## Idaho State Board of Education

## DUAL CREDIT REPORT

February 2021

# Idaho State Board of Education Research Report: Dual Credit 

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## Idaho Students Are Increasingly Pursuing Dual Credit ${ }^{1}$

In FY2017, this trend was accelerated with the implementation of the current form of the Advanced Opportunities ${ }^{2}$ (AO) program. In this program, Idaho students are allocated $\$ 4,125$ to spend on AO between seventh and twelfth grades. ${ }^{3}$ While students can choose from several different types of AO, more students participate in the dual credit part of the program than in all the other parts of the program combined.

## Dual Credit Courses Are Overwhelmingly Taken Through One of Idaho's Eight Public Postsecondary Institutions ${ }^{4}$

Eighty-seven percent of the credits attempted through AO in 2019-2020 were attempted through one of these institutions. ${ }^{5}$ Seventy-nine percent of students who took AO dual credit in that time period took all of their courses through the public system; 93 percent of AO dual credit students took at least one course through the public system.

[^0]Most dual credits attempted at the public institutions by AO dual credit students were academic dual credits rather than Career Technical Education (CTE)
We were able to identify 189,917 AO dual credits as academic and 7,612 as (CTE). ${ }^{6}$ There were 148,045 credits attempted in General Education Matriculation ${ }^{7}$ (GEM) courses. The most common type of GEM courses attempted were Social and Behavioral Ways of Knowing courses; the least common type of GEM courses attempted were Oral Communication GEM courses (see appendix for the two most common courses in each GEM category).

## Students Who Took Dual Credit Through the Public System Were Overwhelmingly Successful in Their Courses

Ninety-four percent of credits attempted were awarded a grade of C- or better. Students were slightly more likely to be successful in academic courses ( 94 percent of credits were at a C- or better) than CTE courses ( 91 percent of credits were at a C- or better). ${ }^{8}$ Students were less likely to be successful in Oral Communication GEM Courses - only 91 percent of credits were at a C- or better compared to 94 to 95 percent of credits in other types of GEM Courses. ${ }^{9}$

## Students Who Took Dual Credits Were Less Likely to Be Economically Disadvantaged Than Students Statewide

However, there was not a difference in economic disadvantage status for students who took dual credits and the students who attended the same schools. This suggests some of the difference in access to dual credit is between schools and not between students within a particular school. Students who took dual credit were more likely to be white and less likely to be Hispanic compared to both students statewide and students who attended the same schools. ${ }^{10}$ None of the differences for other race groups were statistically significant. Finally, females were more likely to take dual credits than males. The difference between the share of males in schools that offer dual credit and the share of males who take dual credit (8 percentage points) is larger than the difference between other groups (0 percentage point difference for economically disadvantaged students and 3 percentage points for Hispanic students).

## There Were Differences Between Groups of Students in Terms of What Types of Dual Credit Courses Students Took

Economically disadvantaged students were slightly more likely to choose CTE courses when compared to their non-economically disadvantaged schoolmates. Males were also more likely to choose CTE courses when compared to their female schoolmates. Finally, there were differences between students of different race/ethnicities. Multi-race students were more likely to take CTE courses compared to their white schoolmates while Asian and American Indian students were less likely to take CTE courses when compared to their white schoolmates.

[^1]| Demographic | More Likely to Take Dual <br> Credit CTE Courses | Less Likely to Take Dual <br> Credit CTE Courses |
| :--- | :--- | :--- |
| Gender | Males | Females |
| Economic <br> Disadvantage | Economically <br> disadvantaged students | NOT economically <br> disadvantaged students |
| Race/Ethnicity | Multiracial students (as <br> compared to white students) | Asian \& American Indian <br> students (as compared to <br> white students) |

For students who took academic courses, economically disadvantaged students were slightly less likely to take GEM courses (courses accepted across all eight public institutions) than their schoolmates who were not economically disadvantaged. Hispanic, Asian, and Black students were less likely to take GEM courses than their white schoolmates. There was no difference between males and females in terms of taking GEM courses.

| Demographic | More Likely to Take GEM <br> Courses | Less Likely to Take <br> GEM Courses |
| :--- | :--- | :--- |
| Gender | No gender difference | No gender difference | | Economic | NOT economically <br> disadvantaged students | Economically <br> disadvantaged students |
| :--- | :--- | :--- |
| Race/Ethnicity | No races/ethnicities were <br> more likely to take GEM <br> courses than white students | Hispanic, Asian, \& Black <br> students (when compared to <br> white students) |

## Different Types of Students Had Different Dual Credit Course Outcomes

Economically disadvantaged students were slightly less likely to earn a grade of C- or better in their courses ( 90 percent) compared to students who were not economically disadvantaged (95 percent). ${ }^{11}$ Hispanic students were less likely to earn a grade of C- or better in their courses (91 percent) than white students ( 95 percent), as were American Indian students ( 88 percent) and multirace students (93 percent). ${ }^{12}$ Asian students (97 percent) were more likely than white students to earn a grade of C- or better. Male students were less likely (93 percent) to earn a grade of C- or better than female students (95 percent). ${ }^{13}$

[^2]|  | More Likely to Earn a Grade <br> of C- or Better in Dual <br> Credit Courses | Less Likely to Earn a Grade <br> of C- or Better in Dual <br> Credit Courses |
| :--- | :--- | :--- |
| Gemographic | Females | Males |
| Economic <br> Disadvantage | NOT economically <br> disadvantaged students | Economically <br> disadvantaged students |
| Race/Ethnicity | Asian students (when <br> compared to white students) |  <br> multiracial students (when <br> compared to white students) |

## Implementation of the Current Advanced Opportunities Program Did Make Dual Credit More Accessible to All Students

We compare the share of 2015-16 graduates who earned dual credit with the share of 2019-20 graduates who earned dual credit by demographic group (economic disadvantage, gender, race/ ethnicity) and by district location (education region and district locale). The graduating class of 2019-20 was the first class to have spent all four years of high school under the current form of the AO program. The graduating class of 2015-16 was the last class to have graduated prior to the implementation of the current AO program. We show all groups of students were more likely to earn dual credit and most groups earned more dual credits under the current AO program than under the old version of the program. ${ }^{14}$ However, some groups did not utilize the expansion as much as other groups. There is concern that American Indian students did not utilize the expansion of AO and that they also earn lower grades in dual credits. More research should be done to better understand these dynamics.

We examine the educational outcomes of students after high school graduation. As discussed above, the first class who benefited from the current Advanced Opportunities program for all years of high school graduated in 2019-20. This means we have limited information on the outcomes of students who fully participated in Advanced Opportunities. We do show that students from this class who earned dual credits were more likely to go to college the fall immediately after high school graduation than students who did not earn dual credit. This parallels findings from earlier graduating classes.

We have more complete data on outcomes for students who earned at least some of their dual credits under previous versions of the Advanced Opportunities program. We examine the outcomes of students after high school graduation and find that students who earn more dual credits in high school are more likely to go-on to college and earn college degrees in fewer years than students who earn no or few dual credits in high school.

[^3]
## Methodology

## Data Sources for the 2020 Dual Credit Report

- Data from the State Department of Education (SDE) regarding administration of the Advanced Opportunities program
(2) Data compiled from a State Board of Education data request to the public postsecondary institutions for the dual credits earned in the 2019-20 academic year to match with the Advanced Opportunities data
- Data from the annual dual credit reports submitted by Idaho's public postsecondary institutions to the Office of the State Board of Education to show dual credits earned and students served at each of those institutions
- Data from the Postsecondary Measures of Academic Progress (PMAP) ${ }^{15}$ to characterize secondary student demographics, go-on rates ${ }^{16}$, college degree attainment and the number of dual credits earned

We have detailed data on course outcomes that were taken from the 8 public postsecondary institutions. We have more limited data outside of these institutions. This is not a shortcoming of the data, rather, it reflects the fact that the State Board of Education has oversight over the public postsecondary institutions and, thus, can gather detailed data from those institutions that is not available from other sources.

Our program totals do not necessarily match those from the SDE's annual Advanced Opportunities report. The Advanced Opportunities report includes data as it relates to funding requests. We used the same underlying data but we used slightly different definitions due to the different focus of the reports. For instance, we only count a course once for the same term, same institution, and same student regardless of whether or not the student moved high schools and took the course at both schools. We also only count courses for which AO payments were made - we excluded courses from our analysis in which payment was denied.

In many ways, this serves as a proof of concept on the type of analysis that can be done by combining the data used to administer the Advanced Opportunities program with course level data in PMAP. This matching was only made possible this year due to a change in how the course names were collected in the Advanced Opportunities administrative data. ${ }^{17}$ In order to make matching easier in the future, common academic terms should also be gathered from K-12 and postsecondary data sources.

In conducting this study, we test whether or not differences between groups are statistically significant. ${ }^{18}$

[^4]Finally, the results from the analysis on student outcomes should not be interpreted as causal. While students who earn more dual credits are more likely to go-on and earn an associate or bachelor degree than students who earn few or no dual credits, these differences are not necessarily caused by the differences in dual credits earned. Students who are more likely to go-on and earn a degree may also be more likely to earn dual credits. In-depth statistical modeling would be necessary to better understand the degree to which the relationship observed is causal versus correlative.

## Background

Advanced Opportunities Program
Idaho's AO program was instituted in its current form on July 1, 2016. It merged several already existing programs (specifically, 8 in 6; Dual Credit for Early Completers; Fast Forward; and the Mastery Advancement Program). The current AO program authorizes for every public school student in grades 7 through 12 up to $\$ 4,125$ to spend on Advanced Opportunities. ${ }^{19}$ All local education agencies (LEAs) are required to offer at least one AO. ${ }^{20}$ Not all LEAs offer all AO programs. Therefore, students may be constrained in their choice of which AO program to pursue based on the school district or charter school they attend.

Dual credit is by far the largest component of the AO program. According to the SDE's annual Advanced Opportunities Program report, 29,768 students enrolled in dual credit courses out of the 39,304 total program in FY20. ${ }^{21}$ Furthermore, $87 \%$ of the dual credits attempted (204,437 out of $235,382.5$ ) were attempted at Idaho's public postsecondary institutions. ${ }^{22}$

Table 1. Advanced Opportunities dual credit by institution, FY20 ${ }^{23}$

| Institution | Amount | Unduplicated <br> Credits | Unduplicated <br> Headcount ${ }^{24}$ |
| :--- | :--- | :--- | :--- |
| BSU | $\$ 2,390,847$ | 31,999 | 6,822 |
| ISU | $\$ 1,821,526$ | 24,388 | 3,744 |
| LCSC | $\$ 561,013$ | 7,509 | 1,229 |
| UI | $\$ 860,760$ | 11,498 | 2,331 |
| CEI | $\$ 198,161$ | 2,651 | 537 |
| CSI | $\$ 3,141,298$ | 42,154 | 7,640 |
| CWI | $\$ 4,833,024$ | 64,848 | 11,716 |
| NIC | $\$ 1,319,941$ | 17,883 | 1,888 |
| NNU | $\$ 2,096,976$ | 28,061 | 5,894 |
| TVCC | $\$ 98,725$ | 1,517 | 246 |
| Utah St | $\$ 70,050$ | 935 | 140 |
| BYU-I | $\$ 15,768$ | 324 | 51 |
| Other | $\$ 11,485$ | 68 | 49 |
| Total | $\$ 17,419,573$ | $\mathbf{2 3 3}, 835$ |  |

As mentioned above, these totals include some duplicate courses and some courses that were denied payment. If we only counted nonduplicate courses that had positive payment, then there were a total of 29,672 students enrolled in dual credit courses for a total of 233,835 credits. Table 1 shows the unduplicated headcount for the largest participating institutions along with the amount paid and total unduplicated credits. Neither the credits or the headcount reported for each institution match what is reported later on this paper. The data in Table 1 reflects credits attempted. Other institution-specific data in this report reflect credits earned for courses we were able to match.

[^5]
## Advanced Opportunity Populations vs. Statewide Student Population (7th-12 Graders)

Table 2. The table below highlights student demographic groups that are underrepresented (using an alpha of 0.10 ) in each Advanced Opportunities program when compared to the average statewide population of 7th-12th graders in each demographic group. Data is for FY20.

|  | Economically Disadvantaged | Male | White | Hispanic | Asian | Black | American Indian | Other race |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Statewide weighted grade 7-12 population | 25\% | 51\% | 75\% | 18\% | 1\% | 1\% | 1\% | 3\% |
| AO Dual Credit | 22\% | 43\% | 80\% | 14\% | 2\% | 1\% | 1\% | 3\% |
|  | $\mathrm{p}=0.000$ | $p=0.000$ | $p=0.000$ | $p=0.000$ | $p=0.469$ | $p=0.478$ | $\mathrm{p}=0.359$ | $p=0.481$ |
| AO AP | 14\% | 45\% | 81\% | 10\% | 4\% | 1\% | 0\% | 3\% |
|  | $p=0.000$ | $p=0.000$ | $p=0.000$ | $\mathrm{p}=0.000$ | $p=0.025$ | $p=0.809$ | $p=0.514$ | $\mathrm{p}=0.830$ |
| AO CTE Exams | 31\% | 39\% | 74\% | 20\% | 1\% | 1\% | 1\% | 3\% |
|  | $\mathrm{p}=0.011$ | $p=0.000$ | $p=0.566$ | $\mathrm{p}=0.334$ | $p=0.936$ | $p=0.839$ | $\mathrm{p}=0.998$ | $\mathrm{p}=0.911$ |

Table 2 compares the demographic characteristics of students who participated in Advanced Opportunities dual credit to those students who participated in Advanced Opportunities Advanced Placement (AP) and Advanced Opportunities Professional Certification (CTE) Exams. These comparisons are shown in order to give context to the types of students served by Advanced Opportunities dual credit in comparison to two of the other popular Advanced Opportunities programs. All three programs are compared to the weighted statewide grade 7 to 12 population. The weights reflect the degree to which students statewide in each grade participate in any one of the three programs.

While 25 percent of the underlying statewide population are economically disadvantaged, only 22 percent of the students participating in AO dual credit are so. ${ }^{25}$ Males are underrepresented in all three programs compared to the underlying population. Economically disadvantaged students and Hispanic students are underrepresented in both the AO dual credit and AO AP programs while white students are overrepresented. Asian students are overrepresented in AO AP. AO CTE Exams is different than the other programs in that economically disadvantaged students are overrepresented in it. However, as discussed above, not all schools offer all AO programs. It could be that economically disadvantaged students are underrepresented in AO dual credit because the schools that choose AO dual credit have less economically disadvantaged students than the underlying population. The following section examines that explanation.

[^6]
## Advanced Opportunity Populations vs. Population of Schools Participating in Advanced Opportunities

Table 3. The table below highlights student demographic groups that are underrepresented (using an alpha of 0.10 ) in each Advanced Opportunities program when compared to the average population of students in schools that participate in Advanced Opportunities. Data is for FY20.

|  | Economically Disadvantaged | Male | White | Hispanic | Asian | Black | American Indian | Other race |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted AO Dual Credit | 22\% | 51\% | 76\% | 17\% | 1\% | 1\% | 1\% | 3\% |
| AO Dual Credit | 22\% | 43\% | 80\% | 14\% | 2\% | 1\% | 1\% | 3\% |
|  | $\mathrm{p}=0.220$ | $\mathrm{p}=0.000$ | $p=0.000$ | $p=0.000$ | $p=0.612$ | $p=0.506$ | $\mathrm{p}=0.623$ | $p=0.613$ |
| Weighted AO | 19\% | 52\% | 76\% | 15\% | 2\% | 2\% | 1\% | 3\% |
| AO AP | 14\% | 45\% | 81\% | 10\% | 4\% | 1\% | 0\% | 3\% |
|  | $p=0.000$ | $p=0.000$ | $p=0.000$ | $p=0.000$ | $p=0.161$ | $p=0.296$ | $\mathrm{p}=0.797$ | $\mathrm{p}=0.957$ |
| Weighted AO CTE Exams | 23\% | 48\% | 74\% | 20\% | 1\% | 1\% | 1\% | 3\% |
| AO CTE <br> Exams | 31\% | 39\% | 74\% | 20\% | 1\% | 1\% | 1\% | 3\% |
|  | $p=0.000$ | $p=0.000$ | $\mathrm{p}=0.877$ | $\mathrm{p}=0.822$ | $p=0.983$ | $p=0.961$ | $\mathrm{p}=0.937$ | $p=0.870$ |

Table 3 replicates Table 2 except, instead of using statewide weights, program weights are used. In other words, the weighted population reflects the schools that offer the program and reflect the degree to which the program is utilized in the school. As can be seen, AO dual credit reflects the economically disadvantaged population of the schools which utilize it. The rest of the differences noted between the programs and the statewide populations still hold. See the appendix for counts of schools offering the different Advanced Opportunities programs and the district locales and regions where they are located.

# Overview <br> Advanced Opportunities Dual Credit at the Public Postsecondary Institutions in FY2020 



Figure 1. Number of Students
Participating in Dual Credit Through the Advanced Opportunities Program and Total Dual Credit Students at Each Idaho Public Institution in FY20


Figure 2. Number of Dual Credits Earned Through the Advanced Opportunities Program and Total Dual Credits Earned at Each Idaho Public Institution in FY20



The rest of this report focuses on the intersection between the Advanced Opportunities program and dual credit at the postsecondary institutions. Students may also participate in Advanced Opportunities dual credit at private or out-of-state institutions. Similarly, students may participate in dual credit at the public postsecondary institutions without going through the Advanced Opportunities program.

Figure 1 shows the number of students who earned dual credits at each public institution in FY202026 as well as the number of students who earned dual credits through the Advanced Opportunities program at each institution in FY2020. The vast majority of students who earn dual credits at the public postsecondary institutions do so through the Advanced Opportunities program. Across the institutions, there were a total of 27,814 students who earned dual credits. Of those, 26,070 (94 percent) did so through Advanced Opportunities. ${ }^{27}$

[^7]

Figure 3. Number of Academic Dual Credits Earned Through the Advanced Opportunities Program and Total Academic Dual Credits Earned at Each Idaho Public Institution in FY20


Figure 4. Number of CTE Dual Credits Earned Through the Advanced Opportunities Program and Total CTE Dual Credits Earned at Each Idaho Public Institution in FY20

In FY2020, there were 203,571 dual credits earned at Idaho's public postsecondary institutions (see Figure 2). Of those, we identified 190,652 as earned through the Advanced Opportunities program. ${ }^{28}$ Community colleges awarded the majority of Advanced Opportunities dual credits (students earned 119,712 dual credits at two-year institutions and 70,940 at four-year institutions). The College of Western Idaho alone accounted for one-third of the total Advanced Opportunities dual credits earned in FY20.

The vast majority of the dual credits earned in FY20 were academic dual credits. Of the 190,652 Advanced Opportunities dual credits earned, 183,570 (96 percent) were academic and 7,082 (4 percent) were CTE. Community colleges awarded about 65 percent more academic dual credits and 172 percent more career technical dual credits than four-year institutions. While the College of Western Idaho provided the most academic Advanced Opportunities dual credits across all institutions, it provided the fewest career technical Advanced Opportunities dual credits across institutions that provided them. The College of Southern Idaho and North Idaho College provided the most earned career technical Advanced Opportunities dual credits. Those two institutions accounted for 60 percent of the career technical dual credits earned in the Advanced Opportunities program in FY20.

[^8]Table 4. The table below highlights student demographic groups that are significantly underrepresented (using an alpha of 0.10) in Advanced Opportunities programs when compared to each underlying participating school population. Data is for FY20.

| Institution | Population | Economically Disadvantaged | Male | White | Hispanic |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BSU | Weighted underlying population | 17\% | 49\% | 72\% | 16\% |
|  | AO Dual credit population | 17\% | 42\% | 79\% | 13\% |
|  |  | $\mathrm{p}=0.994$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.019$ |
| ISU | Weighted underlying population | 24\% | 50\% | 80\% | 13\% |
|  | AO Dual credit population | 19\% | 42\% | 84\% | 10\% |
|  |  | $\mathrm{p}=0.002$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.011$ | $p=0.051$ |
| LCSC | Weighted underlying population | 21\% | 52\% | 83\% | 8\% |
|  | AO Dual credit population | 22\% | 36\% | 85\% | 6\% |
|  |  | $\mathrm{p}=0.722$ | p=0.000 | $p=0.436$ | $p=0.651$ |
| UI | Weighted underlying population | 19\% | 51\% | 81\% | 10\% |
|  | AO Dual credit population | 15\% | 41\% | 85\% | 9\% |
|  |  | $p=0.061$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.032$ | $\mathrm{p}=0.549$ |
| CEI | Weighted underlying population | 26\% | 50\% | 80\% | 14\% |
|  | AO Dual credit population | 21\% | 37\% | 86\% | 9\% |
|  |  | $\mathrm{p}=0.195$ | $\mathrm{p}=0.001$ | $\mathrm{p}=0.163$ | $\mathrm{p}=0.251$ |
| CSI | Weighted underlying population | 30\% | 50\% | 73\% | 22\% |
|  | AO Dual credit population | 27\% | 40\% | 77\% | 18\% |
|  |  | $\mathrm{p}=0.009$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.006$ |
| CWI | Weighted underlying population | 20\% | 51\% | 75\% | 19\% |
|  | AO Dual credit population | 20\% | 43\% | 79\% | 15\% |
|  |  | $\mathrm{p}=0.769$ | p=0.000 | $\mathrm{p}=0.000$ | $\mathrm{p}=0.000$ |
| NIC | Weighted underlying population | 18\% | 52\% | 86\% | 7\% |
|  | AO Dual credit population | 19\% | 41\% | 89\% | 6\% |
|  |  | $p=0.920$ | $p=0.000$ | $p=0.265$ | $\mathrm{p}=0.662$ |

Table 4 replicates the analysis done for the Advanced Opportunities programs in terms of student demographics. It shows the demographic characteristics of the weighted population of schools served by each postsecondary institution and the demographic characteristics of the students served by each postsecondary institution. It only shows White and Hispanic groups due to small sample sizes for other races.

There are differences between the institutions both in terms of the demographics of their dual credit
students and in how closely those students represent the underlying population. Ul serves the smallest share of economically disadvantaged students (15 percent) while CSI serves the largest share (27 percent). Neither one is quite at parity with the underlying population. The institutions are more balanced regarding the share of males in their dual credit programs. The two outliers which regard to gender are LCSC (36 percent) and CEI (37 percent). However, none of the institutions are at parity with regard to gender. NIC serves the smallest share of Hispanic students (6 percent) while CSI serves the largest share (18 percent). NIC is balanced in how representative their students are of the underlying population while CSI is not quite.

Table 5. Credits earned by course type and institution

|  |  | Four-Year Schools |  |  |  | Two-Year Schools |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | BSU | ISU | LC State | UI | CEI | CSI | CWI | NIC |
| Academic Credits | Academic non-GEM courses | 11,714 | 6,668 | 815 | 3,184 | 117 | 10,763 | 4,344 | 3,122 |
|  | Humanistic and Artistic Ways of Knowing | 6,895 | 3,556 | 447 | 2,117 | 51 | 1,759 | 9,295 | 3,021 |
|  | Mathematical Ways of Knowing | 1,598 | 3,136 | 954 | 1,673 | 120 | 4,702 | 12,063 | 676 |
|  | Oral Communication | 9 | 405 | 216 | 76 | 84 | 1,995 | 5,357 | 1,554 |
|  | Scientific Ways of Knowing | 4,251 | 1,464 | 1,044 | 1,345 | 118 | 5,941 | 10,919 | 1,023 |
|  | Social and Behavioral Ways of Knowing | 4,953 | 4,212 | 1,263 | 1,077 | 546 | 8,184 | 15,321 | 2,979 |
|  | Written Communication | 1,326 | 1,833 | 1,362 | 1,443 | 664 | 3,399 | 4,752 | 1,665 |
|  | Total Academic Credits | 30,746 | 21,274 | 6,101 | 10,915 | 1,700 | 36,743 | 62,051 | 14,040 |
| CTE <br> Credits | Mathematical Ways of Knowing |  |  | 256 |  |  |  |  |  |
|  | Scientific Ways of Knowing |  |  |  |  |  | 56 |  |  |
|  | CTE Non-GEM courses |  | 1,007 | 641 |  | 678 | 2,005 | 164 | 2,275 |
|  | Total CTE credits |  | 1,007 | 897 |  | 678 | 2,061 | 164 | 2,275 |
| All Credits | Total credits earned | 30,746 | 22,281 | 6,998 | 10,915 | 2,378 | 38,804 | 62,215 | 16,315 |

Table 6. Share of credits earned by course type and institution

|  |  | Four-Year Schools |  |  |  | Two-Year Schools |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | BSU | ISU | LC State | UI | CEI | CSI | CWI | NIC |
| Academic | Academic non-GEM courses | 38\% | 30\% | 12\% | 29\% | 5\% | 28\% | 7\% | 19\% |
|  | Humanistic and Artistic Ways of Knowing | 22\% | 16\% | 6\% | 19\% | 2\% | 5\% | 15\% | 19\% |
|  | Mathematical Ways of Knowing | 5\% | 14\% | 14\% | 15\% | 5\% | 12\% | 19\% | 4\% |
|  | Oral Communication | 0\% | 2\% | 3\% | 1\% | 4\% | 5\% | 9\% | 10\% |
|  | Scientific Ways of Knowing | 14\% | 7\% | 15\% | 12\% | 5\% | 15\% | 18\% | 6\% |
|  | Social and Behavioral Ways of Knowing | 16\% | 19\% | 18\% | 10\% | 23\% | 21\% | 25\% | 18\% |
|  | Written Communication | 4\% | 8\% | 19\% | 13\% | 28\% | 9\% | 8\% | 10\% |
|  | Total Academic Credits | 100\% | 95\% | 87\% | 100\% | 71\% | 95\% | 100\% | 86\% |
| CTE | Mathematical Ways of Knowing |  |  | 4\% |  |  |  |  |  |
|  | Scientific Ways of Knowing |  |  |  |  |  | 0\% |  |  |
|  | CTE Non-GEM courses |  | 5\% | 9\% |  | 29\% | 5\% | 0\% | 14\% |
|  | Total CTE credits |  | 5\% | 13\% |  | 29\% | 5\% | 0\% | 14\% |

There are also differences between the institutions in the type of courses in which dual credits are earned through the Advanced Opportunities program (see Tables 5 and 6). Generally, a greater percentage of credits earned are in GEM courses at the two-year institutions than at the four-year institutions. The two outliers are CSI and LCSC. Due to the concentration of GEM courses in the institutions offering the most dual credits, 75 percent of credits earned are GEM courses. Overall, 21 percent of credits earned are in academic non-GEM courses and 4 percent are in CTE courses.

## Analysis of Impact Examination of the Impact of Changes in the Advanced Opportunities Program

The Advanced Opportunities program was dramatically changed in 2016. Students who graduated in 2015-16 were the last group who graduated prior to implementation of the changes; students who graduated in 2019-20 were the first group who graduated having four years access to the current program.

To understand how the change in the program affected different groups of students, Figure 6 shows the share of high school graduates who earned dual credits and the amount of dual credits they earned for both of those years. ${ }^{29}$ There was a 17 percentage point increase in the share of students who graduated earning dual credits between those two graduating classes. Both average and median dual credits earned increased by about 3 credits.

Figure 5. Average and median number of credits earned for the graduating classes of 2016 and 2020


Figure 6. Comparison of the share of high school graduates earning dual credit by the number of credits earned for the graduating classes of 2016 and 2020


## Dual Credits Earned and Economic Disadvantage

Both economically disadvantaged and non-economically disadvantaged students benefited from the implementation of the current program. Non-economically disadvantaged students saw an 18 percentage point drop in students who earned no dual credit versus a 17 percentage point drop for economically disadvantages students; an increase of 3.46 credits in average credits versus 2.95 ; and an increase of 3 credits in median credits earned versus 2 credits.

Figure 7. Comparison of the share of high school graduates earning dual credit by economic status and by the number of dual credits earned for the graduating classes of 2016 and 2020


## Dual Credits Earned and Gender

Both male and female students benefited from the expansion of the program. Female students benefited slightly more than male students. There was a roughly equivalent decrease in the share of graduates who earned no dual credit (18 percentage points for females, 17 percentage points for males). Females had a slightly larger increase in the average dual credits earned than males (3.8 versus 2.6 ) and a slightly larger increase in the median dual credits earned than males (4 versus 3).

Figure 8. Comparison of the share of high school graduates earning dual credit by gender and by the number of dual credits earned for the graduating classes of 2016 and 2020


## Dual Credits Earned and Race/Ethnicity

Due to small sample sizes, we only considered four race/ethnicity groups in this section of the paper. In order to make the data between the different years as comparable as possible, we did not compute an indicator for multi-race students. Rather, we counted them in every category they chose with the exception of Hispanic students. If a student indicated they were Hispanic, that is the only group they appeared in. This methodology differs from the methodology used in other sections of the paper.

Asian students saw the largest decline in the share of students who graduated without earning dual credits (23 percentage points). Hispanic students also saw a relatively large decline (20 percentage points). American Indian students saw the smallest decline (10 percentage points). Asian students also saw the largest increase in average dual credits earned (3.86) while American Indian students saw the smallest increase (0.24). It appears that American Indian students benefited the least amount from the expansion of the program. More research needs to be done to better understand this dynamic.

Figure 9. Comparison of the share of high school graduates earning dual credit by race/ethnicity and by the number of dual credits earned for the graduating classes of 2016 and $\mathbf{2 0 2 0}$


# Outcomes <br> Dual Credit Grades Earned, Postsecondary Enrollment, and Time to Completion of Degree 

The first outcome of interest for students who take Advanced Opportunities dual credit is those students' outcomes in the courses. Table 7 shows the share of dual credits by grade earned for those credits taken through Advanced Opportunities in FY2020. Not all courses from the Advanced Opportunities data was matched to the data on grades so total credits reported in this section may not match total credits in other sections of the paper.

## Dual Credit Grades by Course Type

Table 7. Dual credit grades earned for students participating in Advanced Opportunities dual credit overall and by specific course type, FY20 ${ }^{30}$

| Grade Category | $\begin{aligned} & 0 \\ & \bar{G} \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \hline 10 \\ & \hline 0 \\ & \hline \end{aligned}$ | Total <br> $\begin{array}{r}0 \\ 0 \\ 00 \\ \vdots \\ 0 \\ \hline \\ \hline\end{array}$ |  |  |  | Course |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade of a C- or better (including passes) | 94\% | 91\% | 94\% | 95\% | 95\% | 91\% | 95\% | 94\% | 95\% |
| Grade of a D+/D/D- | 2\% | 2\% | 2\% | 2\% | 2\% | 3\% | 3\% | 3\% | 1\% |
| Grade of an F or X or did not pass | 2\% | 2\% | 2\% | 2\% | 1\% | 4\% | 1\% | 2\% | 2\% |
| Did not complete or withdrew | 1\% | 3\% | 1\% | 1\% | 1\% | 1\% | 1\% | 1\% | 1\% |
| Total Credits | 189,917 | 7,612 | 97,529 | 27,992 | 25,951 | 10,291 | 26,879 | 39,771 | 17,161 |

Students who took dual credit through the public system were overwhelmingly successful at their courses. Ninety-four percent of credits attempted were awarded a grade of C- or better. Students were slightly more likely to be successful in academic courses (94 percent of credits were at a C- or better) than CTE courses ( 91 percent of credits were at a C- or better). ${ }^{31}$ In comparison, about 60 percent of AP exams taken through the AO program had scores of 3 or higher.

Students were less likely to be successful in Oral Communication GEM Courses - only 91 percent of credits were at a C- or better compared to 94 to 95 percent of credits in other types of GEM Courses. ${ }^{32}$

[^9]
## Dual Credit Grades by Economic Status and Gender

Table 8. Dual credit grades earned for students participating in Advanced Opportunities dual credit by economic status and gender, FY20

## Grade Category

| Economic Status |  | Gender |  |
| :---: | :---: | :---: | :---: |
| Not Economically Disadvantaged | Economically disadvantaged | Female | Male |
| 95\% | 90\% | 95\% | 93\% |
| 2\% | 4\% | 2\% | 3\% |
| 2\% | 4\% | 2\% | 2\% |
| 1\% | 2\% | 1\% | 1\% |
| 160,862 | 36,474 | 117,723 | 79,806 |

Economically disadvantaged students were slightly less likely to earn a grade of C- or better in their courses ( 90 percent) compared to students who were not economically disadvantaged (95 percent). ${ }^{33}$ Male students were less likely ( 93 percent) to earn a grade of C- or better than female students ( 95 percent). ${ }^{34}$

## Dual Credit Grades by Race/Ethnicity

Table 9. Dual credit grades earned for students participating in Advanced Opportunities dual credit by

| race/ethnicity, FY20 Grade Category | White | American Indian | Asian | Black | Hawaiian/ Other Pacific Islander | Hispanic | Multiracial |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade of a C or better (including passes) | 95\% | 88\% | 97\% | 92\% | 90\% | 91\% | 93\% |
| Grade of a D | 2\% | 5\% | 2\% | 2\% | 5\% | 4\% | 2\% |
| Grade of an F or X or did not pass | 2\% | 5\% | 0\% | 3\% | 5\% | 3\% | 3\% |
| Did not complete or withdrew | 1\% | 2\% | 1\% | 2\% | 0\% | 1\% | 2\% |
| Did not earn credits/grades | 0\% | 1\% | 0\% | 0\% | 0\% | 0\% | 0\% |
| Total Credits | 161,579 | 1,110 | 3,493 | 1,260 | 451 | 24,641 | 4,958 |

Hispanic students were less likely to earn a grade of C- or better in their courses ( 91 percent) than white students (95 percent), as were American Indian students (88 percent) and multi-race students (93 percent). ${ }^{35}$ Asian students ( 97 percent) were more likely than white students to earn a grade of C- or better.

[^10]
## Percent of High School Graduates Earning Dual Credit

For the rest of the outcomes considered, we characterize students by the number of credits they earned as of high school graduation. We also consider more years of data than just the most recent year. Over time, students have become more likely to graduate high school having earned at least some dual credits. Approximately one-third of high school graduates in 2014 had earned dual credits compared to 58 percent of graduates in 2020.

Figure 10. Percent of high school graduates who earned dual credits and those who did not earn dual credits, 2014 through 2020

\% of High School Graduates

Figure 11. Percent of high school graduates earning each number of dual credits by year of high school graduation, 2014 through 2020


The share of students earning between 1 and 10 dual credits has been fairly constant over the last six years (see Figure 11 and Table 10). The largest increase has been in students earning 20 or more dual credits. In the last six years, the share of students in this group has more than quadrupled.

Table 10. Number and percent of high school graduates earning each number of dual credits by year of high school graduation, 2014 through 2020

Year of High School Graduation

|  | Dual Credits Earned | Year of High School Graduation |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|  | None | 11,951 10,496 10,390 |  |  | 9,347 | 9,059 | 8,677 | 8,300 |
|  | 1-3 | 1,597 | 1,713 | 1,742 | 2,160 | 2,206 | 2,359 | 2,241 |
|  | 4-6 | 1,454 | 1,486 | 1,723 | 1,794 | 1,766 | 1,898 | 1,983 |
|  | 7-9 | 946 | 1,028 | 1,130 | 1,218 | 1,401 | 1,503 | 1,517 |
|  | 10-19 | 1,384 | 1,604 | 1,699 | 2,213 | 2,727 | 2,992 | 3,239 |
|  | 20 or More | 576 | 736 | 823 | 1,028 | 1,524 | 2,268 | 2,602 |
|  | None | 67\% | 62\% | 59\% | 53\% | 48\% | 44\% | 42 |
|  | 1-3 | 9\% | 10\% | 10\% | 12\% | 12\% | 12\% | 11 |
|  | 4-6 | 8\% | 9\% | 10\% | 10\% | 9\% | 10\% | 10\% |
|  | 7-9 | 5\% | 6\% | 6\% | 7\% | 7\% | 8\% | 8\% |
|  | 10-19 | 8\% | 9\% | 10\% | 12\% | 15\% | 15\% | 16\% |
|  | 20 or More | 3\% | 4\% | 5\% | 6\% | 8\% | 12\% | 13 |

## Postsecondary Enrollment Rates, Time to Completion of an Degree, and Dual Credit

Students who earn dual credit may differ in their educational outcomes from students who do not earn dual credit. In the remainder of this paper, we focus on go-on to college rates and the rate at which students earn a postsecondary degree. Full results for go-on rates for all years are found in the appendix.

The first outcome of interest is the percentage of students who attend a postsecondary institution the fall immediately after high school graduation ("fall immediate go-on rates"). In comparing fall immediate go-on rates by dual credits earned, two trends stand out. First, graduates who earned more dual credits during high school are more likely to go-on to college immediately than graduates who earned fewer or no dual credits. Second, there has been a general decline in fall immediate go-on rates across every group of dual credit earners between 2018 and 2020.36 The decline between 2019 and 2020 likely reflects some impact of COVID-19. It is noteworthy that the largest decreases between these two years were for students who earned between 4 to 6 dual credits and not for those who earned no dual credits.

In general, in interpreting these results, it is important to remember that more students are earning dual credits. It is possible that the type of student who earns dual credit has changed over time. ${ }^{37}$ If this is true, then the outcomes of those who earned dual credits may also change. For instance, if students who are less likely to go-on to college (for other reasons) are now taking dual credits, then the go-on rates for all students who take dual credits may decline. This may simply be a result of making dual credit available to all rather than to the subset of students who are able to pay for it themselves.

Figure 12. Fall immediate go-on rates by number of dual credits earned at high school graduation for 2018, 2019 and 2020 graduates


[^11]In Figure 13, we show one-year go-on rates for 2018 and 2019 while, in Figure 14, we show fall immediate, one-year, and three-year go-on rates for each category of dual credits earned for 2017 graduates. We show this for the latest year in which we have full data (one-year and three-year go-on rates for other years are reported in the appendix). Go-on rates are lowest for those students who do not earn dual credit and highest for those students who earned 20 or more dual credits. As more time passes since high school graduation, go-on rates increase for all categories of dual credit earners.

Figure 13. One year go-on rates by number of dual credits earned at high school graduation for 2018 and 2019 graduates


Figure 14. Fall immediate, one year, and three year go-on rates by number of dual credits earned at high school graduation for 2017 graduates

The final outcome of interest is whether or not students who earn more dual credit graduate in less time than students who earned fewer or no dual credits. Results are shown for students who immediately attended college in the fall after their high school graduation.

Students who earn 20 or more dual credits are much more likely to graduate with an Associate degree within one year, two years, or three years after starting college than students who earned fewer or no dual credits (see Figure 15). Students who earn 20 or more dual credits are also much more likely to graduate with a Bachelor degree in three or four years than students who earned fewer or no dual credits (see Figure 16). ${ }^{38}$

Figure 15. Percentage of students who go-on in the fall after high school graduation who earn an Associate degree within one year, within two years, and within three years of high school graduation


## Share of Students

${ }^{38}$ Generally, for all years, the differences in outcomes for the students who earn 20 or more dual credits are statistically significant when compared to the other groups for earning an Associate degree within one year. The differences in outcomes for all groups are generally statistically significant for earning an Associate degree within two or three years as well as earning a Bachelor degree within four years and within five years.

Figure 16. Percentage of students who go-on in the fall after high school graduation who earn a Bachelor degree within four years and within five years


## Conclusions

This paper characterizes 2020 AO dual credit with particular attention to AO dual credit in Idaho's public postsecondary institutions and examines outcomes of students who graduated with dual credit. Students who participate in AO dual credit are less likely to be economically disadvantaged and more likely to be female and white than students statewide. AO dual credit students are also less likely to be Hispanic compared to students statewide. However, AO dual credit students are as likely to be economically disadvantaged as students who attend the same schools. The gender and race/ ethnicity differences do persist within schools. This suggests that schools with a larger economically disadvantaged population may need to participate in AO to a greater degree in order for parity to be achieved with regard to economic disadvantage . There does appear to be work that needs to be done within schools to achieve gender and race/ethnic parity.

Students who participate in AO dual credit mostly choose to take GEM courses. Seventy-five percent of the credits earned in 2020 were in GEM courses. Students are overwhelming successful in their courses as measured by the grade they earn. Ninety-four percent of credits attempted were awarded a grade of C- or better.

Students who earn 20 or more dual credits by high school graduation are much more likely to graduate from college with an associate degree within 1, 2, or 3 years than students who earned fewer or no dual credits. Students who earn 20 or more dual credits are also more likely to graduate from college with a bachelor degree within 4 or 5 years than students who earned fewer or no dual credits.


## Appendix

| Two Most Common Courses in Each GEM Category <br> GEM Category <br> Two Most Common Courses |  |
| :--- | :--- |
| Humanistic and Artistic Ways of Knowing | Elementary Spanish I <br> Literature and Ideas |
| Mathematical Ways of Knowing | College Algebra <br> College Algebra \& Trigonometry |
| Oral Communication | Fundamentals of Oral Communication <br> Intro to Speech Communication |
| Scientific Ways of Knowing | Concepts of Biology <br> Introduction to Chemistry |
| Social and Behavioral Ways of Knowing | American National Government <br> United States History I |
| Written Communication | Writing and Rhetoric I <br> Writing and Rhetoric II |

## Number of Schools Offering Advanced Opportunities Programs by District Region

|  | Number of <br> schools | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 Region 6 | Virtual |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Schools serving grades <br> $\mathbf{1 0}$ to 12 | $\mathbf{2 5 0}$ | $\mathbf{2 6}$ | $\mathbf{2 2}$ | $\mathbf{8 1}$ | $\mathbf{4 1}$ | $\mathbf{2 4}$ | $\mathbf{4 0}$ | $\mathbf{1 6}$ |
| Schools offering AO Dual <br> Credit | 203 | 22 | 20 | 71 | 31 | 17 | 31 | 11 |
| Schools offering AO <br> Advanced Placement | 63 | 7 | 4 | 23 | 9 | 6 | 12 | 2 |
| Schools offering AO <br> Professional Certification <br> Exams | 76 | 3 | 8 | 23 | 16 | 8 | 18 | 0 |

## Number of Schools Offering Advanced Opportunities Programs by District Characteristics

|  | Number of <br> Schools | Number in City/ <br> Suburban Districts |  | Number in Town <br> Districts |  | Number in Rural <br> Districts |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Schools serving grades <br> $\mathbf{1 0}$ to $\mathbf{1 2}$ | 250 | 68 | 69 | 97 | 16 |  |
| Schools offering AO Dual <br> Credit | 203 | 57 | 48 | 87 | 11 |  |
| Schools offering AO <br> Advanced Placement | 63 | 27 | 16 | 18 | 2 |  |
| Schools offering AO <br> Professional Certification <br> Exams | 76 | 23 | 25 | 28 | 0 |  |

Comparison of Dual Credits Earned by High School Graduates by Region, 2015-16 versus 2019-20

| Dual Credits Earned | One |  | Two |  | Three |  | Four |  | Five |  | Six |  | Virtual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | 2020 | 2016 | 2020 | 2016 | 2020 | 2016 | 2020 | 2016 | 2020 | 2016 | 2020 | 2016 | 2020 |
| 0 dual credits | 63\% | 50\% | 49\% | 39\% | 56\% | 38\% | 58\% | 37\% | 57\% | 36\% | 69\% | 46\% | 79\% | 71\% |
| Between 1 and 3 dual credits | 6\% | 11\% | 9\% | 8\% | 11\% | 13\% | 10\% | 9\% | 11\% | 10\% | 9\% | 12\% | 7\% | 9\% |
| Between 4 and 6 dual credits | 8\% | 7\% | 12\% | 8\% | 10\% | 11\% | 12\% | 12\% | 11\% | 8\% | 9\% | 10\% | 3\% | 6\% |
| Between 7 and 9 dual credits | 5\% | 5\% | 7\% | 8\% | 7\% | 9\% | 7\% | 7\% | 6\% | 6\% | 6\% | 8\% | 3\% | 4\% |
| Between 10 and 19 dual credits | 8\% | 10\% | 17\% | 20\% | 11\% | 18\% | 10\% | 18\% | 12\% | 21\% | 6\% | 15\% | 4\% | 5\% |
| 20 or more dual credits | 10\% | 17\% | 7\% | 16\% | 5\% | 13\% | 4\% | 16\% | 3\% | 18\% | 1\% | 8\% | 4\% | 5\% |

Comparison of Dual Credits Earned by High School Graduates By Locale, 2015-16 versus 2019-20

| Dual Credits Earned | City/Suburban <br> 20162020 |  | Rural |  | Town |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 dual credits | 60\% | 41\% | 55\% | 37\% | 58\% | 42\% |
| Between 1 and 3 dual credits | 10\% | 12\% | 10\% | 11\% | 10\% | 10\% |
| Between 4 and 6 dual credits | 9\% | 10\% | 10\% | 11\% | 11\% | 10\% |
| Between 7 and 9 dual credits | 7\% | 8\% | 6\% | 8\% | 6\% | 8\% |
| Between 10 and 19 dual credits | 9\% | 16\% | 11\% | 18\% | 11\% | 17\% |
| 20 or more dual credits | 5\% | 13\% | 7\% | 16\% | 4\% | 13\% |

Go On Rates by Dual Credits Earned, Year of High School Graduation, and Time After High School Graduation

|  | 2014 |  |  | 2015 |  |  | 2016 |  |  | 2017 |  |  | 2018 |  | 2019 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dual <br> Credits Earned |  |  |  |  | $\begin{aligned} & \bar{\circ} \\ & \stackrel{1}{\sim} \\ & \stackrel{\otimes}{\circ} \end{aligned}$ |  |  | $\begin{aligned} & \frac{1}{0} \\ & \stackrel{1}{\sim} \\ & \stackrel{\sim}{\circ} \end{aligned}$ |  |  | $\begin{aligned} & \frac{\vdots}{\mathbb{O}} \\ & \stackrel{1}{\sim} \\ & \stackrel{\sim}{\circ} \end{aligned}$ |  |  |  |  |  |  |
| None | 38\% | 43\% | 54\% | 37\% | 42\% | 53\% | 37\% | 41\% | 51\% | 36\% | 39\% | 49\% | 33\% | 36\% | 28\% | 31\% | 23\% |
| 1-3 | 60\% | 64\% | 77\% | 60\% | 63\% | 75\% | 55\% | 60\% | 70\% | 53\% | 57\% | 67\% | 48\% | 52\% | 46\% | 49\% | 35\% |
| 4-6 | 66\% | 70\% | 80\% | 64\% | 68\% | 80\% | 64\% | 67\% | 78\% | 60\% | 64\% | 74\% | 56\% | 59\% | 52\% | 55\% | 38\% |
| 7-9 | 73\% | 76\% | 86\% | 67\% | 70\% | 84\% | 67\% | 70\% | 81\% | 67\% | 71\% | 80\% | 62\% | 65\% | 56\% | 60\% | 45\% |
| 10-19 | 78\% | 81\% | 91\% | 73\% | 76\% | 89\% | 75\% | 78\% | 90\% | 73\% | 76\% | 85\% | 67\% | 71\% | 64\% | 67\% | 54\% |
| 20 or More | 80\% | 82\% | 93\% | 79\% | 82\% | 92\% | 82\% | 84\% | 93\% | 80\% | 82\% | 91\% | 77\% | 80\% | 75\% | 78\% | 65\% |


[^0]:    ${ }^{1}$ Dual credit courses are college level courses taken by junior high/high school students. A student receives both high school and college credit for a dual credit course.
    ${ }^{2}$ Advanced Opportunities encompasses Advanced Placement exams, International Baccalaureate exams, Professional Certification Exams, and College Level Examination Program exams. It also includes Overload Courses, Dual Credit, Workforce Training Courses, and the Early Graduation Scholarship.
    ${ }^{3}$ Very few students take dual credit courses prior to 9 th grade. In FY20, a total of 175 dual credits were attempted by students in the 7th and 8th grades compared to 49,851 dual credits attempted by students in the 9th and 10th grades and 183,809 dual credits attempted by students in the 11th and 12th grades.
    ${ }^{4}$ The 8 public postsecondary institutions in Idaho are Boise State University, Idaho State University, Lewis-Clark State College, University of Idaho, College of Eastern Idaho, College of Southern Idaho, College of Western Idaho, and North Idaho College.
    ${ }^{5}$ Northwest Nazarene University accounted for 12 percent of AO dual credits attempted. The remaining 1 percent were spread out over several institutions.

[^1]:    ${ }^{6}$ We were unable to match all AO records to institution records. We could not match approximately 5,400 credits which means we could not classify those credits as either academic, CTE, or GEM. We could also not report on grades for these credits.
    ${ }^{7}$ General education courses constitute thirty-six (36) or more credits of all Associate of Arts, Associate of Science, and Baccalaureate degrees awarded in Idaho. Under Idaho's general education framework, at least thirty (30) credits must come from General Education Matriculation (GEM) courses that fall within one of six (6) competency areas: Written Communication; Oral Communication; Mathematical Ways of Knowing; Humanistic and Artistic Ways of Knowing; Scientific Ways of Knowing; and Social and Behavioral Ways of Knowing.
    ${ }^{8}$ This difference is statistically significant ( $p=0.029$ ).
    ${ }^{9}$ This difference is statistically significant ( $p=0.068$ ).
    ${ }^{10}$ This differences for white and Hispanic students are all statistically significant with $p=0.000$.

[^2]:    ${ }^{11}$ This difference is statistically significant with $p=0.000$.
    ${ }^{12}$ These differences are statistically significant with $p=0.000$ (Asian students, Hispanic students and American Indian students), $\mathrm{p}=0.002$ (Multi-race students).
    ${ }^{13}$ This difference is statistically significant with $p=0.000$.

[^3]:    ${ }^{14}$ We only have sufficiently detailed data on dual credits earned at high school graduation in the 8 public postsecondary institutions in Idaho.

[^4]:    ${ }^{15}$ PMAP is the state's postsecondary longitudinal data system.
    ${ }^{16}$ The go-on rate is the rate at which high school graduates go-on to college. Go-on rates as measured at several intervals - the fall immediately after high school graduation, within one year of high school graduation, and within three years of high school graduation.
    ${ }^{17}$ Much appreciation is extended to the SDE Advanced Opportunities staff who made this change.
    ${ }^{18}$ We use a z-test to determine statistical significance. A z-test is used instead of a t-test because the differences between groups are differences in proportions (such as the proportion female or the proportion who go-on to college). We report differences as statistically significant for levels of 0.10 or lower.

[^5]:    ${ }^{19}$ Advanced Opportunities programs are identified in Section 33-4602, Idaho Code.
    ${ }^{20}$ Pursuant to IDAPA 08.02.03.106.
    ${ }^{21}$ Advanced Opportunities, Annual Totals FY 20, https://www.sde.idaho.gov/student-engagement/advanced-ops/files/reporting/ FY2020-Advanced-Opportunities-Program-Totals.pdf, downloaded December 12, 2020.
    ${ }^{22}$ lbid.
    ${ }^{23}$ Note that totals for BYU-Idaho do not match those reported by SDE in the annual report. Some schools entered variants of the school's name instead of choosing the name from the dropdown menu. The totals reported here contain all reasonable variants of the institution's name.
    ${ }^{24}$ Students are unduplicated for each institution but may be duplicated across institutions. Therefore, a total is not shown.

[^6]:    ${ }^{25}$ This difference is statistically significant at $\mathrm{p}=0.000$.

[^7]:    ${ }^{26}$ Students may earn dual credits at more than one institution. Therefore, aggregating students across institutions will overstate the number of unique students who earned dual credits. Credits are counted as earned if a grade of D- or higher was earned. In some cases, D grades may be applied to a student's elective coursework.
    ${ }^{27}$ We were able to match 97 percent of records from the Advanced Opportunities administrative data to institution level data. There was disparity between institutions. We were unable to match 10 percent of records for CEI, 7 percent for ISU, 6 percent for CSI, 3 percent for NIC, 2 percent for LCSC and UI, 1 percent for CWI, and 0.1 percent for BSU.

[^8]:    ${ }^{28}$ Students may have paid for dual credits themselves. We were also not able to match all AO dual credits to the institution data.

[^9]:    ${ }^{30}$ CTE data is missing grades for $2 \%$ of the credits.
    ${ }^{31}$ This difference is statistically significant ( $\mathrm{p}=0.029$ ).
    ${ }^{32}$ This difference is statistically significant $(p=0.068)$.

[^10]:    ${ }^{33}$ This difference is statistically significant with $p=0.000$.
    ${ }^{34}$ This difference is statistically significant with $p=0.000$.
    ${ }^{35}$ These differences are statistically significant with $p=0.000$ (Asian students, Hispanic students and American Indian students), $\mathrm{p}=0.002$ (Multi-race students).

[^11]:    ${ }^{36}$ The differences across years for each group of dual credits earned and the differences within years for each group of dual credits earned are all statistically significant at the 0.01 level. 37 This difference is statistically significant with $p=0.000$.
    ${ }^{37}$ Future research will focus on documenting whether there has been a change in the academic achievement of students who earn dual credit since the implementation of the Advanced Opportunities program.

