainen, 1995). Thus, the structural dynamics of the courses may trump the negative effects of being dissatisfied with faculty for those who are less racially mature. In the long run, however, their relative isolation may hinder their continued growth and future success as they invariably will be forced into cross-racial spaces later in life.

The nature of my research design prevented a follow up investigation into why the more academically integrated males generally performed better, and so I looked to the research literature for plausible explanations. Donovan's (1984) study of 403 Black students offers some insight. In this study, African American students who scored higher on perceived levels of Academic Integration also tended to have better study practices. This suggests that either by direct instruction or modeling, increased faculty interaction possibly resulted in improvements in the development of effective learning strategies, which are directly associated with improved grades (Campbell, 1996). Still, on the basis of the present findings, faculty should be sensitive to where a student is in his own identity development so overtures of support will not be misinterpreted.

Academic Integration and Immersion-Emersion Identity

High Immersion-Emersion attitudes, reflecting an intensive and emotional search for identity often associated with pro-Black/anti-White attitudes (Helms, 1990), appear to moderate the effect of faculty engagement as Figure 8 depicts. This racial identity stage, typically triggered by one or a series of racial encounters, spawns an examination into what it means to be a member of this ethnic group in the larger societal context. The Black male in this stage seeks to examine cultural differences, recognizes reinforcing stereotypes held by society, and may take on oppositional behaviors that are sanctioned by his Black reference group. It is possible that his anger directed at Whites associated with this stage of development could strain the interactions between student and faculty who are mostly White at these institutions.

Moreover, Campbell and Fleming (2000) found that African American males who hold high Immersion-Emersion attitudes (pro-Black/anti-White) are also linked to poorer

study habits. The researchers argue that Black males in this intense racial identity category may associate expanding academic efforts to pro-White endeavors and thus categorically reject them. Ogbu (1990) suggested African Americans and other “involuntary minorities” adopt “folk theories” or internal scripts that are oppositional to academic achievement, though this phenomenon could be moderated by the school-identified students in this selective school sample. Still, the effect of the Immersion-Emersion attitudes may in fact diminish the motivation to perform at high levels as these results imply.

Finally, high Immersion-Emersion students may also reflect an immersion in pro-Black activities which detract students from studying (Campbell & Fleming, 2000). Indeed, Helms (1990) asserts that individuals in this stage of psychosocial development take on behaviors and activities that could detract their cognitive energy to the point that it impairs motivation and ultimately hinders academic performance (Helms, 1990). Such a phenomenon may be at the root of Leppel’s (2002) discovery of a negative relationship between campus activities and achievement for African American males who joined more than three student groups on campus. While the Leppel study did not discriminate between the type of student groups they join, Cross (1991) would suggest that Black males in this stage of their development would exclusively join groups that are “down with the cause,” and not necessarily with his academic pursuits. Further study of specific habits and activities of Black men in this developmental stage would be informative.

Given the intensity of emotions and pro-Black worldviews associated with this stage, coupled with the resultant isolationist and often oppositional behaviors, it is a logical conclusion that the positive effect of improved faculty-student interaction is

moderated by high Immersion-Emersion attitudes. Any faculty interaction could be viewed with skepticism by the Black male in this ego stage of his development.

Finally, it is important to note the strong positive link between the perceived quality of faculty interaction and achievement for students who report low scores on the Immersion-Emersion subscale. Low Immersion-Emersion scores could be associated with higher Internalization or Pre-encounter stages, both of which tend to have lower emotional distress associated with them. Thus, the student is cognitively and emotionally able to appraise faculty overtures on face value.

These findings suggest that concerted efforts should be made to help Black males grow in their understanding of their own racial identity by fostering their growth from Immersion to Emersion, and eventually to Internalization attitudes if they are to increase their performance and the quality of their college experience.

In summary, while studies have shown that students who feel satisfied and congruent with the academic systems on campus are more likely to graduate (Brown, 1995; Tinto, 1993), the present study extends Tinto's theory by suggesting that racial identity is a moderator of Academic Integration and achievement. It suggests that attention be given to the development of the Black male's racial identity to take full advantage of efforts to increase faculty-student interactions.

Social Integration and Internalized Racial Identity

Generally, college students benefit academically from greater peer cohesion and campus participation in college-sponsored events (Astin, 1993; Pascarella & Terenzini, 1991), but only a handful of studies have attempted to link peer cohesion with measures of achievement for Black males. Only Leppel (2002) discovered a general positive

relationship between level of campus involvement and GPA for thousands of African American students she examined in her study.

My bivariate correlation analysis uncovered a moderately negative association between the Immersion-Emersion stage and quality of peer interactions (Social Integration). That is, African American males who scored higher on the Immersion-Emersion scale on average reported significantly lower scores on the Social Integration scale. This result suggests that Black males who adopt an Immersion-Emersion racial identity attitude — characterized by an exclusive investigation of their racial identity and withdrawal into a Black world — are less likely to have developed close personal peer relationships or have met students who share their values. Black males who score higher on Immersion-Emersion scales would exhibit psychological functioning that could inhibit the strength and quality of their social relationships. Indeed, Parham and Helms (1985) found that Immersion attitudes predicted significantly more anxiety and anger than in other stages. Another study found negative social problem-solving appraisals (lacking confidence) and avoidant and suppressive coping activities associated with their higher pro-Black/anti-White (Immersion-Emersion) attitudes (Neville & Lilly, 2000). Indeed, the Immersion-Emersion stage is linked to reports of higher college student stressors (e.g., roommate or financial concerns) and more “acting out” using “socially undesirable” defenses when they encounter racialized stimuli (Nghe & Mahalik, 2001).

These are plausible explanations for why Black males who score high in the Immersion-Emersion stage of racial identity have poorer Social Integration scores. Proactively empowering Black males to traverse the Immersion-Emersion stage of racial identity development is critical to their achieving a self-affirming, more resolved socio-racial identity status (Helms, 1990). Universities can create a climate that fosters the

successful development of racial identity without setting up an oppositional dynamic that could delay or, in fact, reify the retreat into ideological and reference group isolation. The next chapter describes programs and institutions that have demonstrated success in fostering positive racial identity development.

In this study, peer cohesion (Social Integration) had no direct effect on academic achievement after accounting for all other factors. However, for African American males who were more sophisticated in their understanding and handling of their racial identity (Internalization), perceived higher quality interactions with their collegiate peers (Social Integration) on average was significantly and positively associated with higher academic outcomes, after accounting for all other factors. That is to say, racial identity, in particular the Internalization attitude, indirectly influences achievement by moderating the effect of peer cohesion on the Black male's academic outcomes. This is an important finding that supports the general hypothesis of this study.

The literature provides key psychosocial insights into why the Internalization attitude moderates peer cohesion. The internalized ego stage has been empirically linked to higher psychological functioning (Brookins, Anyabwile & Nacoste, 1996 in Neville), positive self-concept (Wilson & Constantine, 1999 in Neville), and goal-directed behavior (Jackson & Neville, 1998) which all have social implications. Though the internalized African American male maintains identification with Blacks as his primary reference group, he also develops a concern for others with less regard to race or national origin. Further, he is more likely to have formed relationships that transcend race (Helms, 1990). Indeed, Davis and his colleagues (Davis et al., 2004) discovered that Black males who were more internalized selectively befriended individuals from both White and Black communities. Multicultural friendships are associated with higher college

satisfaction than for those having a mono-cultural friendship circle (Bowen & Bok, 1998).

Echoing an earlier study, Campbell (1996) offers another more practical explanation. Internalized racial identity attitudes were positively linked to strong study habits. Thus, it is plausible that students who had more pride and security in their identity interacted more favorably with a cross-section of students, picking up good learning habits along the way.

For less racially internalized African American males, greater social interaction was associated with *poorer* academic performance. It is possible that those who are not racially internalized and thus have low self-esteem and self-acceptance (Campbell, 1996) get more involved in extracurricular activities to divert their attention from their academic pursuits. In other words, it may be that greater Social Integration could be a welcome but unproductive distraction for Black males who are not performing well.³⁷ Indeed, this might explain why Leppel (2002) found that Black males who join more than three campus groups performed more poorly than their less-involved peers. To steer clear of validating his self-doubt, a Black male may avoid certain *arenas of competition* by increasing his social activity (Howard & Hammond, 1985). Howard and Hammond suggest that avoiding competition is a strategy that Black students employ to battle negative stereotypes or avoid haunting questions about their intellectual capabilities.

Another explanation for the negative relationship between Social Integration and GPA could be a function of the instrument used to assess the quality of peer interactions.

³⁷ Note that I am reporting association and not causality, thus less successful students may be less secure *because* they are less successful.

It is possible that for students who are not internalized (that is, they could be at the Immersion-Emersion stage), their peer interactions, albeit high quality, could largely comprise students who are likewise underperforming. The instrument unfortunately did not inquire into the race of the respondent's closest peers when they were asked to rate the quality of their interactions, leaving unanswered an intriguing question.

One curious finding warrants thoughtful discussion. African American males who are not racially resolved and who were unhappy with the quality of peer cohesion performed better than students who are highly resolved at the same levels of social interaction. This disparity is similar to what I discovered with varying levels of Academic Integration, but not to this great extent. There are several possible explanations for this disparity. First, it is possible that low levels of Social Integration buffers students from triggering questions about their academic ability and thus mitigate the effect of stereotype threat (Steele, 1997), as discussed above. According to Steele, when a school-identified African American finds himself in a situation where a negative stereotype threatens to reduce him to, or be judged by a relevant stereotype, then this situational threat can trigger an emotional response that ultimately undermines his performance in the domain where the threat is activated. Students who are not as racially resolved and who tend to isolate themselves from attacks on their self-concept may be able to perform without psychological impediment. For instance, students with strong Pre-encounter beliefs, in theory, would not be subject to stereotype threat because their diffused identity state would not self-implicate them to confirm a stereotype. Racially resolved students, on the other hand, who have poor peer interactions may be more sensitive to stereotype threat than their classmates who are less racially transcendent.

Neville and Lilly (2000) would offer another explanation. In their factor analysis of racial identity attitudes and psychological distress of 182 (123 women and 59 men) undergraduates attending two predominantly White universities in the Midwest, they discovered three sub-categorizations of Internalization attitudes:

- Engaged Internalization: where there may be a focus on race in that they think about it and are surprised by instances of racism in daily life, yet they are heavily involved in Black activities;
- Committed Internalization: individuals are less concerned with race and racism issues. Though Black identity is central, they may embrace other social identities;
- Dissonance Internalization: Though they present like the Committed Internalization profile, these may be more confused and conflicted by societal racism and race.

According to Neville and Lilly, college students tend to report high levels of Internalization scores, but actually fall within *complex structures* that underlie their responses. For instance, African American college students who reported Engaged Internalization attitudes also reported lower levels of psychological distress than the Dissonance Internalization cluster. It is possible that participants in the present study who report varying levels of Internalization may in fact fall into one or more of these subcategories. Thus, though they report being more racially resolved with high levels of self-acceptance, it is possible that those at the 75th percentile of Internalization scores at low levels of Social Integration may in fact be Dissonant Internalized and still confused about their race. Without a more fine-grained instrument that captures these

subcategories, there is no way to tell if the continuum of racial identity attitudes reported across the full range of Social Integration actually represents more than one cluster of internalized views about their race. Such conjecture calls for further investigation to be sure.

The less racially resolved Black males who report poor peer relationships and who do well may also be more bookish and socially awkward than their classmates. While this link was not investigated in this study, that 74 percent of the sample majored in at least one science, technology, engineering and mathematics (STEM) discipline is informative. Gainen (1995) asserts that STEM classrooms and courses tend to be taught in the traditional lecture-recitation format which she posits does not lend itself to meaningful peer (or faculty³⁸) interactions. Thus, it is entirely plausible that the pedagogical structure of the technical course which requires less peer collaboration may actually benefit the more introverted, racially unresolved Black male. Indeed, the direction of causality may also be in the opposite direction. The socially awkward student may be drawn to classes (and majors) where there is a low expectation for peer cohesion.

To summarize, it is theorized that the extent to which a student is comfortable with the prevailing social values, norms, behaviors and attitudes may predict the rate and degree of transition into the college environment (Tinto, 1993), and thereby influence his achievement. Typically, these values are measured attitudinally by surveying the quality of peer cohesion (as was the case in this study) or quantifying the use of campus

³⁸ Indeed, non-STEM majors in this study on average report higher-quality faculty interactions than STEM majors, though the correlation only approached significance (Table 11).

facilities. This study found no relationship between peer cohesion and measures of achievement for Black males attending research universities except when their racial identity was considered. For Black males who are more racially resolved, there is a positive relationship between levels of Social Integration and academic achievement. The more successful students have a stable Black identity and high quality interactions with their peers. However, for African American males who are more diffused in their racial identity, greater social interaction is associated with poorer grades except when they rate their peer interactions and extracurricular activities unsatisfactorily. Here, it is believed that their relative isolation may buffer them from certain social-psychological effects of peer interactions such as *stereotype threat*, thereby enabling these men to perform better than they would if they were more heavily involved on campus. It is also plausible that the more socially isolated students are also the more bookish who thrive in STEM courses that require relatively minimal social interactions. With fewer social exchanges in this pedagogical context, students may simply have more time to study. Still, I suggest that such isolation will eventually hurt them in the long run as they progress through their academic and professional lives.

STEM Majors

Though the African American males in this study who major in one or more of the STEM fields arrive in college with stronger precognitive scores, they do more poorly than those majoring in non-STEM disciplines, even after accounting for all other factors.³⁹ One explanation for this pre- and in-college performance dissonance is the

³⁹ The difference in grade point averages between STEM and non-STEM majors was not significant when the statistical controls were not employed.

greater academic rigor required of these majors (Williams & Leonard, 1988) which places downward pressure on grades.

To understand if academic self-efficacy, racial identity, or levels of institutional integration explain some of the dissonance, I compared the attitudinal scale scores between STEM and non-STEM majors. No statistical difference was found. The absence of observed factors to explain the achievement disparity adds strength to the suggestion that STEM courses on average are more difficult than non-STEM classes. Future studies should explore more broadly how self-efficacy beliefs, racial identity, and institutional integration differ for STEM and non-STEM majors, perhaps using larger samples.

Cognitive Variables

The analysis revealed certain background factors were positively linked to Black male collegiate achievement. Though these were not my question variables, the findings are important to note. In addition to the positive influence of academic self-efficacy and faculty interaction on GPA, combined SAT I score and high school GPA were also positively linked to achievement. Black males with higher SAT scores and high school GPA did better in college. Indeed, combined SAT scores and high school GPA had respectively the second and third greatest influence on achievement in this study after academic self-efficacy.

Not surprisingly, African American males with stronger high school records on average performed reasonably better in college. The positive association between these cognitive variables and achievement was also discovered by others (Baird, 1984; Bowen & Bok, 1998; Donovan, 1984; Hood, 1992; Johnson, 1993; Williams & Leonard, 1988). However, the strength of the association in the present study between SAT scores, high

school GPA, and collegiate performance is stronger than what has been found elsewhere (Bowen & Bok, 1998; Johnson, 1993).

It is possible that the majority STEM representation in the sample may explain the strong influence. Williams and Leonard (1988) also discovered that cognitive measures (SAT scores, college and high school GPA) had a stronger effect on the academic progress of about 200 African American computer science and engineering students than non-cognitive factors such as racial identity, self-efficacy, vocational interests, and college environment. In explaining their findings, the researchers suggested that the technical majors of their participants required early preparation in math, science, and communication skills, which presumed strong pre-college scores. Their assertion also rings true for my study. With 74 percent of the present sample majoring in one or more STEM fields, it can be inferred that a similar high level of preparation, measured by SAT scores and high school grades, was expected of the African American males in the current sample.

Finally, despite their lower outcomes, students majoring in STEM courses may arrive on campus more confident in their academic ability. These students are typically the most celebrated graduates of their high schools who, because of their success, have developed a positive academic identity (Brookins, 2000). Their pre-college achievement, then, is in effect a proxy for the habits of mind and academic ambition that carried them into college, a correlation that may not be as strong among Black males who are not so academically motivated.

Differences Among High- and Low-Performers

The second major hypothesis held that African American male undergraduates in selective PWIs who report heightened self-efficacy, racial identity attitudes, and levels of

institutional integration score higher on measures of achievement **than Black males who perform less well**. To investigate this hypothesis, I split the sample into two groups: the academically successful Black males who were above the median grade point average of 3.0 and those who fell below the median. I then statistically examined the means of perceived levels of academic self-efficacy, levels of institutional integration, and racial identity attitudes between the two groups (Table 11).

Academic Self-Efficacy and Academic Integration

In comparing the means, only academic self-efficacy and quality of interactions with faculty (Academic Integration) were significantly higher for the high achieving students. This result concurs with earlier findings that academic self-efficacy and Academic Integration were the only significant predictors of achievement among the question variables. Taken together, African American males who do well in college have stronger ties with faculty and have a heightened sense of self-efficacy. As discussed above, these findings agree with the literature which shows strong and positive associations between measures of achievement and self-efficacy (Brown, 1995; Combs, 2001; Santos & Reigadas, 2002; Williams & Leonard, 1988) and faculty interaction (Brown, 1995; Jones, 2001; LaVant et al., 1997; Pascarella et al., 1987; Thile & Matt, 1995), but now extended to include Black males in college. It also in part proves the second hypothesis of this study, that academically stronger Black males have heightened self-efficacy and institutional integration than those who perform less well.

Social Integration

I found no significant difference in Social Integration between high and low performers. This finding diverges slightly from the literature which generally posits a

relationship between measures of Social Integration and persistence for Black males (Leppel, 2002; Pascarella, 1985). Researchers have found that campus involvement has a stronger positive effect on graduation of Black males than for White students and Black females, and contributes twice as much to degree completion than do measures of Academic Integration (Pascarella, 1985). However, campus involvement was not quantified in the present study, and while the Social Integration subscale I employed is typically used to estimate persistence (Pascarella, 1985), few studies have used it to predict achievement. Moreover, the present study found that Social Integration mattered only when considering racial identity attitudes, two-way interactions that were not factored in this statistical comparison of means. Thus, these findings, along with my reading of the literature, calls for the construction of alternate instruments to measure levels of Social Integration that are better at uniquely predicting the *achievement* of Black males.

Racial Identity

Confirming the earlier correlation and regression analyses, there were no differences found in racial identity scores between the high and low achievers at the .05 probability level. It may be that these non-findings are an artifact of the small sample sizes which are not sufficient to surface small effects of the subscales on GPA. In a preliminary data analysis before discarding some of the cases that fell outside of the parameters of this study, the results of the t-test for the Immersion-Emersion scale scores between high and low-achieving students produced p values less than 0.1. This suggests that with a larger sample, the mean difference in Immersion-Emersion scores may reach an acceptable threshold of statistical significance.

An alternative explanation for this non-finding might be psychometric in nature. That is, the marginal internal consistency of the RIAS-B subscales could obscure the true covariance. Indeed, one of the subscales (Encounter) was omitted from this study because of low reliability estimates. Concerns about low reliability of the RIAS-B subscales have been raised by others (Worrell, William E. Cross, & Vandiver, 2001), leading to a subsequent refinement of the identity models and scales (Vandiver, Fhagen-Smith, Cokley, William E. Cross, & Worrell, 2001). I used the RIAS-B instrument because of its widespread use in the literature (Abrams & Trusty, 2004; Campbell & Fleming, 2000; Cheatham et al., 1990; Neville et al., 1997; Neville & Lilly, 2000; Nghe & Mahalik, 2001; Wilson & Constantine, 1999). The popularity of the RIAS-B subscales notwithstanding, future studies might consider alternative instruments that measure similar constructs but that have reported higher internal consistency in the racial identity research literature (Sellers, Rowley, Chavous, Shelton, & Smith, 1997).

Finally, it is possible that the lack of an effect of racial identity on achievement in this model may be a combination of both factors — the sample size and psychometric properties of the RIAS-B subscales.

The size of the difference in Immersion-Emersion scores between the high- and low-achieving students warrants attention. African American males who scored higher on their Immersion-Emersion scores were on the low end of the GPA distribution than high achievers who reported lower Immersion-Emersion scores, though the difference failed to meet the standard of significance. Still, the direction of the difference is consistent with Johnson (1993) who found that Black males who earned lower grades tended to report higher levels of *African consciousness* than the academically successful students. Johnson parallels Black male students who were at the highest levels of African

consciousness with those at the Encounter or Immersion-Emersion stages of Cross' racial identity stage theory. Offering an explanation for the poorer performance among the high African conscious students, he posits that a lack of cultural synchronicity between their Black identity and educational attainment and school success was the root cause. "As a result, many African Americans aspiring for educational excellence are criticized by their peers as 'acting White'" (p. 112). Here, Johnson invokes the oppositional stance toward education that Fordham and Ogbu (1986) discovered among inner city Black high school students.

Chapter 6: Conclusion and Implications

A New Achievement Model

In this study, I extended Tinto's (1993) argument that in-college perceptions and experiences may interact with personal attributes and attitudes by suggesting that perceived self-efficacy and racial identity attitudes may lead certain African American males to respond differently to academic and social challenges on campus. In so doing, I suggested a multi-dimensional achievement model (Figure 2) that depicts the theorized influence of self-efficacy and racial identity attitudes on achievement by modifying institutional integration. Figure 9 represents a revision to this model that summarizes the findings.

Black Male Collegiate Achievement Model

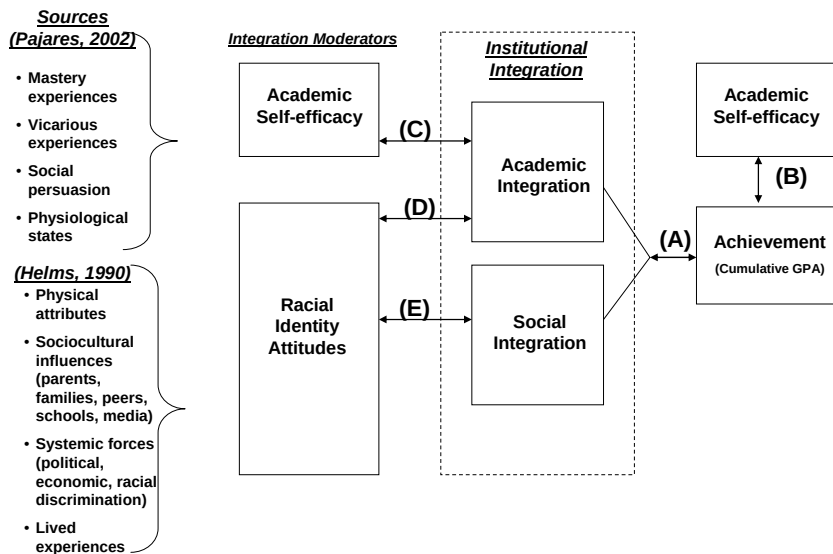


Figure 9: A concept map illustrating the direct and indirect reciprocal influence of self-efficacy and racial identity attitudes on achievement through institutional integration

High achieving African American males report a heightened sense of self-efficacy, with this motivational belief having the strongest effect on achievement among all the factors considered (**Link B**). In addition, the most confident students also reported

being satisfied with their opportunities to interact with their faculty (**Link C**). Thus, academic self-efficacy plays a dual role in the model, both directly influencing achievement, and also correlating positively with the quality of faculty interactions.

Black males with higher GPAs in college also report higher levels of faculty and peer integration (**Link A**), though the relationship is moderated by their racial identity attitudes (**Links C and D**). African American males who have a resolved and stable racial identity and who view their faculty and peer interactions favorably tend to do better in college than students who are less resolved in their racial identity who are also institutionally integrated. Holding strong pro-Black/anti-White attitudes mitigates the effect of greater faculty integration for Black males, and less internalized Black males perform more poorly as peer cohesion increases. Surprisingly, African American males who perceive the quality of their peer or faculty relationships as negative and who are less mature in their racial identity development perform better than Black males in all other categories.

To improve the outcomes of Black males, these results suggest that predominantly White research universities can improve the outcomes of their Black males by facilitating opportunities for them to meet and interact informally with university faculty. In parallel, these institutions could foster a climate that develops African American males' academic self-efficacy beliefs and racial identity in ways that avoid reifying a retreat into ideological and reference group isolation. One way to accomplish this would be to increase the diagnosis and intervention strategies associated with racial identity, then assist their Black males along the developmental pathway from Immersion to Emersion, and ultimately to Internalization stage. One overarching goal

would be to help the young Black men see that their academic pursuits and racial identity development are not orthogonal goals.

How Successful Interventions Apply the Achievement Model

When African American males feel there is a person-environment fit, it plays an important moderating role in their success. GPA and college persistence are linked to the “warmth” of the campus climate (Brown, 1995). How then can faculty and administrators at predominantly White institutions set a cultural tone of inclusiveness and warmth on campuses that are becoming increasingly diverse? Steele (2003) suggests that PWIs must begin by removing the perceived stereotype threat that challenges the capabilities of the student and replace it with a climate of “identity safety” (p. 125). He argues that identity safety can be achieved by developing strategies at the following levels:

- pedagogy and relationships between individual faculty and students;
- institutional and contextual changes; and
- individual personal responses.

Such a complex and strategic effort, he maintains, should reduce the twin outcomes of underperformance and disidentification for minority students. Using these three strategies as an organizing framework, the following section highlights a few institutions and programs that have successfully employed these “wise strategies” (Steele, 1999, p. 117).

The 21st Century Program

Steele (1999) and his colleagues invited 250 multi-ethnic freshmen to live together throughout their first year. The aim of the program was to improve the achievement and low retention rates of African American students by providing cognitive

and non-cognitive opportunities for students to interact and learn. The participants were told that they were competitively selected to be in the program, dispelling any remedial stigmas and conveying, both explicitly and implicitly, their universally high expectations of the staff. Secondly, they were offered “challenge workshops” modeled after Treisman’s (1992) Calculus workshops developed at the University of California at Berkeley initially for African American undergraduate students. These workshops, which have been replicated across the country, create small academic communities characterized by high challenge and high support. 21st Century students also participated in weekly discussions based on readings that examined adjustment-relevant social and personal issues.

Both Black and White student participants earned higher first-semester GPAs than their counterparts outside of the program, and all but a few African American students in the bottom third of the pre-college test score distribution matched or exceeded the performance of the White control group. What’s more, the higher performance of this cohort persisted through the sophomore year—one year after the end of the program. Only one of the 27 Black participants failed to graduate.

The 21st Century Program raised the self-efficacy beliefs through social persuasions by informing all participants that they were selected competitively for the program. Moreover, the Treisman-like workshops raised self-confidence by fostering mastery experiences, a key source of self-efficacy. The leaders of the program also created “identity safety” by facilitating open and transparent discussions about race and social adjustment. The arrangement fostered racial transcendence which moved the African American (and White students) along the racial identity dimension toward the Internalization stage. Fries-Britt (2000) maintains that when students learn how to

construct conversations about and across race, the discourse exposes misconceptions and serves as a crucible to construct new knowledge and understanding. In other words, these discussions reduced the stereotype “threat in the air” (Steele, 1999). Finally, while the 21st Century Program did little to facilitate faculty-student interactions beyond the challenge workshops, the residential context and the facilitated discussions improved peer cohesion.

Meyerhoff Scholars Program

Established in 1988, the Meyerhoff Program at the University of Maryland, Baltimore County began serving high-achieving African American students in math and science. Unlike the 21st Century Program, Meyerhoff students are selected based on their academic abilities and educational aspirations. Over 90% of the Meyerhoff graduates pursue advanced studies immediately, and on average, they graduate with an average GPA of 3.4/4.0 (Hrabowski et al, 1998).

The program is successful because it facilitates faculty and peer interactions in such a way as to catalyze the blending of the students’ racial and intellectual selves into “role identities” that foster the learning process (Fries-Britt, 2000). Beyond creating a community of peers, there is a concerted effort to provide faculty with feedback about the student abilities, cultivating interactions between student and faculty. The students in Fries-Britt study of the Meyerhoff program report personal and academic benefits to these interactions that echo one enabler of Steele’s “identity safety,” namely “pedagogy and relationships between individual faculty and students.” Describing his relationship with a professor, one student commented:

We can talk. It’s not one of those relationships where she is talking down to me or questioning if I’m smart enough. But we

can talk about things that are going on in the research project (Fries-Britt, 2000, p. 63).

It is instructive that the quoted student cites the personal connection before mentioning the intellectual one. Collective membership in the family, extended family, and a racial and ethnic reference group have been found to have a great influence on achievement motivation among certain minority high school students (Bempechat, Graham, & Jimenez, 1999) that Perry (2003) also echoes.

African American students will achieve in school environments that have a leveling culture, a culture of achievement that extends to all its members and a strong sense of group membership, where the expectation that everyone achieves is explicit and is regularly communicated in public and group settings (p. 107).

The Meyerhoff Program's strong sense of group membership is congruent with African American cultural traits which emphasize mutuality and reciprocity (Ladson-Billings, 1995). Thus, participants are precluded from having to choose between their personal and academic selves. Clearly, the Meyerhoff Program has achieved success by leveraging their cultural proclivities.

Mentoring Programs

Less explicitly stated but clearly evident is the mentoring aspect of the Meyerhoff Program, which is designed to offer role models and exposure to African American male (and other) students as soon as they arrive on campus. Mentoring initiatives have been proven effective for helping Black males overcome the barriers that prevent them from being successful in college (LaVant et al., 1997). In their survey of effective mentoring models, LaVant, Anderson, and Tiggs found a strong link between participation in a faculty mentoring relationship and satisfaction with college. A positive mentoring

relationship contains most of the elements posed by Steele (2003) that ensure “identity safety” as noted earlier.

The University of Louisville started the Faculty Mentoring Program (FMP) for African American males after the university saw large increases in first-year attrition rates in the 1980s. The aim of the program was to make the campus more welcoming to these mostly inner-city youth and to enhance their retention. The faculty mentor’s role “entails friendship, guidance, counseling, a warm and genuine smile at times, referrals, and encouragement; it also means playing student advocate, navigator, proofreader, and alarm clock as needed” (LaVant, Anderson, & Tiggs, p. 49). The wide-ranging role description of the faculty mentor goes well beyond the traditional relationship of a typical academic advisor. Here, the student finds a kind and caring adult with whom they can connect on multiple levels. Faculty are matched with students based upon common academic interests, which form the basis for relationship building. Like the Meyerhoff Program staff, these mentors become aware of the students’ abilities beyond numerical measures, and can convey to their colleagues their high potential. In the fall of 1994, all African American students were assigned a faculty mentor. Of this group, 24 were males. Though the first-year retention rates of the participants were not particularly stellar (66 percent), the results were within range of the university-wide annual retention rate of 74.9 percent. Unfortunately, the authors failed to provide a baseline for retention rates prior to the intervention.

Another study found a direct link between self-efficacy and participation in a faculty mentoring program, though not for African Americans. Santos & Reigadas (2002) sought to understand how mentoring facilitated Latino students’ adjustment to college. The thirty-two participants showed an increase in college self-efficacy and academic goal

definition in their first year. Moreover, students assigned same-ethnic mentors perceived them to be more supportive in furthering their personal and career development, and reported greater overall program satisfaction. Finally, frequency of student-mentor contact was positively related to college adjustment, perceived mentor supportiveness, and program satisfaction.

Though the subjects did not include African American males, nor did it measure success outcomes such as GPA and persistence, the findings reveal important insights into the importance of informal faculty-student contact on raising self-efficacy levels. Particularly instructive also was the role that same-ethnic mentors played. As stated earlier, an important source of self-efficacy is the vicarious experience of successful people to whom the student can relate in some personal way. It is possible that the verbal judgments and the vicarious experiences of these faculty scholars were the direct sources of self-efficacy for the FMP participants.

Implications

How might a university foster the development of academic self-efficacy and African American male racial identity? There is evidence to suggest that socially integrated students *become* more internalized in their identity as they increase their campus involvement. Indeed, Taylor and Howard-Hamilton (1995) found that Black males who are more involved in campus activities, including Greek-letter organizations — scored higher on the Internalization subscale. Moreover, they found that Black males in Greek-letter orientations embraced a stronger, more positive sense of self-esteem and racial identity than non-Greek members. Paraphrasing UCLA's Astin, the authors write that “self-development and Afrocentric identity” are enhanced by greater involvement in fraternities or extracurricular involvement (p. 334).

Though the direction of causality was an embedded assumption in the Taylor and Howard-Hamilton article (higher involvement *led* to internalized racial identity), the opposite causal inference could also be argued. Internalized students are more involved *because* they have achieved a level of racial transcendence. That is, African American males who have internalized a mature, positive racial identity do well in predominantly White settings by their ability to traverse the cultural borders between their different worlds (Phelan et al., 1998).

Offering more useful and concrete suggestions, Neville and Lilly (2000) provide a blueprint for fostering ‘identity safety’ and positive identity development of African American students:

On the basis of our findings, we suggest that counselors attend to the racial identity development of Black students even if they seem to have internalized a positive Black identity. In particular, it seems that counselors could work in conjunction with others

such as staff in Black culture centers, Black studies program or department, and other student services (e.g., career centers) to design programs that would help promote a positive Black identity (Internalization attitudes) and encourage students to explore and identify racial issues as important and valuable (Dissonance and Immersion/Emersion attitudes). Programming to promote what we have called an Engaged Internalized identity profile could include organizing events to stimulate higher-order thinking about race-related issues (e.g. affirmative action) followed by informed discussions, offering a structured study group experience on racial identity issues, and explicitly discussing the complexity of one's racial attitudes in a therapeutic context (p. 6).

One way to stimulate *higher-order thinking about race issues* is by facilitating discussions between groups, as was exemplified in the 21st Century Program described earlier. Indeed, Nakkula and Toshalis (2006) go as far as to say that by avoiding or suppressing these conversations, educators may in fact catalyze racial conflict.

Throughout these processes, educators can assume a vital role in opening dialogue about racial identities and the diversity of possibilities available within any single racial group. Seen developmentally, conversations with youth about how they understand themselves and others racially become occasions for connection and expansive thinking, whereas the avoidance of such engagement can exacerbate school-based segregation and prejudice (p. 131).

Drawing from both these recommendations and the findings of this study, I propose that research universities consider the following strategies to foster the achievement of African American male undergraduates:

1. Measure and work to increase the academic self-efficacy of their students by
 - a. creating opportunities for early academic success that could be attributed to their ability;

- b. provide faculty, alumni, and upperclassmen to whom Black males can relate as positive role models who have achieved academic success;
 - c. facilitate opportunities through mentoring initiatives for faculty and other institutional officials to affirm the intellectual abilities of the Black male students and to consistently communicate high expectations about their potential achievement; and
 - d. teach Black males strategies for improving their learning habits and to reduce their stress and anxiety associated with their academics.
- 2. Facilitate opportunities to increase informal faculty contact, possibly through a formal mentoring program, undergraduate research projects, or sustained academic advising.
- 3. Attend to the racial identity development of their Black male students by designing programs that foster positive views of their reference group identity (internalized attitudes) and higher-order thinking while encouraging students to explore and critically resolve their own beliefs, attitudes, behaviors, and norms through structured study groups.
- 4. Increase faculty and counseling staff awareness about racial identity schema and the potentially moderating role it plays in the meaning-making of their students' peer or faculty social interactions.
- 5. Increase opportunities for Black males to have meaningful cross-cultural interactions on campus while supporting their need to retreat into a place

of “identity safety” (Steele, 2003, p. 125) while they work out their own self-concept.

Chapter 7: Limitations

This study has several factors that may limit the generalizability of the findings. First, the sample of African American males is drawn from a convenience sample of institutions. Though it would have been ideal to randomly invite schools to participate, the success of this more rigorous site sampling approach would not have been assured. For instance, when personally invited to participate, four universities either rejected the request or simply did not respond. Those who declined the request had institutional policies that precluded external researchers from surveying subpopulations of students.

Four of the five participating institutions were selective universities that admit less than 50 percent of its applicants. While it would have been informative to expand the sample to include participants who attend less-selective schools, I limited the sample to NAMEPA member schools willing to participate in the study to make more manageable the process of gaining access and administering the survey. Moreover, little is known in the literature about the characteristics of high achieving African American males who attend selective research universities. Future studies might expand the pool to include a greater variety of institutions.

This study relies on self-reported grade point averages for the dependent variable. Studies have shown high correlations of between .70 and .88 between self-reported and actual GPA for college students (Goldman, Flake, & Matheson, 1990; Hishinuma et al., 2001). Gaining access to actual grades would have inevitably delayed the human subjects approval process at most universities or, in some cases, blocked access altogether.

Finally, this analysis assumes that self-efficacy beliefs, measures of institutional integration, and racial identity beliefs influence academic achievement. However, it could also be possible that these factors are endogenous. That is, students may score high

(or low) on a scale precisely *because* they are high (or low) achievers. For instance, high achieving students may have a heightened sense of self-efficacy *because* they are successful students. While there is emerging interest in statistical methods that identify and remove endogeneity bias, my dissertation builds on existing research in self-efficacy, racial identity theory, and institutional integration which is silent on questions of endogeneity. Future studies of college students that identify and trace this statistical phenomenon should be conducted, but it extends beyond the scope of this dissertation.

Appendix A: Email Introductions, Invitations, and Survey

Recruitment Email

Dear Colleagues,

I am the new director of minority education at MIT and also a member of NAMEPA, though it is my capacity as a doctoral student that I am soliciting your assistance.

For my dissertation, I am studying the factors that influence the success of African American male undergraduates attending predominantly White research universities. I have assembled an online survey for Black males that measures the effects of racial identity attitudes, academic self-efficacy, and academic and social integration on achievement (cumulative GPA). I am requesting your assistance in securing additional institutions that would be interested in participating in this dissertation study. The findings may provide university officials with a framework for developing new programs that foster the achievement of both Black males in college (and other underperforming groups) by increasing academic self-confidence and promoting positive identity development.

I am looking for three or four additional universities that would agree to survey their Black males. MIT of course is on board, and I've had hopeful conversations with Northeastern, Harvard and the University of Virginia. It has been my experience that institutions that feel strongly about the performance and success of their Black male students are my best advocates, which is why I am approaching the NAMEPA membership.

I am looking for a university champion who would assist me in securing institutional approvals to conduct the survey, and who would forward an email invitation to a randomly-generated list of full-time Black male enrollees who are sophomores and above. The email will contain a URL for the online survey. To ensure privacy, I will not request any identifying student information in the survey beyond their anonymous survey responses. Moreover, I will use pseudonyms for all participating universities when reporting aggregate results.

Please let me know if your institution would be interested in participating. I have attached a brief abstract of the study as well. Thank you.

All the best,

Karl W. Reid, M.S.
Assistant to the Chancellor
Associate Dean and Director,
The Office of Minority Education
MIT Office of the Dean for Undergraduate Education
phone: (617) 253-7940
fax: (617) 253-9899
email: kwreid@mit.edu

Sample Pre-notice Introduction

Good morning/afternoon,

You have been selected to participate in an important study about the unique college experiences and attitudes of African American males attending selective universities. In a few days, you will receive a link to an online survey that we're asking you to complete when it arrives.

When finished, this study could help universities like ours identify factors that may influence the achievement of Black males, and therefore provide a framework for maximizing their success. Though your participation is voluntary, **the more people respond, the more reliable and valid the results will be.**

It should take only a few minutes to anonymously answer the questions.

If you have any questions, please contact me at [email address of university official].

[Name and title of university contact]

Sample Introductory Email to Student Participants

Dear Student,

You are being invited to participate in a study about the unique college experiences and attitudes of African American males attending selective institutions. When completed, it may help colleges and universities identify factors that may influence the achievement of Black males, and thus help provide a framework for maximizing their success.

Participation involves completing an anonymous survey that asks you to rate your degree of confidence that you will complete your academic requirements, your level of peer and faculty interactions on campus, and your opinions about your race. It will also ask you to provide information about your parents and your academic performance in high school and college. The survey takes about 30 minutes to complete.

This invitation is being sent to African American male upperclassmen attending selective predominantly White institutions. The more individuals who respond, the more reliable and valid the results will be, so I ask you please to participate if at all possible!

URL:

If you are willing to participate, go to:

[URL Link]

Thank you for taking the time to complete the questionnaire!

Sincerely,

Karl W. Reid, M.S.
Doctoral Candidate
Harvard Graduate School of Education
phone: (617) 253-7940
email: reidka@gse.harvard.edu

Associate Dean and Director,
MIT Office of Minority Education
Office of the Dean for Undergraduate Education

Whom to contact about your rights in this research:
Jane Calhoun
Harvard University Committee on the Use of Human Subjects in Research
Science Center 128
Cambridge, MA 02138
Phone: (617) 495-5459
Email: jcalhoun@fas.harvard.edu

Follow-up Email to Participants

Good (morning/afternoon),

Last week, I sent you an email seeking your opinions about your experiences and attitudes as African American males attending [name of university]. You were selected from a list of all sophomores and above who are enrolled in several institutions.

If you have already completed the questionnaire and submitted it, please accept my sincere thanks. If not, please do so **today** by going to the following web site to complete the anonymous survey. Doing so will help us reliably determine the factors that influence college success. It should take a few minutes of your time.

[URL Link]

(You may have to copy this URL into your web browser.)

Thanks in advance for your participation!

Sincerely,

[name and title of university contact]

Whom to contact about your rights in this research:

Jane Calhoun

Harvard University Committee on the Use of Human Subjects in Research

Science Center 128

Cambridge, MA 02138

Phone: (617) 495-5459

Email: jcalhoun@fas.harvard.edu

major with a grade point average of at least 3.0.										
8. Excel at this university over the next quarter/term/semester.										
9. Excel over the next two quarters/terms/semesters.										
10. Excel over the next three quarters/terms/semesters.										
11. Graduate from this university.										
12. Earn admission to your first-choice graduate school.										

The following is a list of statements characterizing aspects of academic and social life at your college. Using the scale below, please indicate the extent to which you agree or disagree with the statement. Please select only one answer for each statement.

Key: SA: Strongly Agree A: Agree NS: Not Sure D: Disagree SD: Strongly Disagree

Peer Group Interactions

	5	4	3	2	1
13. Since coming here, I have developed close personal relationships with other students.	SA	A	NS	D	SD
14. The student friendships I have developed here have been personally satisfying.					
15. It has been difficult for me to meet and make friends with other students.					
16. Few of the students I know would be willing to listen to me and help me if I had personal problems.					
17. Most students on this campus have values and attitudes which are different from my own.					
18. I am satisfied with the opportunities to participate in organized extracurricular activities at this university.					
19. I am happy with my living/residence arrangement this semester.					

Faculty Integration

	5	4	3	2	1
20. I am satisfied with the opportunities to meet and interact informally with university faculty.	SA	A	NS	D	SD
21. Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.					
22. Since coming to this university, I have developed a close personal relationship with at least one faculty member.					
23. Few of the faculty members I have contact with are genuinely interested in students.					
24. Most of the faculty members I have had contact with are interested in helping students grow in more than just academic areas.					

Racial Identity Attitudes

The following is a list of statements characterizing your opinion about African Americans (Blacks). Using the scale below, please indicate the extent to which you agree or disagree with the statement. Please select only one answer for each statement.

Key: SA: Strongly Agree A: Agree NS: Not Sure D: Disagree SD: Strongly Disagree

	5	4	3	2	1
25. I believe that being Black is a positive experience.	SA	A	NS	D	SD
26. I know through experience what being Black in America means.					
27. I feel unable to involve myself in White experiences, and I am increasing my involvement in Black experiences.					
28. I believe that large numbers of Blacks are untrustworthy.					
29. I feel an overwhelming attachment to Black people.					
30. I involve myself in causes that will help all oppressed people.					
31. I feel comfortable wherever I am.					
32. I believe that White people look and express themselves better than Black people.					
33. I feel very uncomfortable around Black people.					
34. I feel good about being Black, but do not limit myself to Black activities.					
35. I often find myself referring to White people as honkies, devils, pigs, etc.					
36. I believe that to be Black is not necessarily good.					
37. I believe that certain aspects of the Black experience apply to me, and others do not.					
38. I frequently confront the system and the man.					
39. I constantly involve myself in Black political and					

social activities (art shows, political meetings, etc.).					
40. I involve myself in social action and political groups even if there are no Blacks involved.					
41. I believe that Black people should learn to think and experience life in ways which are similar to White people.					
42. I believe that the world should be interpreted from a Black perspective.					
43. I have changed my style of life to fit my beliefs about Black people.					
44. I feel excitement and joy in Black surroundings.					
45. I believe Black people came from a strange, dark, and uncivilized continent.					
46. People, regardless of their race, have strengths and limitations.					
47. I find myself reading a lot of Black literature and thinking about being Black.					
48. I feel guilty and/or anxious about some of the things I believe about Black people.					
49. I believe that a Black person's most effective weapon for solving problems is to be come a part of the White person's world.					
50. I speak my mind regardless of the consequences (e.g., being kicked out of school, being imprisoned, being exposed to danger).					
51. I believe that everything Black is good, and consequently, I limit myself to Black activities.					
52. I am determined to find my Black identity.					
53. I believe that White people are intellectually superior to Blacks.					
54. I believe that because I am Black, I have many strengths.					

Background Questions

Please complete the following background questions.

55. Name of your College/University: _____
56. Please indicate your year in school: (e.g., sophomore =2, junior =3) _____
57. What is your academic major/concentration? _____
58. What is your cumulative GPA as of last semester (e.g., 3.0/4.0)? _____
59. What was your final *unweighted* high school grade point average (e.g., 85/100)? _____
60. List your highest SAT I or ACT Verbal Score: _____
61. List your highest SAT I or ACT Math Score: _____
62. Please indicate the number of years of formal education obtained by your mother (e.g., high school=13; undergraduate college=17) _____
63. Please indicate the number of years of formal education obtained by your father (e.g., high school=13; undergraduate college=17) _____
64. Please indicate your approximate yearly family income (in U.S. dollars):
_____ less than \$25,000
_____ \$25,000-\$49,999
_____ \$50,000-\$74,999
_____ more than \$75,000
65. Are you a U.S. Citizen or Permanent Resident? ☐ Yes ☐ No

Appendix B: Taxonomy of Fitted Regression Models

Taxonomy of fitted regression models describing the relationship between cumulative GPA of African American males and academic self-efficacy, racial identity attitudes, institutional integration, year in college, high school GPA, SAT scores, family income, the highest level of parental education, and STEM major (n = 190).

Predictor	Model								
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Intercept	2.773***	3.544***	.172	.103	.094	.040	-.739	-.785~	-1.994
Year in College	.046	.071~	.053	.055	.062	.063~	.040	.029	.029
University 1		-.700	-.964*	-.776	-.641				
University 2		-.902~	-.609	-.485	-.400				
University 3		-.820	-.612	-.472	-.378				
University 4		-.855	-.791	-.720	-.651				
University 5		-1.042~	-.848~	-.645	-.560				
HS GPA			.012*	.013*	.012*	.010*	.010*	.011*	.010*
Combined SAT I Scores			.002***	.002***	.002***	.001***	.001***	.001***	.001***
STEM Major				-.201*	-.220*	-.242**	-.223**	-.213*	-.213*
Highest Parent Ed Level					-.014				
Family Income					.072~	.061~	.053	.061~	.062~
Academic Self-Efficacy							.160***	.143**	.295
Social Integration								-.085	.270
Academic Integration								.144**	.131
Academic Integration x Self-Efficacy									.002
Social Integration x Self-Efficacy									-.044
R ²	.008	.071	.283	.302	.320	.271	.340	.375	.376
Adjusted R ²	.002	.033	.241	.258	.267	.246	.313	.340	.332

Key: ~p<.10; * p<.05; **p<.01; ***p<.001

Predictor	Model							
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17 (FINAL)
Intercept	-.736	-.851	3.973	-.059	-5.875	1.205	3.716*	3.609*
HS GPA	.010*	.011*	.011*	.010*	.010*	.010*	.011*	.012**
Combined SAT I Scores	.001***	.001**	.001***	.001**	.001***	.001***	.001**	.001***
STEM Major	-.212*	-.205*	-.218**	-.184*	-.189*	-.194*	-.214**	-.226**
Family Income	.052	.062~	.060~	.057	.065~	.059~	.054	
Academic Self-Efficacy	.163***	.163***	.158***	.157***	.809	.446*	.160***	.169***
Social Integration	-.083	-.063	-1.369*	-.063	-.043	-.880*	-1.005*	-1.066**
Academic Integration	.155**	.150**	.157**	-.033	.134*	-.192	-.190	-.067
Pre-encounter Stage		-.057	-.453	.364	1.619~	1.161		
Immersion-Emersion		.083	.208	.669*	-.019	.674*	.675*	.663*
Internalization		-.031	-1.159*	-.740*	.496	-1.493**	-1.583**	-1.549**
Internalization x Social Integration			.304*			.212*	.241*	.261**
Social Integration x Immersion-Emersion			-.033					
Social Integration x Pre-encounter			.112					
Academic Integration x Pre-encounter				-.120				
Academic Integration x Immersion-Emersion				-.185~		-.183~	-.187*	-.181*
Academic Integration x Internalization				.219*		.199*	.204*	.166*
Self-Efficacy x Pre encounter					-.210*	-.149		
Self-Efficacy x Immersion-Emersion					.016			
Self-Efficacy x Internalization					-.070			
R ²	.368	.376	.403	.403	.395	.431	.419	.415
Adjusted R ²	.337	.333	.348	.347	.339	.374	.370	.372

Key: ~p<.10; * p<.05; **p<.01; ***p<.001

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