

Bowen, W. G., Chingos, M. M., and McPherson, M. S. (2009). *Crossing the Finish Line: Completing College at America's Public Universities*. Princeton, N.J.: Princeton University Press.

The authors begin by demonstrating the decline of American education, particularly in terms of its long term impact on our economy and global competitiveness. In 2006, the U.S. ranked 20<sup>th</sup> among the members of the Organization for Economic Cooperation and Development (OCED) in our postsecondary degree attainment rate—a large decline from preceding years. In the U.S., only 56% of students who enter postsecondary education finish college. At the same time, increasingly greater numbers of students traditionally underrepresented in higher education are aspiring to college degrees. It's this “opportunity gap” that Bowen and his colleagues are interested in exploring, and they believe that the institutions where the greatest difference can be achieved are our public colleges and universities. For their data set, they selected 1999 entering full-time/first-time students at 21 prestigious flagship universities and all public universities in the four state systems of Maryland, North Carolina, Ohio and Virginia. These institutions were classified according to selectivity: the flagships were separated into SEL I, II and III, based on their selectivity; the system universities were categorized into “selectivity clusters” A, B and C based on the average SAT/ACT scores of their entering students. Historically Black Colleges and Universities (HBCUs) comprised the final cluster. In order to simplify summaries, most of the data reported in this abstract are from the flagship universities. Two primary measures are considered throughout the report: *academic attainment*, defined as high school GPA and SAT/ACT scores, and *socio-economic status (SES)*, defined as family income and parental education.

Using the National Educational Longitudinal Study of the high school class of 1992 (NELS 1988/2000), Bowen et al. present national data on educational attainment. These data show a strong relationship between SES and earning a college degree: when compared with students whose parents are in the lowest SES quartile, students in the top quartile have a 23% higher high school graduation rate, 38% higher rate of college enrollment, and college graduation rates that are 32% higher. While academic attainment plays an important role in explaining the differences in college outcomes, it does not explain most of the gap in graduation rates. The research team found “substantial gaps in graduation rates after controlling for pre-college test scores.” In addition to SES, race and gender play a significant role in baccalaureate degree attainment. Among black and white students, for example, females outperform males of their race at every stage. Characteristics related to SES, race and gender that are considered include time-to-degree, financial aid, transfer, majors, grades (high school and college) and institutional selectivity. All of these variables are analyzed in detail and reported in *Crossing the Finish Line*.

*Finishing College:* At the flagship universities, 49% of students graduated in 4 years; state system colleges showed a 38% 4 year graduation rate. **Researchers found a strong, consistent relationship between SES and the probability of graduating;** at flagships, 83% of high-SES students graduated within 6 years as opposed to 68% of low-SES students. They stress this finding throughout—that “disparities in educational attainment by SES are pervasive in American public higher education and cannot be explained away by associated differences in academic preparation.” Race and gender, however, are also powerful characteristics. Within Hispanic and black populations, women are much more likely to earn a baccalaureate degree than are men. Black and Hispanic males take the most time to graduate; only 26% of black males attending flagships universities graduate within 4 years. Academic attainment in high school and college also makes a difference. College graduation rates increase sharply (to about 90%) among students with first-year college GPAs above 3.0 For low SES students, black and Hispanic men, first year grades have an even greater impact on graduation rates.

*Time-to degree, college grades.* Disparities in time-to-degree and grades earned revealed by the data suggest serious concerns. Disadvantaged students took more time to graduate, and low SES and minority students earned lower grades. At the flagships, 77% of high SES graduates finished in 4 years, as opposed

to 59% of low-SES students. Furthermore, **disparities by institutional selectivity, SES, race/ethnicity and gender are often greater for 4- than for 6-year graduation rates.** Students who take longer to graduate use more of their own time and resources to earn a bachelor's degree, and extended time-to-degree is more often the result of students spending more time in college, rather than stopping out. Differences between low and high quartile SES students are compelling: the grades of low SES graduates were in the 43<sup>rd</sup> percentile, as opposed to the 53<sup>rd</sup> for high SES students; however, the difference drops to 2 once differences in entering characteristics are accounted for. Rank-in-class results are similar: black men are 22 points, and Hispanic men 12 percentage points, lower than white men. White women rank 9 percentage points higher than white males; black, Hispanic and Asian women rank, respectively, 24, 14 and 6 percentage points lower than white women. When the research team looked at the performance outcomes of students, they found that at flagship and SEL A system colleges, 36% of high SES students graduated in 4 years in the top half of their class; 29% of low SES students, on the other hand, earned no bachelor's degree from any institution. At the same categories of institutions, race, ethnicity and gender had the following impact: 7% of black men, 13% of Hispanic men, 16% of black women and 24% of Hispanic women graduated in 4 years in the top half of their class. However, 39% of black men, 30% of Hispanic men, 25% of black women and 20% of Hispanic women earned no college degree, indicating clearly that race matters.

*“Undermatching”*: As they continue to analyze the connections between high school attainment and postsecondary experience, Bowen and his colleagues, used a newly created data base describing all U.S. high schools. Findings indicate that the academic characteristics of high schools attended affect college graduation rates; however, after controlling for differences in other variables, such as student characteristics, the degree of relationship is modest. They then conducted a detailed analysis of the characteristics of North Carolina high schools as they relate to college enrollment patterns and graduation rates in that state. **The most significant predictor of bachelor's degree attainment was the academic rigor of the high school.** The research team assigned high schools to one of three academic levels based on such measures as ACT/SAT and AP course taking patterns. They found that 54% of seniors from Level I (the highest academic level) high schools went to four-year colleges, compared with only 27% from Level III schools; furthermore, 34% of all seniors attending Level I schools earned bachelor's degrees within six years, compared with only 14% of those from Level III schools. College performance was also related to the academic rigor of the high school. Students who graduated from a Level I high school who had GPAs of 4.0 or higher and attended a selective college had a college graduation rate 8% higher than students with comparable grades who attended a Level III high school.

Finally, using the North Carolina database, they examine “undermatching”—the rates of high school seniors who qualified for admission at selective institutions, but instead attended less selective four-year college, two-year colleges, or no college at all. Using high school GPA and SAT/ACT scores, the research team found that **undermatches were more common among black students (especially black women) than among white students. Furthermore, SES was strongly correlated with college choices and drove many undermatches.** Only about one-third of the well-qualified seniors whose parents had never attended college enrolled in a selective college; 42% attended a less selective college. Undermatching also affected time-to-degree: 81% of academically qualified students who attended a selective university graduated within 6 year, compared with 66% of academically qualified students who attended a less selective 4-year institution. The implications of the undermatching data are that huge numbers of academically qualified students attend colleges that do not match their abilities (and thus do not provide levels of rigor that will challenge them)—and the most significant factors, once again, are those related to SES and race/ethnicity.

*Test Scores and High School Grades as Predictors*: The research team found that high school grades are a far better predictor of both 4- and 6-year graduation rates than are SAT/ACT scores. When controlling for the high school attended, they found that **even when students with very good grades graduated**

**from a weak high school, they graduated in large numbers from whatever university they attended. On the other hand, students with poor grades in high school have much lower college graduation rates—again, no matter what the level of the high school they attended.** Bowen and his colleagues believe that high school graduation rates “reveal much more than mastery of content”—motivation, perseverance, good study habits and time management skills—characteristics that we know promote college success. They discuss testing, arguing for greater use of content-based achievement tests, such as Advanced Placement (AP), as being more accurate predictors of academic performance in college.

*Transfer:* Overall, students who enroll as freshmen at 4-year colleges (native students) are more likely to earn a bachelor’s degree than students who start at a 2-yr college. In order to focus the data set, the research team excluded students aged 24 and over. **Transfers to selective colleges graduate at the same rate as native students, and at higher rates than native students at less selective institutions.**

Analysis of the North Carolina data revealed that students who started at a 2-year college were more likely to be from low SES families and enter with weaker credentials; however, they are more likely to earn a bachelor’s degree than similar students who started at a 4-year college. Transfer students with high GPAs are 21-24% more likely to graduate than native students. Transfer students at HBCUs in North Carolina and Maryland graduated at “substantially higher rates” than native students. In states such as California and Florida, where policy encourages transfer, community college transfers have a graduation rate of 92%, 6 points higher than native freshmen.

*Financial aid.* Research indicates clearly that **student financial aid (grants and loans) has a positive impact on college attendance and graduation rates, particularly among low SES students.** Bowen and his colleagues defined the “net price” of tuition as tuition minus grant aid. However, the financial aid support available to students has not kept up with rising tuition costs. For example, for the decade beginning in 1998-99, the net price at public 4-year institutions grew by 32%, while the sticker price grew by 50%; comparable growth at private colleges was less (22% compared to 27% gross). Moreover, over \$100 billion in grant and loan aid was distributed in 2007-08. In order to study a possible relationship between college financing and baccalaureate completion rates, the research team created an “adjusted graduation rate.” They found a positive relationship between lower net prices and higher graduation rates. Students in the bottom two SES quartiles were less likely to graduate; among students in the top two SES quartiles, however, no relationship between net price and graduation rates was found. Once again, students from low SES backgrounds are disadvantaged, in spite of the availability of significant financial aid.

*Institutional selectivity.* Investigating differences in attainment between selective and less selective institutions, Bowen and his colleagues found that graduation rates vary widely—from 86% at the selective institutions to 51% at the less selective (SEL Bs). **The correlation rates, however, between institutional selectivity and graduation rates is high, regardless of high school GPA.** Even when adjusted for student entering characteristics and demographic variables, this relationship is still strongly positive and statistically significant. Using a national data set for the 1995 entering cohort at private liberal arts colleges and Ivy League colleges, the research team compared academic attainment at elite private colleges and universities with public institutions. While they found that graduation rates at the most selective flagships had similar 6-year graduation rates to liberal arts colleges and slightly lower rates than Ivy League universities, 4-year graduation rates were found to be significantly lower at the flagships and Ivy League colleges. Finally, HBCUs included in the North Carolina database were considered in regard to student achievement at HBCUs and predominantly white institutions (PWIs). They tracked the bachelor’s degree attainment rates of black students who started at an HBCU to the graduation rates of black students who started at a PWI. They developed a “propensity score” (likelihood of attending an HBCU) for all black students scoring below 1150 on the SAT and found that within each propensity group attainment rates are slightly higher at the PWIs. They also found that HBCU graduation rates do not vary systematically with student characteristics. Within the public sector universities, overall

graduation rates vary widely, from 86% at selective flagships to 51% at state system SEL Bs. The correlation between bachelor's degree attainment rates and selectivity is very high, even after adjusting for differences in entering characteristics and demographics: attending a more selective institution increases a student's probability of graduating, regardless of high school GPA. In comparison, most selective flagship universities had 6-year graduation rates similar to those of students at liberal arts colleges; the 4-yr graduation rates were found to be 20 and 14 points lower than Ivy League and liberal arts colleges, respectively. In comparing black students who started at a PWI with average SAT scores below 1150 and students who attended HBCUs, graduation rates were found to be slightly higher at the PWIs. HBCUs are institutions with unique missions and characteristics, and need to be studied separately.

*Target Populations.* The research team looked specifically at the attainment rates of underrepresented populations. Only about 15% of black men aged 25-29 have earned bachelor's degrees; of black men in the 1999 entering cohort, 59% graduated in 6 yrs, compared with 75% of white men and 72% of black women. **Only 26% of black men attending flagships graduated in 4 years;** however, for even those black men with low academic backgrounds the selectivity finding held. In fact, black men in the same GPA group who attended more selective institutions graduated at higher rates than black students who went to less selective institutions. In 2006, 10.8% of Hispanics aged 25-29 had completed 4 or more years of college; 58% of Hispanics enrolled in college were attending 2-year institutions, compared to 42% of blacks and 36% of whites. Other things being equal, the association between graduation rates and selectivity is stronger for Hispanics than for blacks.

The following represent the primary findings and challenges from this study:

1. The overall level of educational attainment in the U.S. today is both too low and stagnant. U.S. education system harbors huge disparities in outcomes—especially as measured by baccalaureate completion rates—that are systematically related to race/ethnicity and gender, as well as SES. These issues are linked.
2. Time-to-degree matters.
3. Public universities have to be the principal engines of progress in addressing these challenges.
4. Disparities in educational attainment by SES are pervasive in American public higher education and cannot be explained away by associated differences in academic preparation.
5. High school grades are a far better incremental predictor of bachelor's degree completion rates than SAT/ACT scores, even when we know little or nothing about the quality of the high school attended.
6. Students from all backgrounds should enroll at the most challenging colleges that will accept them.
7. Students from underrepresented minority groups and low SES backgrounds are less likely to graduate from college. In addition, these students are often “undermatched,” resulting in lower graduation rates. College admissions processes need to focus on low SES and minority candidates who meet the academic qualifications of the institution.
8. Students who started at a 2-year college were more likely to be from low SES families and enter with weaker credentials; however, they are more likely to earn a bachelor's degree than similar students who started at a 4-year college.

## Implications

1. AVID is currently addressing academic attainment 4-12 for the groups least likely to earn bachelor's degrees. AVID Postsecondary has the potential for a powerful positive impact on college attainment of these students.
2. A strong first-year experience is likely to increase persistence and college graduation rates.
3. The power of high school grades in academic attainment in college suggests that greater rigor in high school will result in increased degree attainment, especially for target populations.

4. The “selectivity factor” is very consistent with AVID’s philosophy and college decision strategies. College admissions officers need to be increasingly mindful that when students are challenged, they rise to those expectations, and focus acceptance on low SES and minority students who have the academic qualifications to succeed.
5. Postsecondary AVID has tremendous potential to increase baccalaureate completion rates.
6. Taking Advanced Placement courses and tests provides several advantages in terms of bachelor’s degree completion.
7. The lagging college completion rates of black men must be addressed.