## Illinois' African American and Hispanic students are significantly less likely to complete a bachelor's degree than their White peers.



African American and Hispanic students entering undergraduate education in the state of Illinois are far less likely than their White peers to complete a bachelor's degree. Research by **Bob Blankenberger** identifies changes that can be made in promoting the ACT core curriculum and early enrollment programs such as offering AP and dual credit classes in Illinois' high schools that can improve students' likelihood of completing a bachelor's degree.

Like many states, Illinois has embraced the 'College Completion Agenda', a plan that Illinois education policymakers have adopted to increase the number of postsecondary degree holders from the current level of 41% of working age adults to 60% by 2025. However, this will be highly challenging. For every 100 Illinois students who enter the ninth grade, only 76 graduate from high school, 42 enter college, and just 20 graduate within 150% of their expected degree program time. This challenge is further exacerbated by the achievement gap in postsecondary education and changing demographics in Illinois; a gap which is perhaps most clearly evidenced by the National Center for Education Statistics study of the 2003-2004 class of first time postsecondary students. Of the students in the study, 36.4% of White students achieved a baccalaureate degree within 7 years compared with only 16.7% of Black students and 16.9% of Hispanic students. As minority students now make up over half of the students in Illinois public schools, policy makers must address this gap if the state is to meet its completion goals.

By analyzing statewide data, we attempted to identify patterns that will help inform policy making to achieve these goals. While at the Illinois Board of Higher Education (IBHE), colleagues Dr. Allison Witt and Dr. Doug Franklin and I worked with Dr. Eric Lichtenberger from the Illinois Education Research Council (IERC) to pilot a statewide analysis and distribute results to state policymakers, the results of which were recently published by *Education and Urban Society*. We analyzed a statewide dataset housed at IERC which included the entire population of Illinois public high school graduates from 2003. We restricted the initial analysis only to those graduating seniors who entered a baccalaureate postsecondary institution in the first year after high school – 21,665 students out of the total of 115,677 in the class of 2003. We conducted a Cox regression survival analysis to examine the relationship between undergraduate degree completion and a large number of demographic, family, and school factors, which indicates the comparative likelihood of completion, while controlling for the effect of the other factors included in the analysis. Given the importance of race for state policymakers, we conducted the analysis differentiating by race and by income as well.

We found that African American (0.768 odds ratio) and Hispanic students (0.746) in the class were significantly less likely to complete a baccalaureate degree within 7 years of graduating from high school when compared with their White peers. That is, while controlling for all other factors in the analysis, for every 768 African American students completing an undergraduate degree, 1,000 White students completed an undergraduate degree. This confirmed concerns about the achievement gap and the problem this poses for policy makers in states like Illinois. Additionally, across income levels, males were also significantly less likely to complete (0.825) compared to females.

Improving the likelihood of bachelor's degree completion

Several curricular factors were significantly related to improved likelihood of bachelor's degree completion. Completing the more rigorous ACT core curriculum which includes an additional year of social science and natural science beyond the Illinois state requirements was significantly related to completion (1.066 odds ratio), as was taking an Advanced Placement (AP) Social Science course (1.052) or AP Foreign Language course (1.053). Taking a dual credit course (a course taken for both college and high school credit) (1.026 odds ratio) was significant when comparing students who participated in these opportunities with students who did not. Students taking the general high school curriculum were significantly less likely to complete a baccalaureate degree (0.948) compared to those who took a college preparatory curriculum. For rare outcomes (less than 10% difference), we can interpret this as relative increase or decrease in risk. So, in other words, while controlling for other covariates, taking the ACT core curriculum, for example, increased the likelihood of completing an undergraduate degree by 6.6 percentage points compared to those who did not take the ACT core.

Our results also indicated the importance of high school academic context. Students from secondary schools with higher composite ACT scores enjoyed statistically significantly higher odds ratios of baccalaureate completion than their peers from schools with lower composite ACT scores (1.044 odds ratio), but particularly for mid-low (1.112 odds ratio) and low income students (1.153 odds ratio), and for African American students (1.050 odds ratio).

When focused on low income and minority students we found fewer statistically significant relationships, but the relationships were still meaningful given that we analyzed the full enumeration of students. The most important factors associated with positive impact on low income students were dual credit participation (1.076 odds ratio), and completing the more rigorous ACT core curriculum (1.153). That is, controlling for other factors, low income students taking a dual credit course had a 7.6% greater likelihood of completing a bachelor's degree compared to those who did not take a dual credit course. For African American students, completing the ACT core was statistically significantly related (1.146 odds ratio) to completing an undergraduate degree, and though not significant, taking an AP Social Science course (1.049), or an AP Foreign Language course (1.030) was associated with higher odds of completion. Hispanic students were more likely to complete if they took a dual credit course (1.098 odds ratio), and an AP Science course (1.043) or an AP Foreign Language course (1.067), though the AP relationships were not significant. Interestingly, taking the ACT core was not associated with higher levels of baccalaureate completion for Hispanic students.

Ideally, more of these types of analyses will become available to aid policy makers as researchers take advantage of new statewide datasets funded in large part by the United States Department of Education's Statewide Longitudinal Data System (SLDS) Grant program. Although further focused study is necessary, analyses like those noted in this blog provide data on challenges to completion like the achievement gap, but also on curricular patterns that appear to benefit students, such as more rigorous high school curricula, and dual credit and AP course taking.

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