

## Postsecondary enrollment outcomes for students who enroll in dual credit

This publication is an extension of the [2023 Annual ERDC Dual Credit Report](#) and [Dashboard](#). It aims to answer one of the prioritized research questions identified in the report by using the same cohort methodology and focusing on the six primary dual credit types in Washington<sup>1</sup>. To align outcome comparisons, this analysis looks at the postsecondary enrollment of students in the 2015 through 2021 cohorts who graduated from high school (approximately 71,000 students per cohort).

### Dual credit types included:

- Advanced Placement (AP)
- International Baccalaureate (IB)
- Cambridge International (CI)
- College in the High School (CiHS)
- Running Start (RS)
- Career and Technical Education Dual Credit (CTE-DC)

This analysis is meant to describe outcomes of students and does not consider other factors that may impact those outcomes, such as students' intention to pursue postsecondary education after high school. Therefore, these data do not support causal relationships.

### Research questions

- What proportion of students who enrolled in dual credit (DC) enrolled in postsecondary education after they graduated from a public K-12 school in Washington?
- Were there differences in postsecondary enrollment by institution type, dual credit type, or student group?

*To view detailed result tables, see the [Appendix](#) file.*

### Key findings

1. Graduates who enrolled in dual credit had substantially higher rates of postsecondary enrollment than those who did not enroll in dual credit. Enrollment rates were highest for Running Start students and lowest for Career and Technical Education-Dual Credit students.
2. The magnitude of the postsecondary enrollment rate increase varied by student group and dual credit type, particularly for Running Start and federal racial and ethnic categories.
3. Graduates who enrolled in postsecondary education after high school primarily did so at in-state public institutions. However, whether they enrolled at a community and technical college or four-year baccalaureate institution varied by dual credit type.

### Dual Credit enrollment

While the majority of graduates enrolled in at least one dual credit course while in high school, the combinations of dual credit type vary greatly and impact this analysis.<sup>2</sup> Table 1 shows the distribution of graduates based on each dual credit type they enrolled in over the course of high school.<sup>3</sup> The dual credit

<sup>1</sup> For additional information on the student cohort and descriptions of dual credit types, see the [2023 Annual ERDC Dual Credit Report](#) and [Dashboard](#).

<sup>2</sup> For additional information on the breakdown for all students, inclusive of non-graduates, see the [2023 Annual ERDC Dual Credit Report](#).

<sup>3</sup> See [appendix](#) table A-1 for mutually exclusive groupings (e.g. AP only, Running Start only, etc.).

types include graduates who enrolled in only one type as well as those who enrolled in several types of dual credit.

Table 1: Washington graduates in 2015-2021 cohorts by dual credit enrollment

Total Graduates	No Dual Credit	AP	IB	CI	CiHS	RS	CTE-DC
<b>497,715</b>	38,102	221,452	29,556	2,749	126,039	107,813	366,016
<b>100%</b>	8%	45%	6%	1%	25%	22%	74%

## Institution type of initial postsecondary enrollment

Across all cohorts, 67% of graduates that enrolled in at least one dual credit course enrolled in a postsecondary institution at some point after high school, compared to 39% of graduates who did not enroll in dual credit (see Table 2). Postsecondary education enrollment rates vary greatly by dual credit type (from 39% to 82%) and obscure the differences in initial institution type among the dual credit types.

Table 2: Count and percent of graduates enrolled in a postsecondary institution at any point after high school by dual credit type

Total Graduates	No Dual Credit	AP	IB	CI	CiHS	RS	CTE-DC
<b>324,066</b>	14,791	177,613	22,921	2,008	93,606	88,241	234,101
<b>65%</b>	39%	80%	78%	73%	74%	82%	64%

Among students who enrolled in a postsecondary institution, those who did not enroll in dual credit were far more likely to enroll at a two-year (2yr) institution, which includes Washington state Community and Technical Colleges (CTC)<sup>4</sup> than at a four-year baccalaureate institution (4yr). Graduates who enrolled in *at least one* dual credit course were more evenly split between enrollment at two-year institutions and four-year institutions. However, this varied by dual credit type (see Figure 1).

Figure 1: Percent of postsecondary enrollees at each institution type by dual credit type

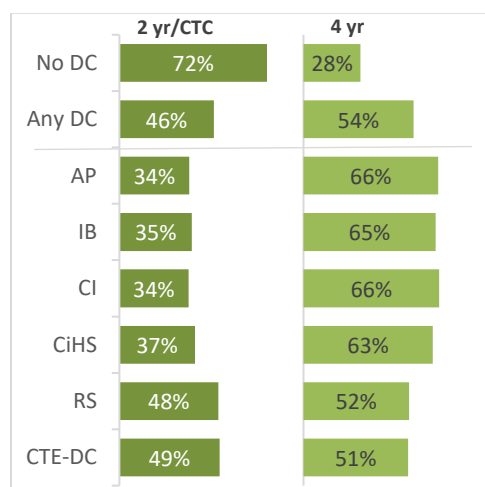
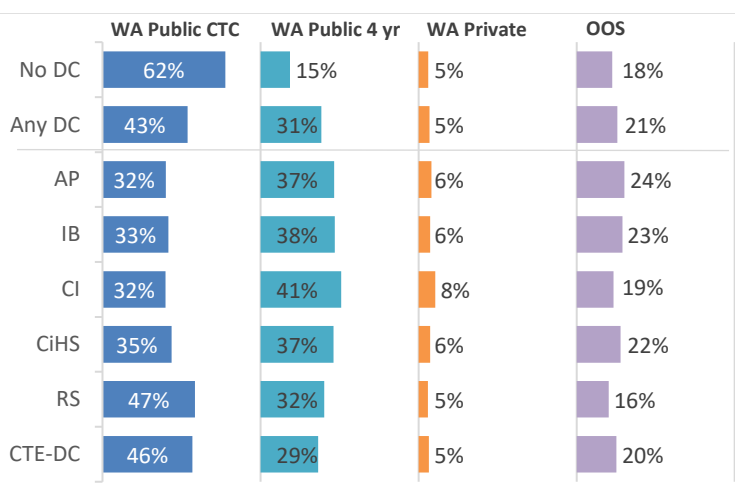


Figure 2: Percent of postsecondary enrollees at each institution type by dual credit type and institution sector



<sup>4</sup> CTCs are similar to two-year institutions in other states. CTCs offer programs of varying lengths, some shorter than two years and others that confer baccalaureate degrees traditionally associated with four-year programs. Due to the small proportion of CTC enrollments for Applied Baccalaureate Degree programs (see [SBCTC report](#)), we do not separate them from other programs at CTC institutions, but that may be of interest in future research.

Most high school graduates who enrolled in a postsecondary institution enrolled at a public CTC or a public four-year institution in Washington. A smaller proportion enrolled at a private institution in Washington or at an out-of-state (OOS) institution (Figure 2).<sup>5</sup> <sup>6</sup> Those with no dual credit enrollment enrolled at CTCs at a higher rate than those who enrolled in at least one dual credit course (62% and 43% respectively).

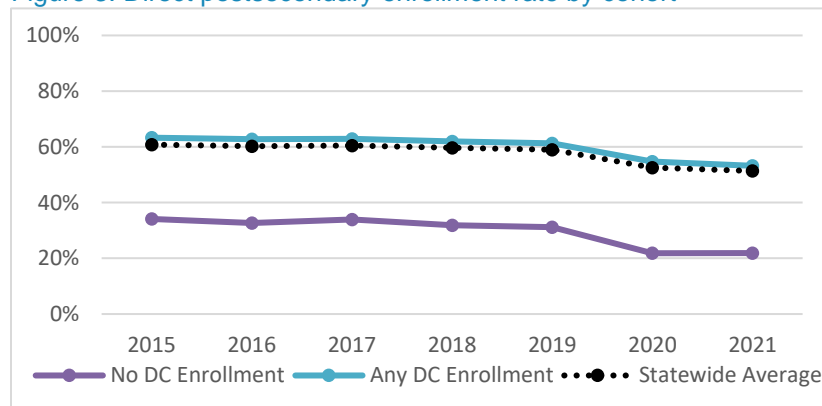
Among the various dual credit types, postsecondary enrollees who had enrolled in AP, IB, CI, or CiHS had the lowest rates of enrollment at a CTC (ranging from 32% to 35%). Those who had enrolled in RS or CTE-DC had the highest rates (ranging from 46% to 47%). Similarly, postsecondary enrollees who had enrolled in AP, IB, CI, or CiHS had the highest rates of postsecondary enrollment at a Washington public four-year institution (ranging from 37% to 41%) and those who had enrolled in RS or CTE-DC had the lowest rates (ranging from 29% to 32%).

The variation in type of institution students attend could indicate that graduates enrolling in certain dual credit types have different intentions regarding their education and career paths. For example, a small number of graduates were awarded an associate degree during high school through RS. This postsecondary enrollment metric would not capture these students unless they pursue an additional credential after graduation.

### Direct postsecondary enrollment<sup>7</sup>

Across all cohorts, 60% of graduates who enrolled in at least one dual credit course enrolled in a postsecondary institution within the first year after high school, compared to 30% of graduates who did not enroll in dual credit.

Figure 3: Direct postsecondary enrollment rate by cohort



The gap in direct postsecondary enrollment between graduates with dual credit enrollment and those without dual credit enrollment remained relatively consistent for the 2015 through 2021 cohorts (Figure 3). Both groups saw a slight decline in the rate starting in 2018 and a larger decline for the 2020 and 2021 cohorts, which likely reflects impacts from COVID-19. The

decline was two percentage points larger for graduates who did not enroll in dual credit.

Figure 4 shows that graduates who enrolled in each dual credit type (except for CTE-DC) had first-year postsecondary enrollment rates higher than the statewide average. RS had the highest direct

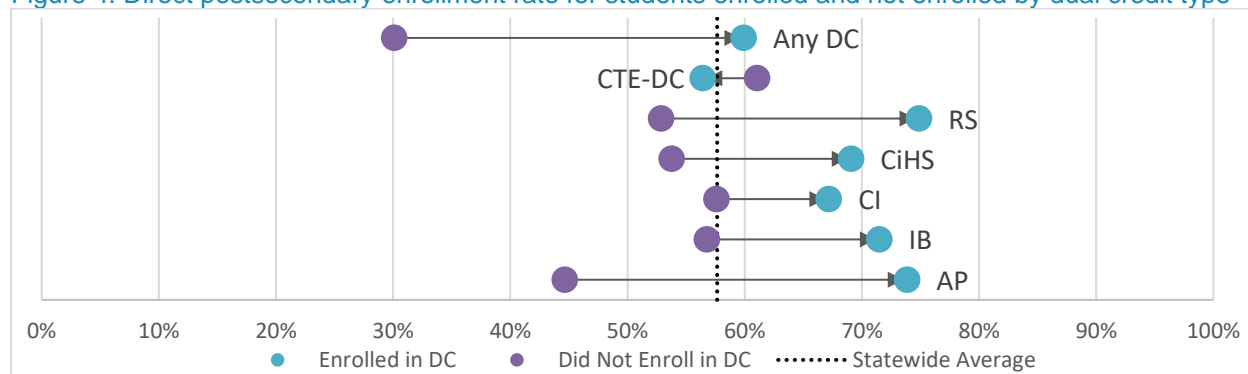
<sup>5</sup> Private institutions include all institutions that are not primarily funded through the state and include for-profit, non-profit, and tribal colleges. OOS institutions include all institutions located outside of Washington. Institutions that have a branch campus located in Washington but are headquartered outside of Washington may be categorized as OOS. Two-year Private and OOS institutions do not have the same focus and structure as a CTC and therefore are labeled as 2yr.

<sup>6</sup> Variation over each of the cohort years was examined. While there was an observable change in the proportion of graduates enrolling in Washington CTCs and 4yr institutions over time, the reasons for this may be complex and are outside the scope of this study. Future research may explore this topic within the broader context of student choice in postsecondary education.

<sup>7</sup> Direct Postsecondary Enrollment is defined as having an enrollment record at a postsecondary institution at some point in the academic year following graduation, which includes the summer term immediately following graduation through the spring term of the next calendar year.

postsecondary enrollment rate at 75%. The difference in the rate compared to graduates who did not enroll in each dual credit type varied widely. For example, graduates who enrolled in CTE-DC had a direct postsecondary enrollment rate that was five percentage points lower than those who did not enroll in CTE-DC, while graduates who enrolled in AP had a direct postsecondary enrollment rate that was 29 percentage points higher than those who did not enroll in AP. The rate of enrollment in a postsecondary institution within three years after high school showed similar results.<sup>8</sup>

Figure 4: Direct postsecondary enrollment rate for students enrolled and not enrolled by dual credit type



Most high school graduates (74%) enrolled in CTE-DC (see Table 1), which is why CTE-DC enrollees had a postsecondary enrollment rate near the statewide average. This analysis cannot determine why CTE-DC enrollees had lower postsecondary enrollment rates than those who did not enroll in CTE-DC. There may be differences in background characteristics that are related to lower postsecondary enrollment rates or CTE-DC courses might better prepare students for different post-high school pathways. Determining what drives this variation in postsecondary enrollment may be of interest in future research.

## Variation by student characteristics

The data for the four largest dual credit types<sup>9</sup> were disaggregated by various student demographics and program participation.<sup>10</sup> This was done to examine if the differences in postsecondary enrollment rates between students who *did* and *did not* enroll in dual credit varied by student group membership. Figures 5 and 6 display the percentage point difference in postsecondary enrollment between those who did and those who did not enroll in each dual credit type.<sup>11</sup>

For Figure 5, a positive percentage point difference means that students in that group who enrolled in dual credit had higher postsecondary enrollment rates than students in that group who did not enroll in dual credit. For example, Figure 5 shows that Asian students who enrolled in CiHS had a direct postsecondary rate that was about eight percentage points higher than Asian students who did not enroll in CiHS. While the percentage point difference is positive, it is below the statewide average percentage point difference of 15. Experiencing a larger than average percentage point increase from enrollment in dual credit would work to narrow the achievement gap experienced by student groups that have lower postsecondary enrollment rates than their peers.<sup>12</sup>

<sup>8</sup> 58% of high school graduates enroll within 1 year of graduation, an additional 4% enroll within 2 years, another 2% enroll within 3 years, and 2% enroll within 4+ years. See [appendix Table A-5b](#) for Enrollment Within 3 Years measure.

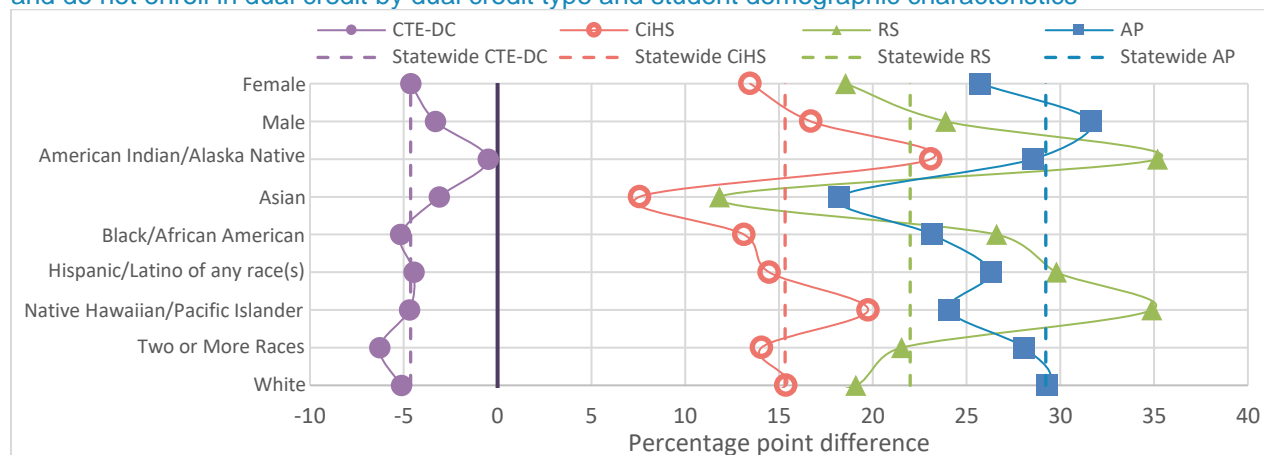
<sup>9</sup> Some dual credit types and student groups were excluded due to small populations (CI, IB; Transfer Status, Graduation Timing). For full results, see [appendix Tables A-6a and A-6b](#).

<sup>10</sup> All student groups examined are the same as those for the [2023 Annual ERDC Dual Credit Report](#). See that report's appendix for definitions.

<sup>11</sup> Note that points are connected only to make it easier to recognize patterns of deviation from the Statewide average.

<sup>12</sup> For rates of enrollment for each student group, see [appendix Table A-6c](#).

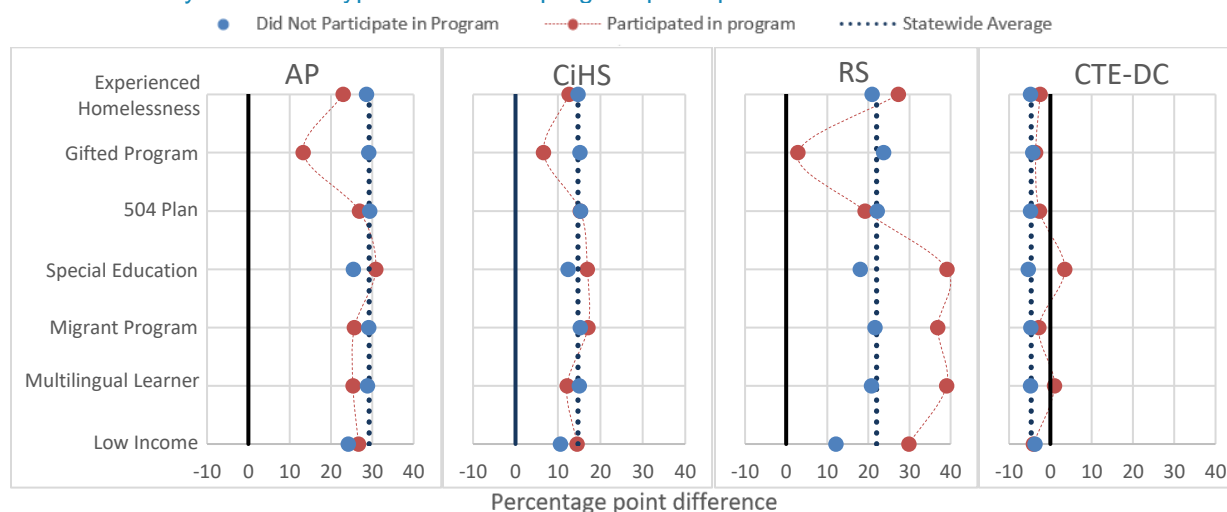
Figure 5: Percentage point difference in rate of direct postsecondary enrollment between those who do and do not enroll in dual credit by dual credit type and student demographic characteristics



Consistent with the statewide results above, all student groups who enrolled in AP, CiHS, or RS had higher direct postsecondary enrollment rates than those who did not enroll in AP, CiHS, or RS (positive percentage point difference). However, the magnitude of the increase varied widely. CTE-DC had the least variability across student groups (range of 10 percentage points) and RS had the most variability (range of 36 percentage points). Additionally, the largest increases were not always experienced by the same student groups across all dual credit types:

- Male students experienced a larger increase than female students for all dual credit types.
- Among federal racial and ethnic categories, American Indian/Alaska Native students experienced the largest increase for CiHS and RS. White students experienced the largest increase for AP. Asian students experienced the smallest increase for all dual credit types.

Figure 6: Percentage point difference in rate of direct enrollment between those who do and do not enroll in dual credit by dual credit type and student program participation



For Figure 6, the interpretation of the percentage point difference in postsecondary enrollment rates is the same as in Figure 5. However, Figure 6 presents the data differently to highlight the variation among those who participated in a program (red dot) and those who did not participate in the program (blue dot). For example, students identified as low income experienced a 30-percentage point increase in

postsecondary enrollment for those who enrolled in RS. Students not identified as low income experienced a 12-percentage point increase in postsecondary enrollment for those who enrolled in RS.

- Students in the special education program experienced a larger increase than non-participants for all dual credit types while students in the gifted program experienced the same or smaller increase than non-participants for all dual credit types.
- Students identified as low income, multilingual learners, or experiencing homelessness, as well as those who participated in migrant education or had a 504 plan had mixed results. There were larger increases for some dual credit types, but not others.

**Data sources.** The data for this publication came from the ERDC P20W data system. This data system links administrative records from several education state agencies. Data sources for this publication include:

- Office of Superintendent of Public Instruction (OSPI): Comprehensive Education Data and Research System (CEDARS) — For data on enrollment in AP, IB, CI, CiHS and CTE-DC during High School, student characteristics and K-12 program participation.
- Washington State Board for Community and Technical Colleges (SBCTC) — For data on enrollment in RS during High School and enrollment after High School in a Washington public CTC.
- Public Centralized Higher Education Enrollment System (PCHEES) housed at the Office of Financial Management (OFM) — For data on enrollment in RS during High School and enrollment after High School at Washington public 4-year institutions.
- National Student Clearinghouse (NSC) — For data on enrollment after High School at Washington State private and tribal institutions as well as Out-of-State institutions.

**Published:** December 2023

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**Acknowledgements:** ERDC would like to recognize our partners in the Dual Credit Workgroup who consulted on this publication through offering valuable insights and suggestions and contributing their expertise.

To view more statewide dual credit data, visit our  
[Dual Credit Dashboard | Washington State Education Research and Data Center](#)

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