

The Educational Attainment of Chicago Public Schools Students 2015: A Focus on Four-Year College Degrees

Technical Appendix

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**Jenny Nagaoka
Kaleen Healey**

UCHICAGO Consortium
ON SCHOOL RESEARCH

Data Sources

Data on high school graduation, course grades, and ACT scores are from the Chicago Public Schools (CPS) administrative records, shared with the University of Chicago Consortium on School Research (UChicago Consortium) through its Master Research Services agreement with the district. With the exception of course grades used to compute ninth-grade on-track status and cumulative GPA, these data are available for all CPS students, including charter school students.

Data from the National Student Clearinghouse (NSC) are used for college enrollment and college graduation rates. The NSC houses enrollment and graduation records for colleges throughout the United States and covers 98 percent of all post-secondary enrollments nationally. All of these data are available for all CPS graduates, including charter school graduates.

Data Definitions

Direct bachelor’s degree attainment index

The direct bachelor’s degree attainment index (Direct Bachelor’s DAI) is the product of the most recent rates available for high school graduation, four-year college enrollment, and graduation from four-year colleges (see definitions of these terms below). It provides an estimate of the percentage of ninth-graders who will take a straightforward route to a four-year college degree within 10 years of beginning high school. The direct bachelor’s degree attainment index is *not* the rate at which any single cohort of CPS ninth-graders obtains a college degree; rather it uses the most recent numbers for the three milestones to give a picture of the current state of the district.

High School Graduation Rate (2015 HS graduates)	Four-Year College Enrollment Rate (2014 HS graduates)	Four-Year College Graduation Rate (six year rate; 2008 college enrollees)	Direct Bachelor’s Degree Attainment Index (2015)			
74%	X	42%	X	50%	=	16%

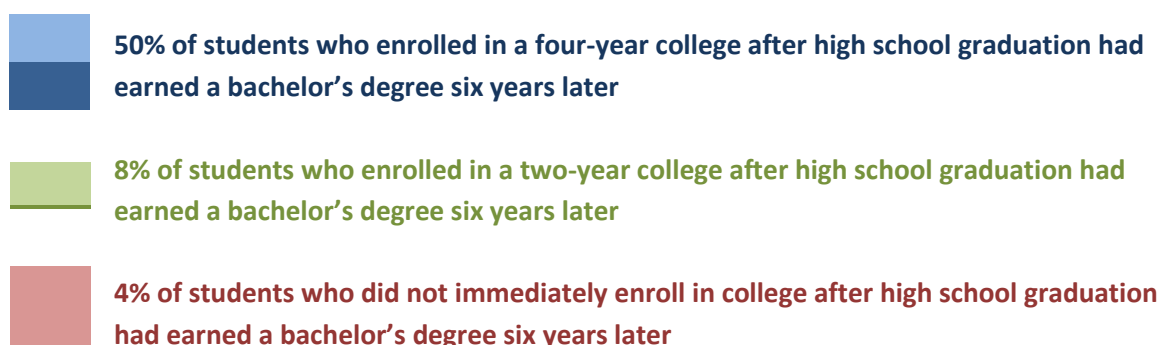
Bachelor’s degree attainment index

The bachelor’s degree attainment index (Bachelor’s DAI) provides a better estimate of the proportion of ninth-graders who will earn a four-year college degree within 10 years of beginning high school because it accounts for students who take alternative routes to a degree, either by delaying college entry or first enrolling in a two-year college. While the Direct Bachelor’s DAI only includes enrollment and graduation rates for four-year college enrollees, the Bachelor’s DAI uses the enrollment and bachelor’s degree completion rates for two additional groups of CPS graduates: Those who enroll in a two-year college and those who delay college enrollment.

To calculate the Bachelor's DAI, we use the most recent college enrollment rates available. For the 2015 Bachelor's DAI we use the college enrollment rates for 2014 CPS graduates:



We then multiply these enrollment rates by the most recent six-year bachelor's degree completion rate for each group of students, respectively. For the 2015 Bachelor's DAI, we use the bachelor's degree completion rates for 2008 CPS graduates:



Finally, we multiply the high school graduation rate by the sum of these products to reach the Bachelor's DAI.

High school graduation rate

The high school graduation rate is the proportion of students in an adjusted, first-time ninth-grade cohort who earned a regular high school diploma within four years, including the summer after their fourth year. Students are considered a first-time ninth-grader if they had never before been enrolled in a CPS high school¹ and if they either a) were actively enrolled as a ninth-grader on the 20th day of the school year or b) enrolled as a ninth-grader after the 20th day of the school year and remained enrolled long enough to receive course grades. Charter schools are not required to provide data on their students' course grades to CPS and so students who enrolled in a charter school after the 20th day are included in the first-time ninth-grade cohort, even though we do not know if they remained enrolled long enough to receive grades.

¹ High schools include programs CPS developed for students who had not passed the eighth-grade test benchmarks and were aged 15 or more (e.g., transition centers, academic preparatory centers, achievement academies).

To compare graduation rates by school type, students are assigned to the first CPS high school that they are actively enrolled in, and are counted as graduates if they receive a diploma from any CPS high school that is not an alternative school. Students who transferred into CPS after ninth grade are included in the cohort that corresponds to their grade and are assigned to the first CPS high school they enroll in. Ungraded special education students, students whose first CPS enrollment is at an alternative school, and students who permanently transfer out of CPS (whether the transfer was verified or not) are not included in first-time ninth-grader cohorts. Students who earn a diploma from an alternative school or program are counted as non-graduates.

For 2011 to 2014, the national numbers use the *Adjusted Cohort Graduation Rate (ACGR)*. A four-year ACGR is defined as the number of students who graduate in four years with a regular high school diploma, divided by the number of students who form the adjusted cohort for that graduating class. The adjusted cohort refers to students who enter ninth grade and adds students who transfer into the cohort, but removes students who transfer out, move out of the country, or are deceased (National Center for Education Statistics, 2016a). In prior years, the national numbers use the *Averaged Freshman Graduation Rate*, which uses aggregate student enrollment data to estimate the size of an incoming freshman class and aggregate counts of the number of regular diplomas awarded four years later. The incoming freshman class size is estimated by summing the enrollment in eighth grade for one year, ninth grade for the next year, and tenth grade for the year after and then dividing by three (National Center for Education Statistics, 2016b).

College enrollment rate

The college enrollment rate is the proportion of graduates who enrolled in a post-secondary institution (which participates in the NSC) in the fall following high school graduation. Students who graduate from special education schools or alternative diploma programs are not counted as graduates. Graduates who enroll in primarily baccalaureate degree-granting institutions are considered four-year enrollees and graduates who enroll in institutions that primarily grant associate's degrees or certificates are considered two-year college enrollees. Off-cycle graduates are counted as graduates in the school year in which they graduated. To compare enrollment rates by high school type, graduates are assigned to the high school where they were enrolled in the spring of their graduation year, or their last active school for off-cycle graduates. Graduates who enroll in colleges that do not report enrollment data to the NSC, or request that their college not share their data with the NSC, are not counted as college enrollees.

Individual schools may have better data on their graduates' college enrollment. The NSC relies on a matching algorithm to pair data provided by CPS on their graduates with data provided by colleges. This algorithm may produce different results using data provided by schools, which may be more current than the data given by CPS. Additionally, schools may have other evidence—such as course schedules or transcripts—of their graduates' college enrollment.

The national four-year college enrollment rate uses the *Immediate College Enrollment Rate* for four-year colleges. The immediate college enrollment rate is the annual percentage of high school completers (including GED recipients) who enroll in a four-year college in the fall immediately after completing high school (National Center for Education Statistics, 2015b).

College graduation rate from four-year colleges

The college graduation rate is the proportion of enrollees who earned a degree from a four-year college within six years. Data on college graduation come from the NSC. Students who earn a degree from a different college than where they first enrolled after high school are counted as college graduates. Students who enroll in a college which does not provide graduation records to the NSC in the fourth through sixth years after high school graduation are not included in these rates, as we are unable to determine if they earned a degree.

The national four-year college graduation rate is based on the number of students entering the four-year institution as full-time, first-time, degree-seeking undergraduate students in a particular year (cohort) and the number completing their program within 150 percent of normal time to completion (six years for a four-year degree). Students who graduate from a college other than where they first enrolled are not counted (National Center for Education Statistics, 2015a).

Freshman on-track rate

Freshman on-track rate is the proportion of first-time ninth-graders who have earned five or more credits and have failed no more than one semester of a core course (English, math, science, and social studies) by the end of ninth grade. On-track status does not include summer coursework. Course grades for charter school students are not available and so we are unable to calculate on-track rates for charter schools.

ACT score

ACT score is the composite score students received when they took the ACT as part of the Prairie State Achievement Examination taken by all eleventh-graders in the State of Illinois. These statistics are likely underestimates of CPS students' performance submitted in college applications because they do not reflect the higher scores that students who retake the exam may have submitted to colleges. These statistics differ from those published by CPS because they reflect the scores of graduates and not of all students who take the ACT.

GPA

GPA is the cumulative, unweighted average of grades received in core courses (English, math, science, and social studies). Only GPAs based on four or more semester credits are included. Course grades, and therefore GPAs, are not available for charter school students.

References

National Center for Education Statistics. (2015a). *Graduation rate from first institution attended for first-time, full-time bachelor's degree-seeking students at 4-year postsecondary institutions, by race/ethnicity, time to completion, sex, control of institution, and acceptance rate: Selected cohort entry years, 1996 through 2008* [data file]. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from

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