



# Postsecondary Outcomes of IB Career-Related Programme Graduates in the U. S.

January 2024

Joshua Leake, Manager Research Operations

Megan Townsend, Data Analyst

National Student Clearinghouse

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## Executive Summary

The International Baccalaureate's (IB's) 2-year Career-Related Programme (CP) is designed to prepare students for higher education, apprenticeships or employment (IBO 2015).

IB commissioned the National Student Clearinghouse ("the Clearinghouse") to study the postsecondary outcomes of the CP students who graduated high schools in the U.S. in 2016 and enrolled in U.S. postsecondary institutions (i.e., "CP graduates"). This report is the first to examine the longer-term postsecondary outcomes (four-year and six-year graduation rates) of the CP graduates from U.S. high schools.

The Clearinghouse's analyses indicate that IB CP graduates experience more positive postsecondary outcomes than the general postsecondary population in the United States.

- Compared to the national postsecondary enrollment rate of 64%, the cohort of CP graduates averaged an enrollment rate of 72%.
- CP graduates enrolled more often than the national cohort at four-year institutions (55% compared to 43%).
- Nationally, students persist from year one to year two of their postsecondary enrollment at a rate of 72%. CP graduates average an 81% persistence rate.
- The four-year graduation rate of CP students mirrors the outcome in the national cohort (47% compared to 49% nationally).
- CP graduates complete their degree in six years at a notably higher rate than the national average (77% compared with 68% nationally).
- There are many uncollected or unknown elements to support a direct, causal relationship between IB programme participation and higher postsecondary success rates.

## Introduction

The International Baccalaureate (IB) is a global nonprofit educational organization that offers a unique and challenging curriculum for students aged 3 to 19. Founded in 1968, the IB has grown to encompass over *5,700 schools in 160 countries*, providing a high-quality, internationally recognized education to more than 1.5 million students.

The International Baccalaureate aims to develop inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To this end, the organization collaborates with schools, governments, and international organizations to develop challenging programmes of international education and rigorous assessment. These programmes encourage students across the world to become active, compassionate, and lifelong learners who understand that other people, with their differences, can also be right (IB Facts and Figures, 2023).

The IB offers four<sup>1</sup> educational programmes to more than 1.95 million students aged 3 to 19 across the globe. The IB programmes can be offered individually or as a continuum of international education. As of November 2023, there were over 8,000 programmes being offered worldwide.

The IB Career-related Programme is designed for students aged 16-19. The CP is a framework of international education that incorporates the values of the IB into a unique programme addressing the needs of students engaged in career-related education. The programme leads to higher education, apprenticeships or employment. CP students undertake a minimum of two IB Diploma Programme courses, a core consisting of four components and a career-related study. While the DP courses provide academic rigor, the career-related study supports the CP's academic strength and provides real-world approaches to learning; the CP core supports the development of skills and competencies required for lifelong learning.

The programme is currently offered in 169 schools in the United States and due to its recent introduction, the CP student graduating cohort from U.S. high schools in 2016 was comprised of 706 students.

IB commissioned the National Student Clearinghouse ("the Clearinghouse") to examine and summarize the postsecondary outcomes of CP students who graduated high schools in the U.S. in 2016 and enrolled in U.S. postsecondary institutions. These outcomes include:

- Entry rates into postsecondary education;
- Rate of persistence in postsecondary education from first year to second year;
- Graduation rates at the four-year and six-year marks.

The National Student Clearinghouse, a nonprofit formed in 1993, is the trusted source for and leading provider of higher education verifications and electronic education record exchanges.

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<sup>1</sup>The four programmes offered by the IB are: the Primary Years Programme (PYP), the Middle Years Programme (MYP), the Diploma Programme (DP), and the Career-related Programme (CP).

Besides working with over 3,600 postsecondary institutions, the Clearinghouse also provides thousands of high schools and districts with continuing collegiate enrollment, progression, and completion statistics on their alumni. For more details, visit [studentclearinghouse.org](http://studentclearinghouse.org).

Expanding on past reports, this report examined postsecondary behaviors of CP students. A separate report is available, providing an in-depth analysis of the Diploma Programme graduates' postsecondary outcomes.

## Literature Review

The decision to attend college is a significant one, impacting individuals' future careers, earning potential, and overall well-being. While the benefits of higher education are widely acknowledged, understanding the specific reasons why attending college can be advantageous requires a comprehensive exploration of the existing literature.

One of the most prominent justifications for attending college concerns its positive impact on earning potential. Studies consistently demonstrate a strong correlation between educational attainment and income levels (Chetty, 2017) (Carnevale, Smith, & Strohl, 2013). Individuals with bachelor's degrees earn significantly more than those with only high school diplomas, with the difference widening over time (Bureau of Labor Statistics, 2023). Additionally, college graduates experience lower unemployment rates and greater job security, further enhancing their economic prospects (Autor, 2014).

Beyond financial advantages, college equips individuals with valuable skills and knowledge necessary for success in various careers. College curricula expose students to diverse disciplines, fostering critical thinking, problem-solving, and communication skills essential for navigating the ever-evolving job market. Furthermore, college degrees function as credentials, opening doors to opportunities unavailable to those with lower levels of education (Carnevale, Smith, & Strohl, 2013). This credentialing effect is particularly pronounced in fields requiring specialized knowledge and skills, such as law, medicine, and engineering.

College attendance contributes significantly to personal growth and development. The academic environment fosters intellectual inquiry, cultural awareness, and social responsibility, empowering individuals to become well-rounded and informed citizens (Pascarella & Terenzini, 2005). Additionally, college experiences broaden perspectives, exposing individuals to diverse viewpoints and fostering tolerance and understanding. This exposure can lead to greater personal satisfaction and a heightened sense of social responsibility (Astin, 1993).

Research reveals a positive correlation between higher education and various positive health outcomes. College graduates tend to enjoy better physical and mental health, with lower rates of chronic diseases and mental health issues (Adler & Ostrove, 1999). Additionally, college attendance can promote healthy lifestyle choices and increase access to healthcare resources, further contributing to overall well-being (U.S. Department of Health and Human Services, 2014).

College provides a unique opportunity to build social capital and develop valuable networks. Through interactions with peers, faculty, and professionals, individuals can establish connections that can benefit them personally and professionally throughout their lives (Burt, 2007). These networks can provide access to job opportunities, mentorship, and valuable resources, further enhancing career success and personal development.

However, recent graduates face strong pressures to delay entry or choose a non-traditional route entirely. Rates of entry into postsecondary studies after graduation are still below the levels seen prior to the pandemic in most categories.

## Methodology

This report makes use of data gathered from multiple sources by the Clearinghouse to examine enrollment, persistence, and graduation rates of the CP graduates in the U.S. The primary data source is comprised of a variety of administrative records held by the Clearinghouse on behalf of postsecondary institutions in the United States. As of Fall 2022, the Clearinghouse received enrollment and administrative records on over 97% of postsecondary students in the United States. These records consist of enrollment statuses, institutional characteristics, limited demographics, and other administrative data points. Sources from outside the Clearinghouse were also incorporated into the study to allow for the examination of specific questions around institutional characteristics.

### Data Sources

Specific elements from each source are described below.

#### Carnegie Classification of Institutions of Higher Education

The Carnegie Classification of Institutions of Higher Education is a commonly used framework for categorizing U.S. higher education institutions. First published in 1973, the ratings are updated every three years and capture a wide range of elements. Please visit <https://carnegieclassifications.acenet.edu/> for additional information.

For this study the Clearinghouse made use of the Carnegie Classification on the selectivity of an institution. By these standards, selectivity comes in a range of Inclusive, Selective, and More Selective. Institutions using ACT or SAT scores as part of their admissions process report out those scores to the framework. For those institutions, the selectivity designation is based on those scores. For those institutions who are test optional but not designated for using an open admissions approach, the designation is based on the percent of applicants admitted.

#### International Baccalaureate Organization

Described earlier in this report, the IB supplied student data allowing the Clearinghouse to match to its collection of postsecondary enrollment records. The IB additionally supplied programme designations and results of IB assessments.

#### Career-Related Programme graduates

The analyses included in this report examined the postsecondary outcomes of the CP students who graduated U.S. high schools in 2016 and enrolled in U.S. postsecondary institutions (i.e., “CP graduates”).

#### National Student Clearinghouse

Described earlier in this report, in addition to matching student records, the Clearinghouse supplied data elements detailing postsecondary enrollments. These elements included enrollment dates, enrollment status, degree earned, and institutional level elements of institutional name and level (2-year or 4-year). The compilation of these records generated for each term, for each school of enrollment, enables the Clearinghouse to observe long term postsecondary behavior patterns,



including transfers, dropout/ stop out, and completion measures, to name those details applicable to this report.

In the tables found elsewhere in this report, national averages as published by the Clearinghouse in freely available reports are used to provide national baselines against which the DP graduates may be compared. For these national averages, the following definitions were used:

#### *Fall Term Enrollment*

A student is counted as having been enrolled in the fall if they were enrolled for any length of time in a term that began between August 1 and October 31, inclusive.

#### *First-Time Beginning Students*

The reported figures use historical Clearinghouse enrollment and degree data to confirm that students included in the study (1) showed no previous college enrollment, (2) had not previously completed a college degree or certificate, and (3) their first-time enrollment in an applicable cohort year was not categorized as dual enrollment (that is, any enrollment prior to age 18).

#### *Enrollment Intensity*

A student is classified as having started college in a full-time status or part-time status based on their earliest reported enrollment intensity within the entering fall term. The part-time category comprises three-quarter-time, half-time and less-than-half-time students.

#### *Persistence*

Persistence is defined as continued enrollment at *any* higher education institution in the fall term of a student's second year *or* completion of a credential at any time between the start of the fall term of the first year and end of the fall term of the second year.

#### *Completions*

For the reference report, we examined completion by first-time students at either two-year or four-year institutions. We defined completion as having obtained a degree or certificate at any institution within the six-year study period (i.e., by June 30, 2023). Clearinghouse data provide a unique headcount of U.S. college enrollments during each term, which allows for the tracking of individuals including those with concurrent completion.

For a deeper discussion of the methodologies used by the National Student Clearinghouse Research Center please see the methodological notes of *Completing College National and State Reports* published November 2023 and *Persistence and Retention* published July 2023. These reports and others dating back to 2011 may be found at <https://nscresearchcenter.org/publications/>.

## **Analytic approach**

Below is an overview of the methodology used in the generation of these findings. Additional notes may be found in the Appendix.

IB provided the Clearinghouse with a list of CP students who sat for IB exams and graduated high schools in 2016. This list was loaded to SAS for matching to students in the Clearinghouse

database. Potential matches for students in the cohort file were found using full birth dates and partial first and last names. Potential matches were then scored according to the completeness of the match, with only matches above a specific threshold retained. Overall, matches were found for 87% of the IB student cohort. For additional information on the Clearinghouse matching process please see U.S. Patent #11423030.

An initial table of all student enrollment records during the period of January 1, 2016 to December 31, 2022 was created based on the student identification number identified in the matching process. To this base table, school information, degrees, graduations, and demographic information were matched based on student identification number.

The Carnegie Classification for 2021 was matched based on school code. The classification was collapsed to three categories: Inclusive, Selective and More Selective. These categories were applied to four-year institutions only. Persistence and completion rates were calculated for students enrolling full-time at four-year institutions between August 1, 2016 and January 31, 2017.

Exhibit 1 below provides a synthetic view of the examined outcomes. Immediate enrollment was defined as full-time enrollment during the period of August 1, 2016 to January 31, 2017. One-year persistence rates were calculated for students with immediate full-time enrollment in a four-year institution. Persistence did not account for changes in enrollment status, concurrent enrollment, or of changes in specific school or field of study at these institutions. Students enrolled during the period of August 1, 2017 to January 31, 2018 were flagged as persisted. Four- and six-year graduation rates were calculated for students with immediate full-time enrollment in a four-year institution. Students with a graduation date on or before July 31, 2020 were flagged as completed within four years, and students with a graduation date on or before July 31, 2022 were flagged as completed within six years. The same graduation cutoffs were applied to the general U.S. postsecondary population meeting the same inclusion criteria as the IB cohort and the outcomes presented for comparison purposes.

*Exhibit 1 – Definitions of the Postsecondary Outcomes Examined*

	Definition
Immediate enrollment	Enrollment at a Clearinghouse-participating college or university immediately after high school graduation (between August 1, 2016 and January 31, 2017).
1-year persistence	Enrollment at the same 4-year college or university in the fall after immediate enrollment (persisting into second year of college).
4-year graduation	Graduation by the end of July 31, 2020.
6-year graduation	Graduation by the end of July 31, 2022.

The sum of the number of immediate full-time students enrolled at each institution was calculated by Carnegie Classification. Exhibit 2 outlines the selectivity standards used by the Carnegie Classification schema.

*Exhibit 2 – Standards for Institutional Selectivity*

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Full-time 4-year institutions <sup>a</sup>	
More selective	<ul style="list-style-type: none"><li>• At least 80 percent of undergraduates enrolled full time</li><li>• College admission test scores (SAT I or ACT composite) for incoming freshmen in the top fifth of bachelor's degree-granting institutions</li></ul>
Selective	<ul style="list-style-type: none"><li>• At least 60 percent of undergraduates enrolled full time</li><li>• College admission test scores (SAT I or ACT composite) for incoming freshmen in the middle two fifths of bachelor's degree-granting institutions</li></ul>
Inclusive	<ul style="list-style-type: none"><li>• At least 60 percent of undergraduates enrolled full time</li><li>• College admission test score data not submitted, or in the bottom two fifths of bachelor's degree-granting institutions</li></ul>

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<sup>a</sup> The Carnegie Classification's selectivity categorizations are based on the 25th percentile test score for each institution's incoming freshman class.

**A note on Clearinghouse privacy practices:** In the tables included in this report, a cell with a value of “\*” indicates that the precise number of individuals in a cell was suppressed if that number is 10 or fewer. Thus, an \* indicates that the cell contains 1-10 individuals. If the result for the cell is zero then the cell is left blank or left off, depending on format of the table.

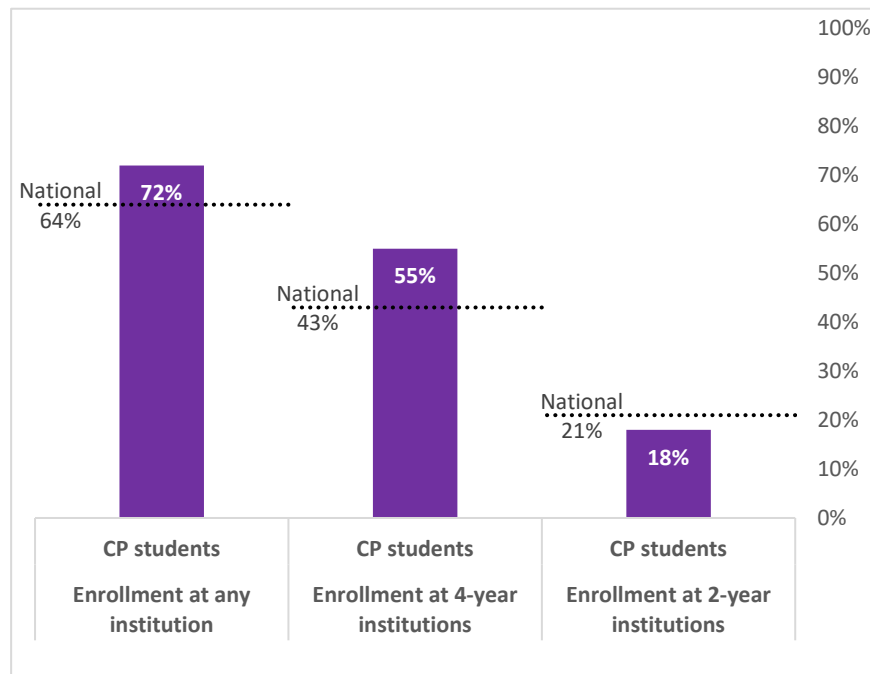
## Findings

The section below details the findings of the analysis of the postsecondary outcomes of CP graduates from the 2016 cohort. Specifically, the findings detail the postsecondary enrollment, the year one to year two rate of persistence in postsecondary education, and the graduation rates of these students.

### Enrollment Outcomes

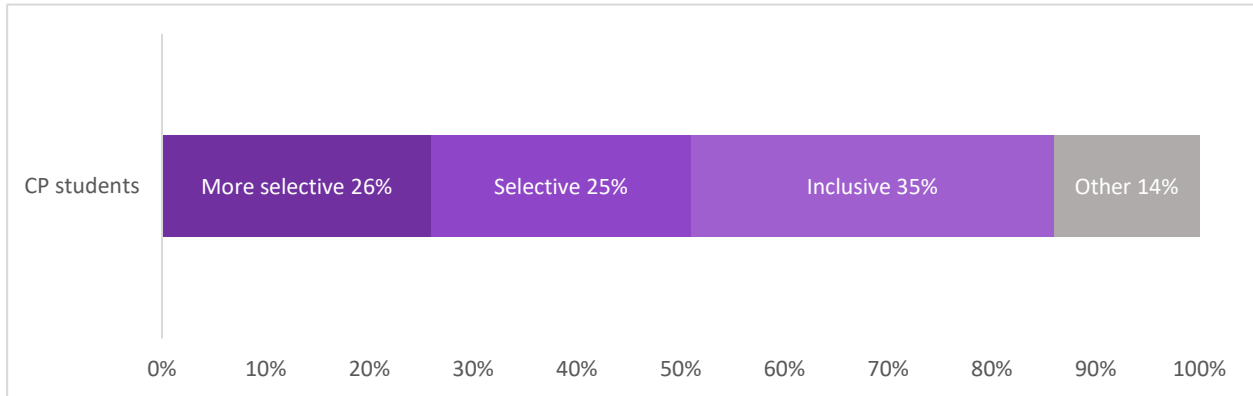
The analyses revealed that of the CP students who graduated high schools in the U.S. in 2016 (n=706), 72% enrolled in postsecondary institutions in the U.S. immediately after high school completion. This enrollment was notably higher than the national average of 64% across all institutions reporting to the Clearinghouse (Exhibit 3). In addition, when considering the type of institution, CP graduates were more likely to enroll at four-year institutions in comparison to the national figures (55% compared to 43% nationally). Conversely, the CP student cohort had slightly lower rates of enrollment at two-year institutions (18% compared to 21% nationally).

*Exhibit 3 - CP Postsecondary Enrollment Rates*



Another pattern of enrollment behavior for the CP graduates emerges when considering the selectivity of the institutions, based on the Carnegie Classifications. More than half of the CP graduates attended More Selective or Selective institutions at the start of their postsecondary careers, with an approximately even distribution between these two tiers of selectivity (Exhibit 4).

*Exhibit 4 - CP Postsecondary Enrollment by Institutional Selectivity (Carnegie classification)*

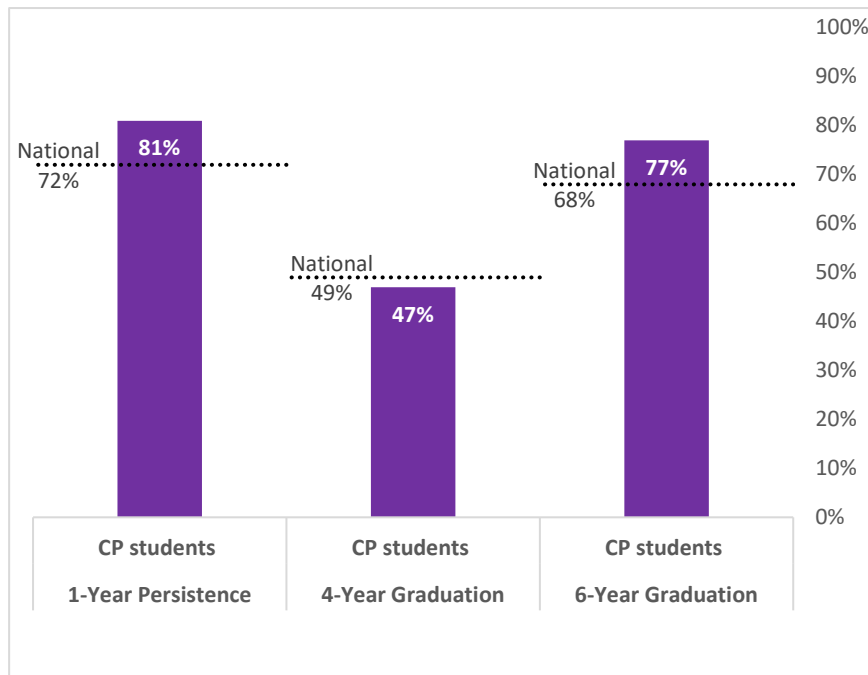


## Persistence and Graduation Outcomes

The analyses indicate that CP graduates persisted at four-year institutions, with no disturbance between year one and year two, at higher rates than the national cohort (81% compared to 72% nationally) (Exhibit 5).

In terms of postsecondary graduation, CP graduates exhibited varied outcomes, with a 4-year graduation rate approximately on par with the national average (47% compared to 49% nationally). When calculating the same outcomes at the six-year mark, a notable difference emerged between the CP and national cohort. The CP graduates had a rate of 77%, nine percentage points higher than the national cohort.

Exhibit 5 - CP Postsecondary persistence and graduation



## Discussion

Overall, participation in the Career-related Programme (CP) for the 2016 cohort was associated with successful outcomes more often than the corresponding national cohort. CP graduates enter postsecondary education at a higher rate, and the majority attend More selective and Selective institutions. They persist at a higher rate than the national average. Both of these outcomes are suggestive of a student population better prepared for the postsecondary experience than the average U.S. high school student.

While the CP students performed at a rate roughly equivalent to the national cohort when it came to graduating within four years, six-year graduation rates for CP students were substantially higher than the general population. However, this association cannot be untangled, especially in the longer-term metrics, from other factors outside of students' CP experience, such as socioeconomic status, family support, and financial support structures.

## Conclusion

This study making use of the entire cohort of IB Career-Related Programme who graduated in 2016 linked to the Clearinghouse postsecondary enrollment data has allowed the researchers to avoid the need for proxies in many findings. This report from the Clearinghouse has attempted to maintain consistency with prior studies in design while taking advantage of this deeper data access. As a result, a new baseline could be established from these reports to assist in observing the long-term outcomes of the IB CP graduates. In both studies making use of proxies and studies making

use of direct data, the traits involved are tied to long term performance at a high level prior to entry into postsecondary education.

## **Limitations of Research**

As mentioned in the methodology notes, the Clearinghouse was able to match 87% of the submitted cohorts. For the remaining 13%, it is unknown whether the Clearinghouse matching processes failed to find them or if the individuals simply never enrolled at a postsecondary institution in the United States.

## References

- Adler, N. E., & Ostrove, J. M. (1999). Socioeconomic status and health: what we know and what we don't. *Annals of the New York Academy of Sciences*, 3-15.
- Astin, A. W. (1993). *What Matters in College? Four Critical Years Revisited*. San Francisco: Jossey-Bass Inc.
- Autor, D. H. (2014). Skills, education, and the rise of earnings inequality. *Annual Review of Economics*, 593-617.
- Bureau of Labor Statistics. (2023). *Occupational employment projections, 2021-2031*. Retrieved from Employment projections program: <https://www.bls.gov/emp/>
- Burt, R. S. (2007). *Brokerage and Closure: An Introduction to Social Capital*. Oxford University Press.
- Carnevale, A. P., Smith, N., & Strohl, J. (2013). *Recovery: Job outlook 2013-2022*. Retrieved from Georgetown University Center on Education and the Workforce: <https://cew.georgetown.edu/cew-reports/recovery-job-growth-and-education-requirements-through-2020/>
- Chetty, R. F. (2017). College cost and completion: Evidence from changes in tuition and financial aid. *American Economic Review*, 208-244.
- IB Facts and Figures*. (2023, December 1). Retrieved from <https://ibo.org/about-the-ib/facts-and-figures/>
- Pascarella, E. T., & Terenzini, P. T. (2005). *How College Affects Students: A Third Decade of Research. Volume 2*. Indianapolis: Jossey-Bass, An Imprint of Wiley.
- Pilchen, A., Caspary, K., & Woodworth, K. (2023, June 6). *Postsecondary Outcomes of IB Diploma Programme Graduates in the U.S.* Retrieved from IBO US postsecondary outcomes (2020): <https://www.ibo.org/research/outcomes-research/diploma-studies/us-postsecondary-outcomes/>
- U.S. Department of Health and Human Services. (2014). *Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2012*. Retrieved from Vital and Health Statistics: [https://www.cdc.gov/nchs/data/series/sr\\_10/sr10\\_260.pdf](https://www.cdc.gov/nchs/data/series/sr_10/sr10_260.pdf)



## Appendix

### Data Elements Included from the Clearinghouse

Student Names	Separate fields reporting the student's First Name, Middle Initial, and Last Name as reported by the school. Clearinghouse records also maintain Former Name elements to allow for a continuous record in the face of name changing decisions.
Student Date of Birth	The date the student was born.
Enrollment Institution	The name of the institution providing the enrollment record for that term.
Dates of Enrollment	Separate fields submitted by the school detailing the date of the start of the term and the end of the term.
Enrollment Status	While the Clearinghouse collects a wide array of statuses only those students enrolled at a Full Time status were considered immediately enrolled.
CIP for Program of Study	Six-digit Classification of Instructional Program code identifying a program's academic content.
Reported Gender	Currently available response options are: <ul style="list-style-type: none"><li>• F=Female</li><li>• M=Male</li></ul>
Reported Race / Ethnicity	Currently available response options are: <ul style="list-style-type: none"><li>• Nonresident Alien</li><li>• Asian</li><li>• Black, Non-Hispanic</li><li>• American Indian / Alaskan Native</li><li>• Hispanic</li><li>• Native Hawaiian or Other Pacific Islander</li><li>• White, Non-Hispanic</li><li>• Two of More Race / Ethnicity Categories</li><li>• Race / Ethnicity Unknown</li></ul>