Student Engagement and First Year Academic Performance at a Historically Black University

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The research question

- What types of student engagement most influence the first year academic performance of first time in college (FTIC) freshman students attending a historically black university?
Student Engagement

- Student engagement encompasses an array of activities:
  - at the student level it may be measured by the amount of time that a student dedicates to educationally purposeful and other activities.
  - At the institutional level, engagement may reflect the amount of effort colleges and universities devote to promoting effective educational practices (Kuh, et al. 2007; Pascarella, 2001).
Why Focus on Student Engagement and Performance at a HBCU?

- More Limited resources and increased calls for accountability have caused many HBCUs to rethink their approaches to promoting student success.
- Allows us to drill deeper into widely accepted explanations for student success at HBCUs.
- Exploration of practical implications for students beyond the university campus
- Traditional models focusing cognitive ability have not performed evenly in explaining student success across different demographic groups and institutional types.
  - without appropriate support and integration into the college environment even the brightest student may falter.
- Students’ experiences once they arrive on campus likely play a significant role in their performance.
  - Understanding how these experiences help to shape student outcomes can provide significant benefits to administrators in shaping institutional policies
Literature Review

- Cognitive measures are important but...

- Pre-college cognitive indicators have performed unevenly in explaining achievement for White college students and minority college students.

- SAT scores have consistently performed well in explaining the academic achievement and persistence of White college students (e.g. Morgan 1990; Fleming and DuBois 1981; Fincher 1984).

- Several studies have shown a moderate to strong positive relationship between SAT score and performance for African-American students who attend historically black colleges and universities (Fleming, 1990; Ramist, Lewis, and McCamley-Jenkins, 1994).
  - Others (e.g. Wilson, 1981 and Fleming and DuBois 1981), find either no correlation - or at best only a weak one - between the two.
Literature Review (continued)

• Engagement and Institutional type matter:
  • Several studies have shown that institutional type has a significant effect on student outcomes:
    • Attending an HBCU has positive effects on outcomes for African-American students (e.g. Flowers, 2002; DeSousa and Kuh, 2002; and Oucalt and Skewes-Cox, 2002).
    • Variation in the performance and engagement of African-American students at HBCUs versus predominantly White institutions (PWI) is believed to be due to the academic and social alienation of African-American students who attend PWIs.
Description of the Institution

- HBCU located in a medium-sized city in the south-eastern United States.
- The institution is classified as a Doctoral/Research institution by the Carnegie Foundation.
- Undergraduate African-American students have historically comprised more than 90% of the university’s total enrolment.
- For the both cohorts observed...
  - Women comprised approximately 58% of the university’s total student population
  - men made up the remaining 42%.
Study Sample

- The study sample is drawn from students who responded to the National Survey of Student Engagement during the Spring 2005 and Spring 2008 Semesters
  - Use data for first time in college freshman students only
  - Approximately 760 total responses for both years
    - Due to missing data for key variables 237 of these observations are used in the analysis.
Model

Technique: Linear Regression

- Dependent variable is measured by first year college GPA.
  - Calculated using data from institutional data files
  - Measures GPA through spring semester of freshman year

- Independent variables:
  - Engagement measures: Taken from student responses to the National Survey of Student Engagement (NSSE)
  - Cognitive measures: Obtained from institutional data files
  - Demographic measures: Obtained from both NSSE and institutional data files
Model (cont.)

- Independent Variables

  - Engagement Measures: Student/Faculty Interactions
    - FACFEED: frequency at which students sought feedback from faculty members (0=Low, 1=High);
    - FACGRADE: frequency at which students discussed grades with faculty members (0=Low, 1=High);

  - Engagement Measures: Academic and Intellectual Experiences
    - ASK: how frequently students asked questions in class (0=Low, 1=High)
    - TUTOR: how often a student tutored others (0=Low, 1=High)
    - UNPREP: frequency with which a student attended class without completing readings or assignments (0=Low, 1=High)
    - CLASSGRP: frequency at which student participated in in-class group work (0=Low, 1=High)
    - OUTGRP: frequency at which student participated in academic group work outside of the classroom (0=Low, 1=High)
Model (cont.)

- Engagement Measures: Non-Academic Activities
  - SOCIAL: Number of hours per week spent engaging in social activities
  - WORKON: Number of hours per week spent working for pay on campus
  - WORKOFF: Number of hours per week spent working for pay off campus
  - CAREDFOR: Number of hours per week spent caring for a dependent

- Cognitive Measures
  - High School GPA
  - SAT Score

- Demographic Measures
  - Parental Degree
  - Gender
### OLS Model Results

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Observations: 237
R-squared: 0.433

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
Findings

- **Student/Faculty Interactions:**
  - Controlling for other factors, students who report that they frequently receive timely feedback from faculty members had higher first year GPAs.
  - On average .0138 units higher than those who reported less frequent feedback (p<.05)
  - FACGRADE were neither significant nor in the anticipated direction.

- **Academic and Intellectual Experiences:**
  - Controlling for other factors, first year grade point averages for these respondents were .011 units (p < .1) higher than their counterparts who reported that they never or rarely asked questions in class.
  - On average, first year grade point averages were .025 units higher (p < .05) for students who reported tutoring other students often or very often.
Findings (continued)

- **Non-Academic Activities**
  - Coefficients for WORKON, WORKOFF, and CAREDFOR were all negative. However of the three, only WORKON was significant.
    - students who reported working more than twenty hours per week on campus were, on average, .065 units lower (p < .01) than were those of students who reported working on campus twenty hours or less.

- **Other Explanations**
  - SAT Score: For the sample population, each ten point increase in SAT score is associated with a .01 unit increase in first year grade point average.
  - Each .1 unit increase in high school grade point average translated to a .056 unit increase (p < .01) in first year grade point average for students in the study sample.
  - On average, students in the sample who have at least one parent with a bachelor’s degree or greater had first year grade point averages .02 units greater than students with neither parent holding at least a bachelor’s degree.
  - Similarly, on average first year grade point averages were .029 units higher (p< .05) for students for students having two parents with at least a bachelor’s degree versus those having neither parent with a degree.
Discussion

- Faculty/Student Interactions:
- THEY MATTER!
  - While only one of two measures relating to student interactions with faculty could be incorporated into the model, Summary NSSE results suggest a relatively high amount of faculty-student interaction at the subject HBCU.
  - While most of the students in the sample report lower levels of timely feedback when compared to their peers at other institutions, where it does occur it appears to have positive impacts.
  - The finding on faculty feedback suggests that generating policies to promote it will likely lead to positive student outcomes.
Discussion (Continued)

• Academic and Intellectual Activities
  • Students’ voluntary academically oriented activities outside of the classroom also appear to have positive effects on student performance.
    • Again, developing or refining programs and curricula that encourage students to work together in less formalized settings may yield positive academic outcomes.

• As should be expected, students’ in class activities matter. Students who report being engaged in the classroom setting appear to perform better.
Discussion (continued)

- **Non-Academic Activities**
  - While statistical significance was achieved for only one relationships between all but one of these variables are and student performance are worth noting.

- **Cognitive/Demographic Measures**
  - THEY ALSO MATTER
  - High School GPA, SAT Score, and parental degree attainment appear to be good predictors of academic success for student sin the sample
Next Steps/Limitations

- Rethink some of the variable codings...

- Small sample limits the amount of variables that can be included...

- Possibly reframe analysis to include seniors...
  - Focus on cumulative performance regardless of student classification
  - May help measure the importance certain dimensions of student engagement at different points in students’ academic careers
Thank You!