



Career-related Programme graduates in higher education

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Studies examining the effectiveness of career and technical education (CTE) in secondary school often reach inconclusive findings on the question of whether CTE promotes career-oriented skills without any detriment to students' academic achievement. Launched in 2012, the IB Career-related Programme (CP) has been uniquely designed to do just that: it combines the rigour of IB courses with the practical learning of CTE to promote both college and career readiness equally.

This study examines the patterns of higher education enrollment, destinations and persistence of all CP graduates from secondary schools in the US between 2013 and 2015.

Key takeaways

CP graduates attend four-year universities

Four out of five (81%) CP graduates enrolled in university some time after secondary school. Of those, 79% chose four-year institutions over two-year colleges as compared to 64% nationally in 2014.

CP graduates enroll and persist in university at higher rates than the national average

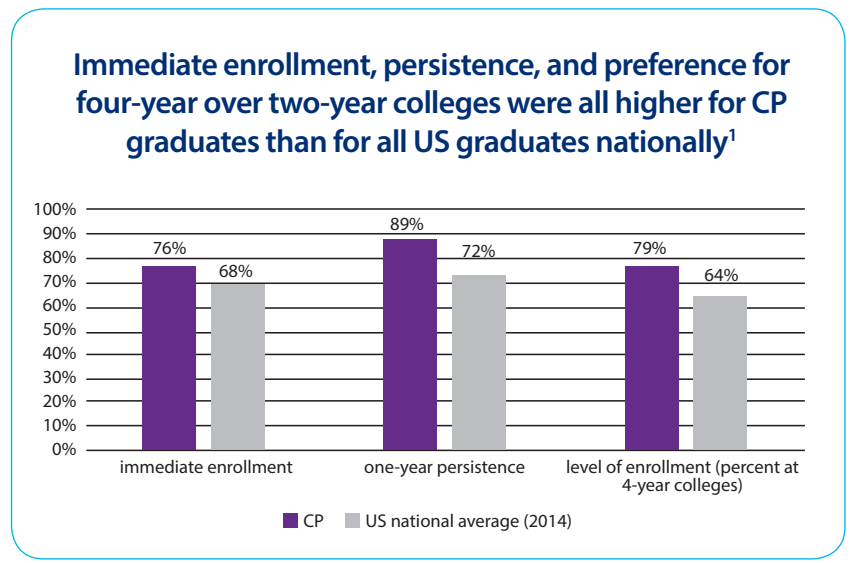
They also tend to major in high-earning, career-oriented fields* such as:

- engineering (18%)
- business (17%)
- health sciences (15%)

CP graduates attend selective higher education institutions

Of the CP graduates who chose four-year institutions, more than half (55%) enrolled at a university ranked by Barron's Selectivity Index as "very competitive" or better.

*Percentage points represent four-year university students.



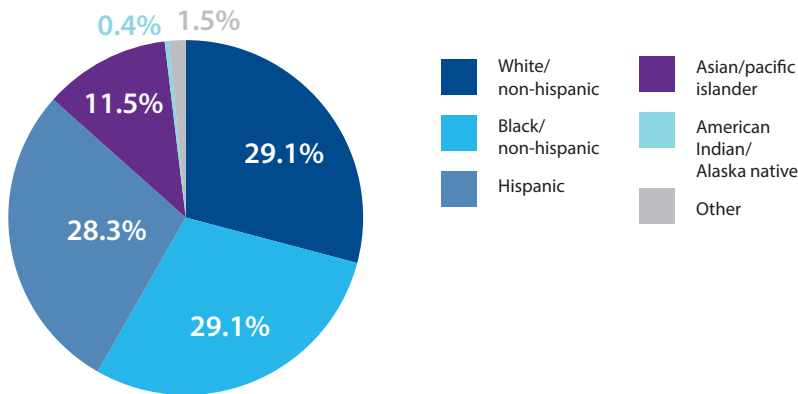
¹Figures for immediate enrollment of the national cohort are taken from US Department of Education, Digest of Education Statistics 2015, table 302.10. Figures for persistence of the national cohort are from National Student Clearinghouse Research Center: <https://nscresearchcenter.org/snapshotreport-persistence/retention22/>.

How was the study conducted?

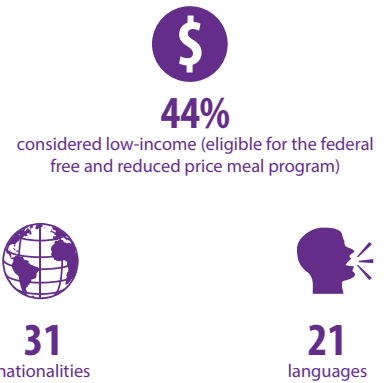
The IB Global Research team requested records from the National Student Clearinghouse in order to examine patterns of enrollment, persistence, specialization, and equity of access in higher education, as well as how those outcomes compared to national averages. These were relatively short-term outcomes; at the time of data collection, the youngest cohort of CP graduates had been out of secondary school for only nine months.

All 542 students in the US who participated in the CP and graduated between 2013 and 2015 were included in the study. These are among the first graduates of the CP, and they represented very diverse backgrounds, including traditionally under-served populations.

US CP graduates are diverse²



US CP graduates (2013-2015)



What were the results?

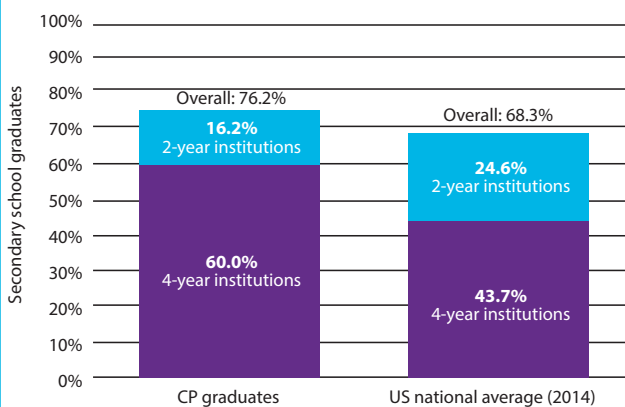
Enrollment in higher education

Most CP graduates attended university full-time (87%) and also stayed enrolled continuously without any gaps (84%).

The study shows that:

- CP students immediately enrolled in four-year institutions at higher rates than US secondary school graduates in 2014 (59.6% compared to 43.7%).
- Low-income status had little impact on enrollment rates.
- 70% of CP graduates who began at two-year universities pursued degrees designed for transfer to four-year institutions.

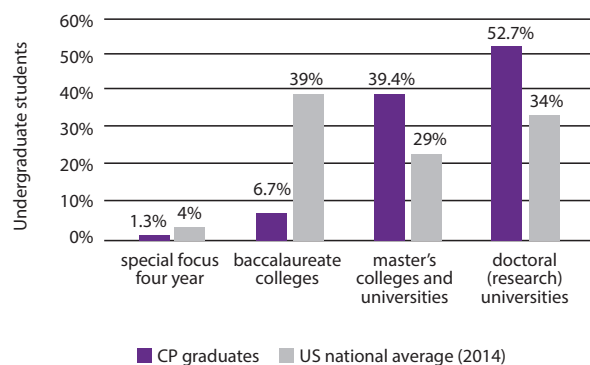
Immediate higher education enrollment³



²Race/ethnicity and income data are missing for 12% of students.

³Figures for the national cohort are taken from US Department of Education, Digest of Education Statistics 2015, table 302.10. Immediate enrollment includes only individuals who enroll in higher education by October of the year they complete high school.

Among CP graduates who enrolled in four-year institutions, many chose large, flagship state universities with a high degree of research activity⁴



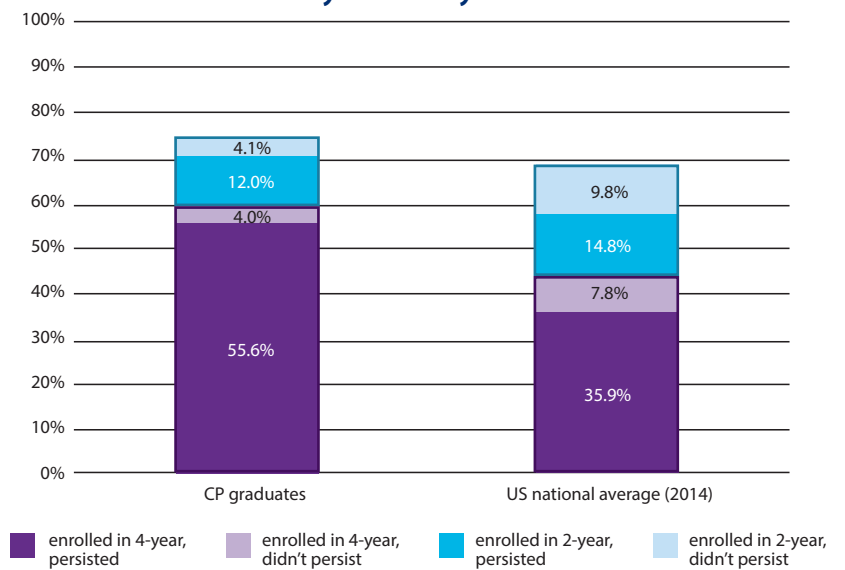
⁴National average is for fall 2014. Source: Snyder, de Brey, & Dillow (2016), table 317.40. Percentages are calculated using only the Carnegie Basic Classification categories shown. Tribal colleges (0% CP, 0.1% national) and all two-year colleges were omitted, and the classification "baccalaureate/associates" (0% CP, 5% national) was combined with "baccalaureate colleges".

Persistence: Did CP graduates return for their second year of higher education?

Of the three main outcomes studied, one-year persistence showed the largest advantage for the CP over the national average.

- 93% of CP graduates at four-year institutions persisted for one year, as compared to 82%⁵ nationally in 2014.
- Overall, once CP graduates enrolled, almost all (89%) return for their sophomore year, which is 17 percentage points higher than the national average (72% in 2014).
- Gender, race/ethnicity and low-income status were not significant factors in predicting students' likelihood of persisting.

Immediate enrollment with persistence, 4-year vs. 2-year⁵

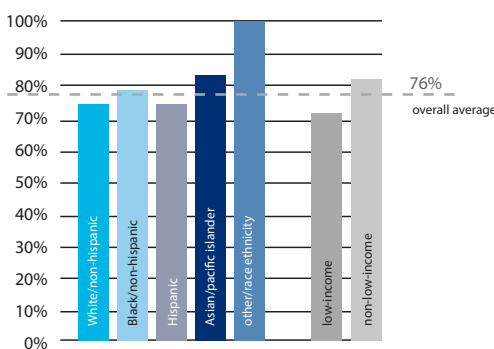


Higher education outcomes: How consistent were the results across income and race/ethnicity?

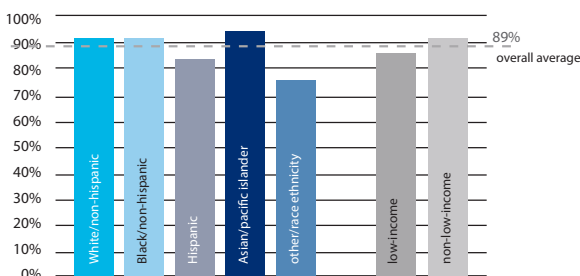
CP graduates' postsecondary outcomes were relatively similar across income and race/ethnicity.

- Immediate enrollment, persistence and preference for four-year over two-year universities were all higher for CP graduates than for all secondary students nationally.
- These differences were especially pronounced for black and hispanic students.

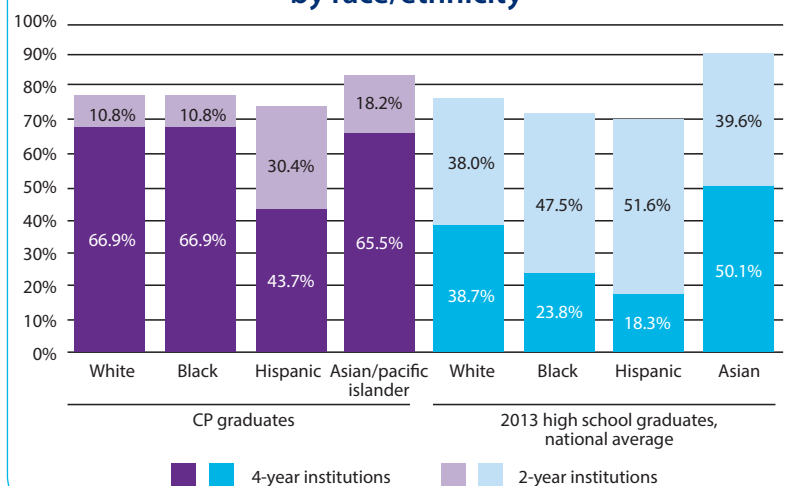
CP graduates' immediate enrollment in higher education



CP graduates' one-year persistence in higher education



4-year and 2-year immediate enrollment by race/ethnicity⁶



⁵Figures for immediate enrollment of the national cohort are taken from US Department of Education, Digest of Education Statistics 2015, table 302.10. Figures for persistence of the national cohort are from National Student Clearinghouse Research Center: <https://nscresearchcenter.org/snapshotreport-persistence/retention22/>.

⁶Figures for the national cohort are taken from US Department of Education, Digest of Education Statistics 2015, table 302.43. Immediate enrollment includes only individuals who enroll in higher education by October of the year they complete high school.

Summary of findings

- ▶ Academic rigour and CTE are not mutually exclusive.
- ▶ The college trajectories of CP graduates set them up to succeed.
- ▶ Persistence rates were relatively consistent across income and ethnicity groups. These rates also showed the largest advantage over the national average.

Most popular four-year university destinations of CP graduates in the US

Institution name	State	Number of CP graduates	Top three Barron's selectivity classification
George Mason University	Virginia	17	very competitive
University of Illinois at Chicago	Illinois	16	very competitive
Virginia Commonwealth University	Virginia	15	
Virginia Tech	Virginia	14	highly competitive
James Madison University	Virginia	11	very competitive
Columbus State University	Georgia	8	
Towson University	Maryland	8	very competitive
Georgia Southern University	Georgia	7	
University of Minnesota - Twin Cities	Minnesota	7	highly competitive
University of Wisconsin - Madison	Wisconsin	7	highly competitive
Palm Beach State College	Florida	6	
University of Maryland - College Park	Maryland	6	highly competitive
Old Dominion University	Virginia	5	
Texas A & M University	Texas	5	highly competitive
University of Maryland - Baltimore County	Maryland	5	very competitive
Florida Atlantic University	Florida	4	
Kennesaw State University	Georgia	4	
Pennsylvania State University	Pennsylvania	4	very competitive
University of West Georgia	Georgia	4	
DePaul University	Illinois	3	very competitive
Georgia Tech	Georgia	3	highly competitive
Radford University	Virginia	3	
St Catherine University	Minnesota	3	
Tennessee State University	Tennessee	3	
University of Illinois at Urbana-Champaign	Illinois	3	highly competitive
University of Virginia	Virginia	3	most competitive
Valdosta State University	Georgia	3	

About the CP:

The IB Career-related Programme is offered during the last two years of secondary school to develop students' academic, technical, and employability skills, leading to college and career readiness. All CP students must complete the programme's three components:

- The CP core: language development, service learning, personal and professional skills and a reflective project.
- At least two courses from the IB Diploma Programme (DP).
- Career and technical education (CTE) from a provider such as BTEC, Project Lead the Way, and other approved providers. The five most popular career pathways selected by CP students are: business, health science, engineering, hospitality and IT.

Combined, the three elements of the CP prepare students to pursue higher education, apprenticeships or direct employment.

To view the full study visit ibo.org/research



Learn more about the IB Career-related Programme (CP) at ibo.org/cp