

**FACTORS AFFECTING THE MATRICULATION OF AFRICAN AMERICAN UNDERGRADUATE STUDENTS: AN EXPLORATORY STUDY**

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**ABSTRACT**

*In this study, a regression analysis was conducted to explore the factors associated with African American student retention and graduation. The study sample is comprised of 133 undergraduate African American MIS students at a southeastern, private university. This university uses Blackboard. Using a structure that is grounded on Astin's student involvement theory, the results of this preliminary investigation indicated that both academic involvement and student involvement share a positive relationship with student retention.*

**Keywords:** retention, student involvement, matriculation, African American Students.

**INTRODUCTION**

Universities are confronted with aging faculties, the likelihood of a lack of faculty in several academic fields, increased competition for student financial support, budget cuts, and expensive upgrades for facilities and educational environments. Simultaneously, United States industry is besieged as countries such as China, Japan, France, and Germany moved from an industrial to a knowledge society.

The emphasis placed on a college education in today's society is enormous. The perceived impact of a college education includes a measure of academic achievement and it highlights the beginning of a professional career.

For African Americans, a college degree is of particular importance, as it serves as a means to cross obstacles and fulfill advancement on top of an overpass to institutional growth and national progress [15]. The availability of financial aid was a major determinant in the persistence of African American students at HBCUs. One of the biggest issues as to why students drop out was the lack of funds [8]. Nevertheless, according to a survey by Nellie Mae [13], the largest nonprofit provider of private and federal education loan funds in the country, only 29% of respondents stated that loans played a major factor in their decision to drop out of school. Recently, there has been a remarkable development in the monetary incentives for young blacks to go to college and earn a degree [8]. While statistics show that there is an increase in the amount of African American students graduating from high school, there is disproportion among the number of African American students enrolling in colleges and universities and those graduating [15]. It is not enough for African American students to simply enroll in institutions of higher education; enrollment does not necessarily result in degree attainment. Of the African Americans who do enroll in college, many do not stay long enough to graduate[15].

There is a plethora of information regarding retention issues, yet there is a scarcity of literature that focuses on the retention of African American students. Primarily noticeable is the neglect to state the reasons or factors why African American students lack the persistence to graduate from college.

The comparison between the graduation rate of African American students at the nation's Historically Black Colleges and Universities (HBCUs) and Predominately White Institutions (PWI) are astounding. At HBCUs the graduation rate of black students is much lower than that of black students at the higher ranking PWI [8]. An HBCU founded in 1904 located in the southeast, has contributed significantly over its 102 year history, to the educating of African Americans. As of 2001, the nationwide average for African American student graduation stood at a very low rate of 37 percent. The black student graduation at the selected college stood slightly below the average at 35 percent [8].

The purpose of this paper is to address the lack of information about the retention rate and to identify the factors that hinder African American student retention and graduation.

This exploratory research will seek to answer the following question:

Is there a relationship between student involvement and student retention?

The paper is structured as follows: First, a review of the literature including Astin's Theory of Involvement is introduced. Then, the methodology is presented followed by the results. Finally, a discussion of the results, their implications for research and practice, limitations of the study and conclusion are presented.

## **THEORETICAL FRAMEWORK**

The current study is based on Astin's [2] theory of student involvement. "Student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience" [2]. The abstraction of student involvement in some ways draws comparison to the psychological construct of motivation. Nevertheless for the purpose of this paper, the term involvement would be better suited because it implies more than just a psychological state, and is more inclined to direct measurement and observation. In other words, it is easier to measure or to see how involved a student is as in comparison to how motivated he/she is. Astin's [2] theory of involvement holds that students learn further, the more they are drawn in both the academic and social facets of the collegiate experience. Involved students allocate considerable energy to academics, consume time on campus, engage in student organizations and activities, and intermingle frequently with faculty. Alternatively, uninvolved students ignore their studies, spend insignificant time on campus, refrain from supplementary activities, and hardly ever instigate a communication with faculty or other students [2]. Astin [2] proposed five fundamental assumptions in his theory: 1) involvement represents the investment of physical and psychological power in diverse "items (b) involvement happens along a continuum (c) involvement consists of quantitative and qualitative components; (d) the amount of student learning and personal growth is relative to the quality and extent of involvement; and (e) the efficacy of any educational exercise is correlated to the capability of that exercise to augment involvement [2]. Astin asserted that the last two assumptions offer valuable evidence for devising better educational programs for students [2].

While Astin's theory stemmed from a longitudinal study of college dropouts which attempted to discover factors in the college setting that contributed to the student's longevity in college, it seemed that all the positive factors were directly or indirectly related to the student's involvement, while the negative factors were credited to a lack of student involvement [2].

African American students who partake in campus social activities become a part of the social atmosphere, and thus are more likely to endure [1]. HBCU's are known for taking students under their wings and being socially supportive towards African American students than PWIs [10]. Attending HBCU's fosters relationships and activities with students and faculty, which significantly influences the student's social and academic developments [3].

## **RELATED RESEARCH STUDIES**

Several significant studies detail the academic and social experiences of African American students. Mayo, Murguia and Padilla. [12] examined the social integration process of 340 White students and 315 African American students at a large PWI. The objective of the study was to find out which class of social integration variables whether formal or informal, if any, had affected academic performance. The results showed that formal social integration (i.e. contact with faculty members, administration and organizations) had a much greater impact on African American students' academic performance than informal social integration (i.e. involvement in the social life of the campus)

Robinson [16] studied the disconnect between the number of African American students entering college and those that graduated, as she compared graduates (students graduating in four years) and non-graduates (students graduating in five or six years, and those who did not graduate). Her study involved 386 African American freshmen who entered Great View University (GVU), and she found that only 104 (27 percent) of those freshmen

graduated in four years. The variables presented included those of personal and social characteristics such as gender, age, region of residency and parental data. Also she presented non academic variables such as early exposure to a career and an outgrowth of anticipatory socialization, while academic variables were the number of credit hours, GPA and the number of developmental courses taken. Robinson [16] found that the characteristics of students who did and did not graduate were based largely upon their experiences in college and not before college. Experiences can be faculty interaction with the student, the student's interaction among themselves or even financial aid issues. In addition, she also found that graduates did not appear to have better academic credentials than non-graduates upon admittance into the University. Socially, a difference found was that of family structure, as a higher amount of graduates were members of two-parent family households. Most non graduates were members of single parent family homes, inferring a lack of financial support.

Berger and Milem [4] examined the relationship between behavioral involvement, perceptual integration, and the college persistence process. The results of the study showed the following: (1) that early faculty-student relationships, increased the likelihood that students will have positive perceptions of support from the institution, which then would translate into subsequent institutional commitment; (2) the high school GPA can be used as a predictor of early involvement and persistence; (3) perceptions of peer support is shown to have a positive indirect effect on persistence, whereas perceptions of institutional support reveals a negative indirect effect on academic integration and (4) social integration has a statistically significant direct effect on persistence.

Flowers [8] conducted a study to explore the extent to which student involvement experiences impacted educational outcomes for African American in college. A sample of 7923 African American Students from 192 postsecondary institutions participated in the study. Overall, the results indicated that in-class and out-of-class experiences positively impacted student development.

Braxton, Milem and Sullivan [5] conducted a longitudinal study including 718 first-time, full-time first-year students at a highly selective, private research I University to empirically and conceptually assess Tinto's theory holding that various theoretical outlooks including economic, organizational, psychological, and societal account for college departure [17]. Their valuation concentrated on the extent of support for the 13 primary propositions postulated in Tinto's [17] foundational theory. Three different surveys were administered to the students: one during orientation, one during the fall semester and the third during the spring semester. Six set of variables were developed: student background characteristics, initial institutional commitments, active learning classroom behaviors, social integration, subsequent institutional commitment and departure decisions. Path analysis using ordinary least-squares multiple regression was used to test the propositions. The findings back up the role of active learning in shaping student persistence/departure decisions. Three of the four indices of active learning (class discussions, knowledge level examination questions, group work and higher order thinking activities) generate a statistically significant influence on one or more of the central constructs: social integration, subsequent institutional commitment and students' intent to return.

Allen [1] conducted a quantitative study on the differences in the college experience between Black undergraduates who attended historically Black colleges and universities and those who attended predominantly White colleges and universities. Data were collected using questionnaires. The students were randomly selected. They used a multivariate approach to investigate relationships between the student outcomes of academic achievement, social involvement, occupational aspirations, students educational backgrounds, educational goals, demographic characteristics and personal adjustment to college and the college environment. The findings suggest that academic achievement is highest for students who have high educational aspirations, who are certain that their college choice was correct, and who report positive relationships with faculty. Compared to Black students who attend historically Black Colleges, those Black students attending predominately White colleges report lower academic achievement. College racial composition was also associated with social involvement

### **Research Method and Data Collection**

Astin's [2] student involvement theory was used to construct the model, which is used to examine the impact of social and academic involvement as it relates to retention.

This research seeks to answer the following question:

What relationship exists, if any, between involvement and student retention?

Based upon the research question and the literature review, the following hypothesis is tested in the study.

H1: There is a positive relationship between student involvement and student retention.

To test the proposed hypothesis, we developed measurements for each variable. We used a modified version of the questionnaire that was developed under the Cooperative Institutional Research Program at the University of California, Los Angeles (UCLA). This mechanism was designed to measure the quality-of-effort college students expend in using the resources and opportunities provided by an institution for their learning and aspects of the college environment. This survey was chosen because it contained questions pertaining to student's demographic characteristics, academic and involvement experiences and in addition has been used in many different studies.

The independent variables used in this study were academic and social involvement. Academic involvement as stated by Astin, involves the outlay of mental and physical energy into the academic life of the campus [2]. Activities that are considered as engaging the student academically include library use, course learning, computer and information technology use and writing experiences. It is believed that the likelihood of student's persistence in college is a result of their engagement in academic related activities [17]. Social involvement refers to the amount physical and psychological energy exerted into the social life of the campus [2]. Social involvement activities include interaction with faculty, clubs and organizations, student acquaintances and personal experiences. Like academic involvement, it is believed that the more students participate socially on campus the more likely they are to persist in college [17].

The dependent variable is student retention which can be defined as a student re-enrolling or returning to the same institution. As the survey also has longevity and extended use, this presents sufficient substantiation of validity and reliability.

The study sample is comprised of undergraduate students at a southeastern, private university. This university uses Blackboard. One hundred thirty three African American MIS students completed the questionnaire. The survey instrument was administered in the classroom.

### **ANALYSIS AND PRESENTATION OF FINDINGS**

The sample consisted of 133 selected students. The respondents represent students from different majors and classifications. A total of 52 responses were received. This represents a response rate of 39%. Generally, a 20% response rate is desirable [18]. None of the returned surveys contained missing items, so all the 52 responses were used for analysis. Fifty-nine percent (59%) of the sample was females and 41% were males; 19 were freshmen, 5 sophomores, 15 were juniors and 13 were seniors. Nineteen students were enthusiastic about attending college, 27 students liked it and 6 students were more or less neutral about it. When asked if they would attend the same institution, 13 replied yes, definitely; 23 said probably yes; 12 said probably no; and 4 said definitely no.

**VALIDITY AND RELIABILITY OF RESEARCH CONSTRUCTS**

Validity is defined as a level to which a test measures a variable it is expected to measure [6]. An exploratory factor analysis using principal components factor analysis with varimax rotation was performed to examine the unidimensionality/convergent validity of each predefined multi-item construct. Hair et al. [9] argued that loadings greater than 0.50 are considered very significant. An iterative approach was used to conduct factor analysis. Items that did not make the loading cutoff and/or items that loaded on more than one factor were dropped from the analysis. The remaining items were then resubmitted into another round of factor analysis. This process continued until we obtained a meaningful factor structure.

The results are summarized in Tables 1 & 2

**Table 1 Academic Involvement  
Component Matrix(a)**

	Component
	1
General Knowledge	.722
Knowledge of Particular Field	.799
Conduct Research	.684
Part of Team	.742
Critical Thinking	.825
Analytical/Problem Solving	.819
Professors Expect	.644

Extraction Method: Principal Component Analysis.  
a 1 components extracted.

**Table 2 Social involvement  
Component Matrix(a)**

	Component
	1
Job Responsibilities	.762
School Work	.903
Family Responsibilities	.880
Social Life	.592

Extraction Method: Principal Component Analysis.  
A 1 components extracted.

Reliability is defined as the ability of the measurement to be consistent and yield similar results under similar subjects and conditions [6]. The Cronbach's Alpha is widely used to evaluate reliability of the instrument. Reliability estimate is higher if the Alpha is closer to one. Reliability was evaluated by assessing the internal consistency of the indicator items representing each construct using Cronbach's Alpha. An alpha value of more than 0.7 is desirable, though this limit may be as low as 0.60 for exploratory research [9][14].

The reliability test conducted on both constructs ranged from .868 and .787. This suggests that there is strong evidence of internal stability among the questions that were used to measure the academic and social involvement.

The hypothesis was observed for statistical significance. A regression analysis was conducted to observe the correlation between the independent factors – academic and social factors and the dependent variable of the study attending the same institution.

The coefficient of determination ( $R^2$ ) was calculated to be .533. The independent variables account for 53.3% of the variation of the dependent variable. The calculated F of 4.155 was significant at an alpha <0.01. Table 3& 4 show the model summary of the regression analysis. As a result of our p value being less than alpha, we can accept the hypothesis, that there is a relationship between student involvement and student retention.

**Table 3 Regression Analysis**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.730(a)	.533	.405	.684	.533	4.155	11	40	.000

a Predictors: (Constant), Professors Expect, Job Responsibilities, Critical Thinking, Social Life, Conduct Research, General Knowledge, Family Responsibilities, Part of Team, Knowledge of Particular Field, School Work, Analytical/Problem Solving

**Table 4**

**ANOVA(b)**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21.363	11	1.942	4.155	.000(a)
	Residual	18.695	40	.467		
	Total	40.058	51			

a Predictors: (Constant), Professors Expect, Job Responsibilities, Critical Thinking, Social Life, Conduct Research, General Knowledge, Family Responsibilities, Part of Team, Knowledge of Particular Field, School Work, Analytical/Problem Solving

b Dependent Variable: Attend Same Inst.

**CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS**

The purpose of this paper was to explore the factors associated with African American student retention and graduation. The results of this preliminary investigation indicated that both academic involvement and student involvement share a positive relationship with student retention. The result of this preliminary investigation does suggest some pertinent implications. Most studies that support Astin’s theory were initially conducted at PWI institutions, which then questions the validity of the studies done for future research of retention at HBCUs. Nevertheless, the findings of this study do support Astin’s theory. African-American students continue to be plagued by problems associated with access, retention, and achievement in U.S. higher education. Therefore, the results of this study can add to the modest knowledge base of student retention of African American students.

There are a few recommendations for future research. The goal of retention research is to come up with ways to retain students until they graduate. As social involvement has a positive impact on retention, it would be interesting to examine its impact further, by studying detailed activities associated with social involvement on student retention. As this study was conducted at only one university and with a small sample size, it would be an interesting comparison to expand the size and scope of the sample. Therefore this model should be tested with data from participants at other HBCU's. Other types of HBCU's including two-year private colleges and universities should be included to examine the impact of institution type on retention outcomes.

Future research could also examine the correlation between academic involvement and social involvement. While this study explored whether being socially involved had a positive impact on retention, a study should examine whether being socially involved affects academic performance. Additionally, further study in the differences in social involvement activity is needed.

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