



CTE Annual Report: 2018-19 to 2020-21

Part 2: Major, Awards, CTE 9+ Units

August 20, 2021

Context

This briefing provides a high level overview of CTE programs in the District for the academic years of 2019-20 to 2020-21 (includes Summer, Fall, and Spring) in regards to CTE Major, and for the years of 2018-19 to 2020-21 for CTE Awards, CTE Award Earners, completion of 9+ CTE Units, and the CTE Employment Outcomes Survey. This briefing is Part 2 of 2 of the CTE Report. Part 1 included Section, Headcount, and Outcomes data.

Findings

Major (students at credit colleges only)

- There were just over 21,000 CTE major students enrolled across the credit colleges in 2019-20 and 2020-21 (35% to 38% of all students). The count of CTE major students remained relatively stable (-1%) over that time, compared to a 15% decrease in non-CTE majors (**Section 1**).
- Overall CTE major students were less likely to be female and tended to be older than non-CTE major students (**Section 3**). While this is the trend across all CTE major students, there are strong, different patterns by gender, ethnicity, and age in some CTE programs (**Section 4**).
- The top CTE majors demonstrated strong representation patterns by gender: Fire Technology, Computer Information Sciences, and Administration of Justice majors were highly male dominated, and Child Development students were nearly all female (**Section 4**).

Awards

- CTE awards at the credit colleges have decreased 22% since 2018-19, and increased 63% at the College of Continuing Education. The decrease at the credit colleges was driven by a decrease in CTE Certificates, particularly in programs traditionally reliant on on-campus instruction such as Cosmetology, Aviation Maintenance, and Dental Assisting (**Section 5**).
- In 2020-21, 43% of awards at the credit colleges were in CTE, and 78% of awards at the College of Continuing Education were in CTE (**Section 6**). The proportion of CTE awards at the credit colleges has decreased since 2018-19 as certificates in programs traditionally reliant on on-campus instruction have seen sharp decreases.

Completion of 9+ CTE Units (*Section 9*)

- Several groups were disproportionately impacted in earning 9+ CTE Units in some years: African American and Native American students in 2020-21, non-Binary students in 2019-20 and 2020-21, and younger (18-24) and the oldest (50+) students.

Employment Outcomes Survey (*Sections 10 and 11*)

- Three-quarters of CTE students from SDCCD were employed after they stopped enrolling or completed a program from 2018 to 2020. Between 63% and 73% of students had an occupation related to their field of study. COVID-19 likely contributed to a 6% to 11% decrease in employment in 2020 compared to 2019.

Metrics and Definitions

- **CTE Major:** A student enrolled at City, Mesa, or Miramar College with a Current Academic Plan on file in the academic year with a CIP code connected to a TOP code aligned to the Student Success Metrics definition of Career Technical Education. College-level headcounts of CTE major students are determined by the college at which the student's academic plan is on file.
- **CTE Award:** A state-supported degree or certificate with a TOP code aligned to the Student Success Metrics definition of Career Technical Education. Includes Bachelor's and Associate degrees; high school diplomas and Certificates of Course Completion awarded by the College of Continuing Education; and credit certificates from 8 to 16, 16 to 30, 18 to 30, 30 to 60, and 60 or more units. Excludes Certificates of Program Completion from the College of Continuing Education, which were introduced in the 2019-20 academic year.
- **CTE Award Earner:** A student who earned a state-supported degree or certificate with a TOP code aligned to the Student Success Metrics definition of Career Technical Education. Excludes those who earned only credit certificates from 8 to 16 units, 12 to 18 units, 16 to 30 units, and 18 to 30 units, and those who earned Certificates of Program Completion from the College of Continuing Education.
- **CE Certificate of Completion:** Includes Certificates of Completion and High School Diplomas awarded by the College of Continuing Education.

Exclusions

- Awards data excludes non-state supported awards.
- Awards data excludes 1,312 Certificates of Program Completion (91% of which were CTE) from the College of Continuing Education in 2019-20, and 1,542 in 2020-21 (97% CTE); this data was unavailable in 2018-19.

Additional Notes

- Headcount disaggregations for non-binary students became available in 2019-20 as the district transitioned to Campus Solutions; this data was not available in 2018-19.
- This report shows an increase in Certificates of Course Completion awarded by the College of Continuing Education from 2018-19 to 2019-20. During this period, the College of Continuing Education began to transition to a managed enrollment strategy rather than open-entry/open-exit. The effects of this strategy transition were somewhat accelerated by the COVID-19 pandemic and the districtwide adoption of Campus Solutions; these circumstances led to increased use of electronic systems to report and track certificates.

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CTE Majors at the Credit Colleges

- Credit Colleges Headcount by CTE Major:** There were over 21,000 students enrolled across the credit colleges with a CTE major in both 2019-20 and 2020-21; this was between 35% and 38% of all students enrolled at the credit colleges.

While the count of CTE major students enrolled across the colleges remained stable from 2019-20 to 2020-21 (-1%), the count of non-CTE major students decreased 15% over that period. **This led to an increase in the proportion of students with a CTE major, from 35% in 2019-20 to 38% in 2020-21.**

Of students with a CTE major (21,508 in 2019-20 and 21,282 in 2020-21), almost three-quarters enrolled in a CTE course each year at City, Mesa, or Miramar Colleges (2019-20: 73%, 2020-21: 72%). Just over one-third of students with a non-CTE major enrolled in CTE courses.

Figure 1. Headcount by Major Type, Credit Colleges

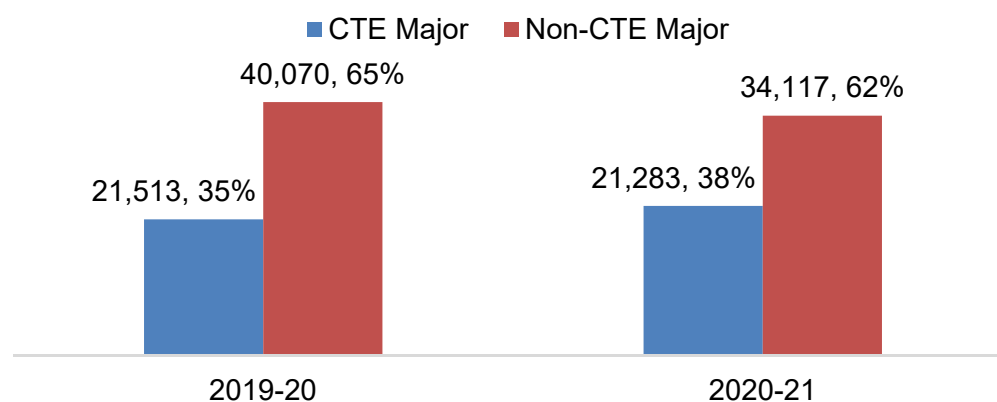


Table 1. Credit Colleges Headcount of Students who Enrolled in CTE courses, by Major Type

		2019-20	2020-21	Difference	% Change
CTE Major	Enrolled in CTE	15,672	15,416	-256	-2%
	Did not enroll in CTE	5,841	5,867	26	0%
	Total	21,513	21,283	-230	-1%
Non-CTE Major	Enrolled in CTE	14,781	12,730	-2,051	-14%
	Did not enroll in CTE	25,289	21,387	-3,902	-15%
	Total	40,070	34,117	-5,953	-15%

Table 2. Credit Colleges Proportion of Students who Enrolled in CTE courses, by Major Type

		2019-20	2020-21	Difference
CTE Major	Enrolled in CTE	73%	72%	0%
	Did not enroll in CTE	27%	28%	0%
	Total	100%	100%	---
Non-CTE Major	Enrolled in CTE	37%	37%	0%
	Did not enroll in CTE	63%	63%	0%
	Total	100%	100%	---

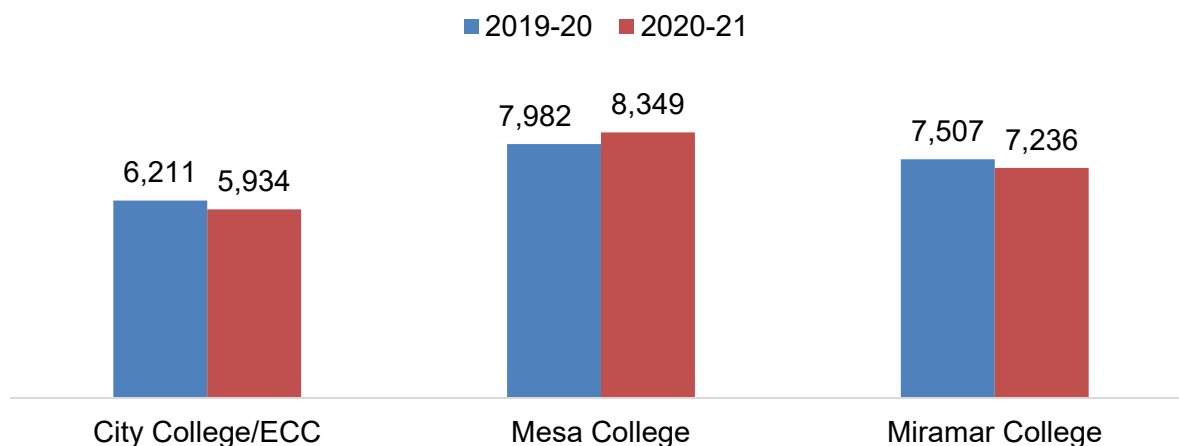
2. CTE Major Students, by Credit College: Between 5,900 and 8,300 students had CTE academic plans (majors) on file at each of the credit colleges in 2019-20 and 2020-21, accounting for between 31% and 44% of the student population.

Mesa College had the largest population of students with a CTE major in both academic years (7,982 in 2019-20 and 8,349 in 2020-21), and City College had the smallest.

As City and Miramar Colleges, the count of CTE decreased more slowly (City/ECC: -4%, Miramar: -4%) than the count of non-CTE students (City/ECC: -16%, Miramar: -13%), and at Mesa College the count of CTE students increased slightly (+5%) as the count of non-CTE students decreased (-15%). This led to a larger proportion of students with CTE majors at the colleges in 2020-21 than in 2020-21. See Table 4 on the next page for more detail.

Between 65% and 81% of students with CTE majors enrolled in CTE courses at City, Mesa, or Miramar College. A higher proportion of Miramar College students enrolled in CTE courses (81% in both years), followed by Mesa College (2019-20: 69%, 2020-21: 70%) and City College (2019-20: 68%, 2020-21: 65%). For more detail see Table 19 in the appendix.

Figure 2. Headcount and Proportion of Students with a CTE Academic Plan, by Credit College



Note. Students are included in the credit college at which they had an active academic plan on file in the given academic year.

Table 3. Proportion of all students with CTE Majors, by Credit College

	2019-20		2020-21	
	CTE Major Headcount	% of Total	CTE Major Headcount	% of Total
City College/ECC	6,211	35%	5,934	38%
Mesa College	7,982	31%	8,349	36%
Miramar College	7,507	41%	7,236	44%

Table 4. Credit College Headcount of Students by Major Type who Enrolled in CTE Courses

			2019-20	2020-21	Difference	% Change
City College/ ECC	CTE Major	Enrolled in CTE	4,237	3,886	-351	-8%
		Did not enroll in CTE	1,974	2,048	74	4%
		Total CTE Major	6,211	5,934	-277	-4%
	Non-CTE Major	Enrolled in CTE	4,297	3,694	-603	-14%
		Did not enroll in CTE	7,412	6,119	-1,293	-17%
		Total non-CTE Major	11,709	9,813	-1,896	-16%
Total Credit College		17,920	15,747	-2,173	-12%	
Mesa College	CTE Major	Enrolled in CTE	5,519	5,839	320	6%
		Did not enroll in CTE	2,463	2,510	47	2%
		Total CTE Major	7,982	8,349	367	5%
	Non-CTE Major	Enrolled in CTE	6,083	5,271	-812	-13%
		Did not enroll in CTE	11,480	9,688	-1,792	-16%
		Total non-CTE Major	17,563	14,959	-2,604	-15%
Total Credit College		25,545	23,308	-2,237	-9%	
Miramar College	CTE Major	Enrolled in CTE	6,073	5,837	-236	-4%
		Did not enroll in CTE	1,434	1,399	-35	-2%
		Total CTE Major	7,507	7,236	-271	-4%
	Non-CTE Major	Enrolled in CTE	4,539	3,897	-642	-14%
		Did not enroll in CTE	6,062	5,351	-711	-12%
		Total non-CTE Major	10,601	9,248	-1,353	-13%
Total Credit College		18,108	16,484	-1,624	-9%	

Note 1. Students are included in the credit college at which they had an active academic plan on file in the given academic year.

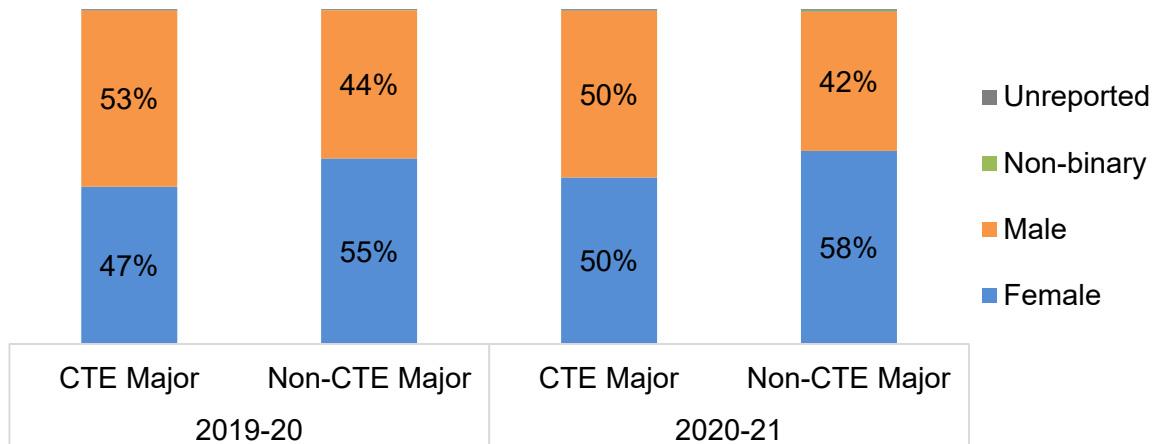
Note 2. Students are included in the "Enrolled in CTE" row if they enrolled a CTE course at any of the credit colleges or at the College of Continuing Education in the given academic year.

3. Credit Colleges CTE Major Students, Demographics: Compared to students with a non-CTE major, CTE-major students are less likely to be female and more likely to be older.

This analysis only includes students at the credit colleges.

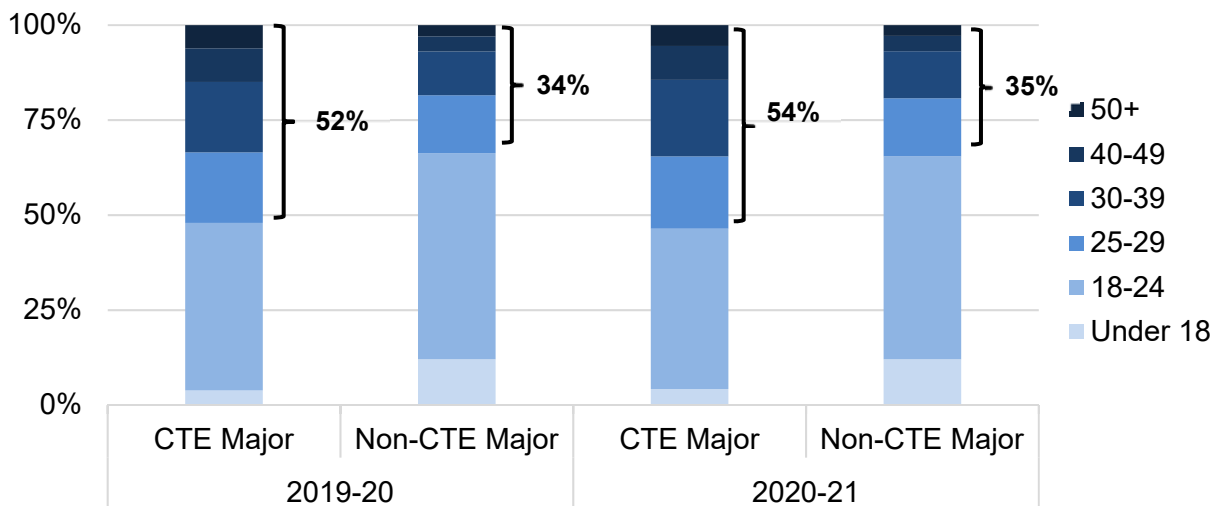
CTE-major students less likely to be female: Female students accounted for a smaller proportion of CTE major students than of non-CTE major students in both 2019-20 and 2020-21 (-8% in both years).

Figure 3. CTE Major and non-CTE Major students, by Gender, Credit Colleges



CTE-major students tend to be older: Students 25 and older accounted for more than half of CTE-major students, compared to just over a third of non-CTE major students, in both 2019-20 and 2020-21.

Figure 4. CTE Major and non-CTE Major students, by Age Group, Credit Colleges



CTE-major students were similar by ethnicity to non-CTE major students, except that they were slightly less likely to be Asian (-2% in 2019-20 and 2020-21) and more likely to be white (+4% in 2019-20 and 2020-21). See Table 18 in the appendix for more detail.

3. Credit Colleges Top Majors, Overall: Business Administration and Business Administration for Transfer were the most popular CTE majors across 2019-20 and 2020-21. Three different Administration of Justice majors were included in the top 10 CTE majors in both 2019-20 and 2020-21.

COVID-19 impacted the number of students selecting Cosmetology as a major: 208 fewer students enrolled at the colleges had this major in 2020-21 than in 2019-20, a decrease of 46%.

There were 269 more students with an Administration of Justice, Law Enforcement Specialization major in 2020-21 than in 2019-20, an increase of 42%. This increase may be part of a shift away from two other Administration of Justice majors, which saw a combined decrease of 281 students from 2019-20 to 2020-21.

Table 5. Top 10 CTE Majors at the Credit Colleges in 2019-20 and 2020-21

	2019-20	2020-21	Difference	% Change
Business Administration for Transfer	2,784	2,665	-119	-4%
Business Administration	1,620	1,319	-301	-19%
Child Development	951	838	-113	-12%
Computer and Information Sciences	810	813	3	0%
Fire Technology	743	540	-203	-27%
Admin. of Justice Law Enforcement	662	477	-185	-28%
Admin. of Justice Law Enforcement Spec.	646	915	269	42%
Administration of Justice for Transfer	539	443	-96	-18%
Nursing Education Registered Nurse	473	733	260	55%
Cosmetology	458	250	-208	-45%
Business Management	457	629	172	38%

Nearly all Administration of Justice and Fire Protection students enrolled in CTE courses in either 2019-20 or 2020-21. On the other hand, only 30% of Nursing students enrolled in CTE courses, even as the number of students in that major increased 55%.

Table 6. Percent of Top CTE Major Students who Enrolled in CTE Courses

	2019-20	2020-21
Business Administration for Transfer	69%	71%
Business Administration	60%	65%
Child Development	75%	75%
Computer and Information Sciences	54%	57%
Fire Technology	93%	91%
Admin. of Justice Law Enforcement	95%	97%
Admin. of Justice Law Enforcement Spec.	98%	98%
Administration of Justice for Transfer	78%	77%
Nursing Education Registered Nurse	30%	30%
Cosmetology	80%	67%
Business Management	68%	68%

There were **260 more Nursing students in 2020-21** than the prior year.

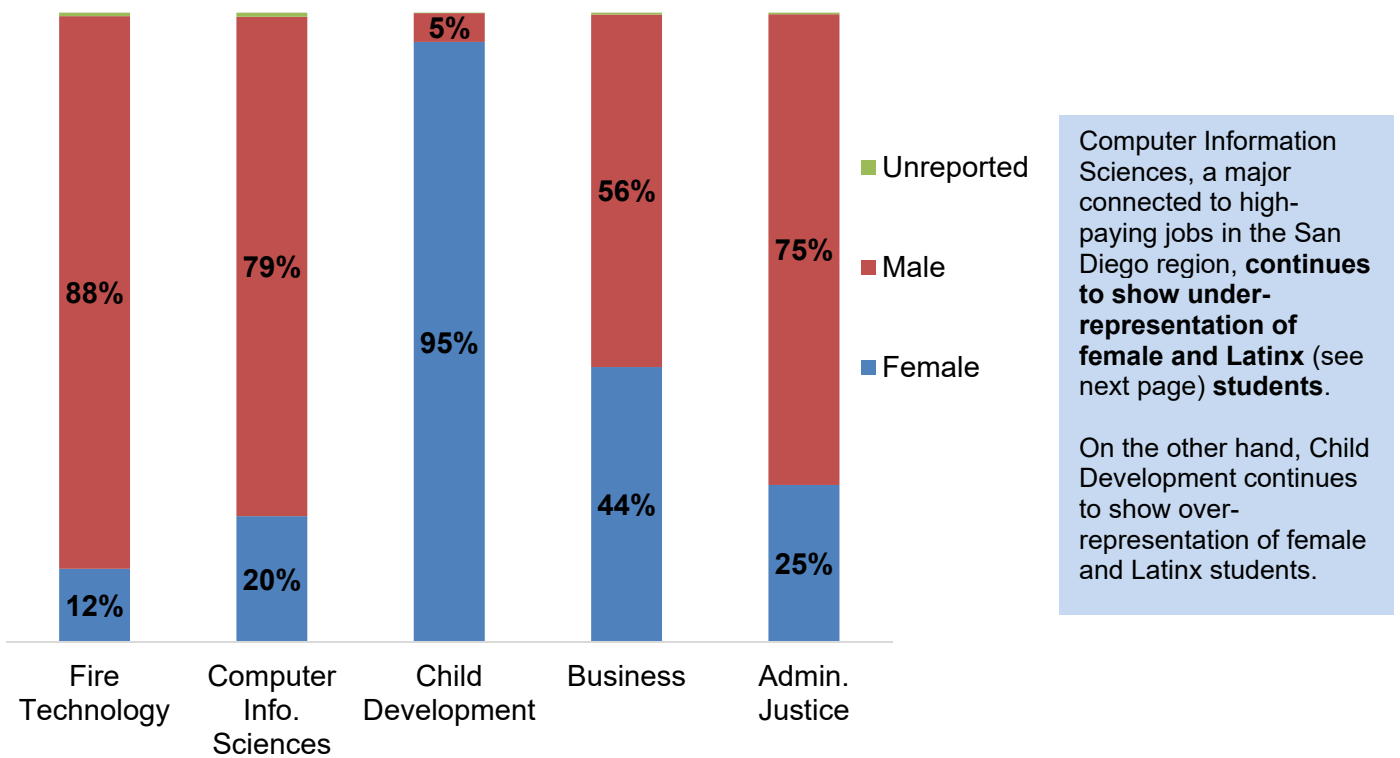
However, **only 30% of Nursing students enrolled in CTE courses** in 2019-20 and 2020-21.

4. **Credit Colleges Top 5 Major Groups, Demographics:** There were strong trends among CTE major by gender, and moderately strong trends by ethnicity. Female students were highly under-represented in Computer Sciences and Public Safety (Admin. Justice and Fire Technology), while male students were very highly under-represented in Child Development. Public Safety major students were more likely to be white.

The most popular majors were grouped by subject area to simplify analysis (i.e., “Business” refers to Business Administration for Transfer, Business Administration, and Business Management). See Table 22 in the Appendix for full grouping detail.

Trends by Gender: The most popular CTE majors reflect entrenched gender representation trends in occupations related to those majors. Majors aligned to traditionally male-dominated professions (Fire Technology, Computer Science, and Administration of Justice) had strong over-representation of male students at the colleges. On the other hand, nearly all Child Development major students are female.

Figure 5. Top CTE Major Groups at the Credit Colleges, by Gender, unduplicated across 2019-20 and 2020-21

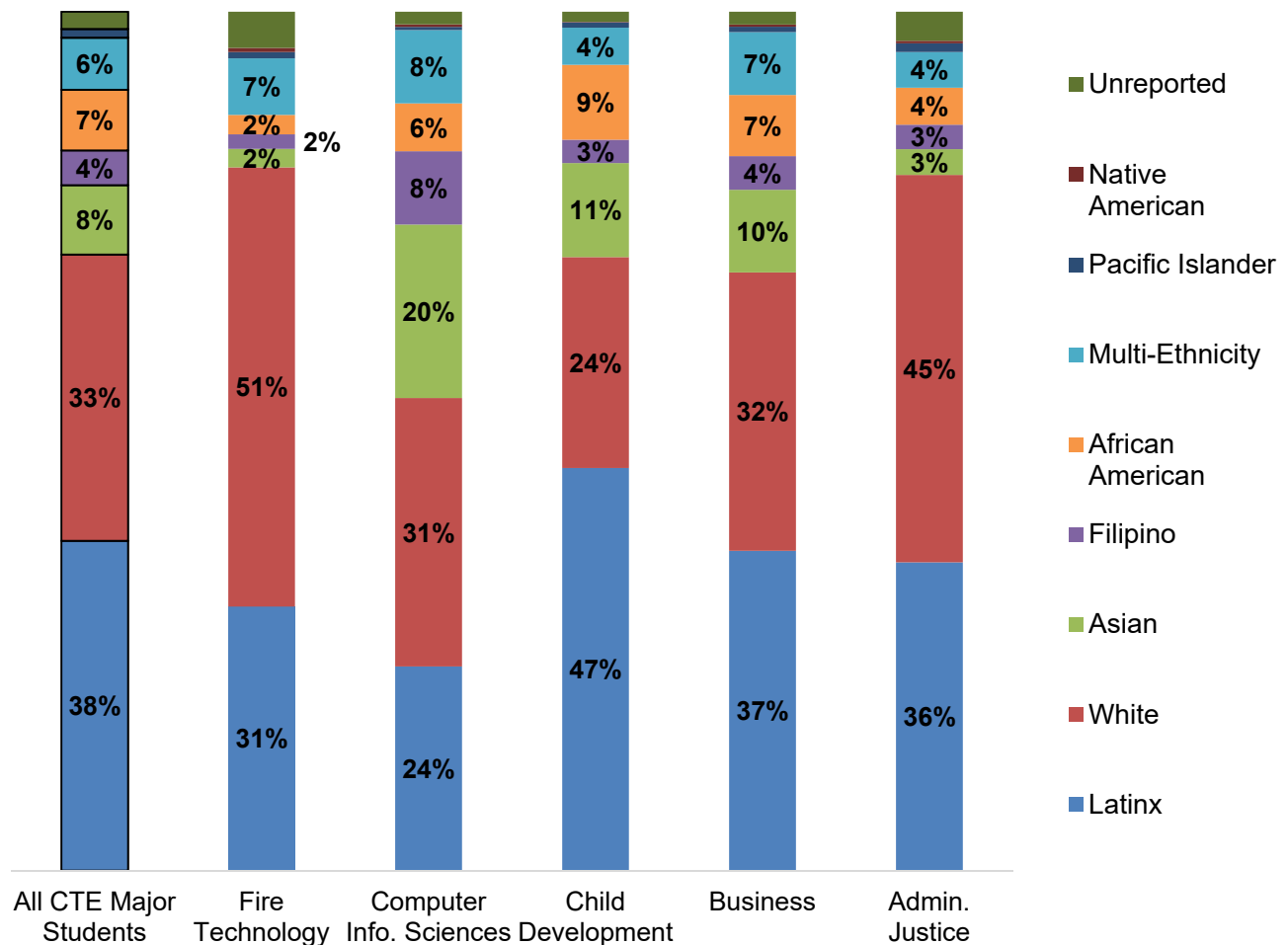


Note. Non-binary students were not represented among these majors.

Trends by Ethnicity: Compared to all CTE-major students:

- Fire Technology and Administration of Justice students were **much more likely to be white** (+18% and +12%)
- Child Development students were **more likely to be Latinx** (+9%).
- Computer Information Sciences students were **much more likely to be Asian** (+12%). **Latinx students were highly under-represented** among Computer Information Sciences major students (-14% compared to representation of all CTE major students).

Figure 6. Top CTE Major Groups, by Ethnicity, unduplicated across 2019-20 and 2020-21



CTE Completion

- 5. CTE Awards Decreases due to COVID-19: In 2020-21, the credit colleges conferred 2,180 CTE awards and the College of Continuing Education conferred 10,382 CTE certificates. CTE awards at the credit colleges have decreased 22% since 2018-19, and increased 63% at the College of Continuing Education.**

COVID-19 impacted award completion in 2019-20: There was a significant decrease in overall awards conferred in 2019-20 by the Credit Colleges, from 5,348 the prior year to 4,605 (-14%). The decrease in awards from 2018-19 to 2019-20 was largely accounted for by CTE awards, which decreased 29% from the prior year (City/ECC: -31%, Mesa: -21%, Miramar: -35%), while non-CTE awards increased at City and Mesa (+10% and +5%) and decreased slightly at Miramar (-6%).

In 2020-21, CTE awards recovered somewhat at the credit colleges compared to 2019-20 (+210 awards, +10%), although CTE awards in 2020-21 were still 22% lower than in 2018-19.

It should be noted that more Associate degrees while were awarded in 2020-21 than in 2018-19, credit Certificates were still significantly lower. See Table 8 on the next page for more information.

Table 7. 2018-19 Awards by CTE/non-CTE

		2018-19	2019-20	2020-21	Diff. 18-19 to 20-21	% Change 18-19 to 20-21
City College/ECC	CTE	762	524	520	-242	-32%
	Non-CTE	708	782	810	102	14%
	Total	1,470	1,306	1,330	-140	-10%
Mesa College	CTE	933	737	838	-95	-10%
	Non-CTE	1,068	1,119	1,144	76	7%
	Total	2,001	1,856	1,982	-19	-1%
Miramar College	CTE	1,092	709	822	-270	-25%
	Non-CTE	785	734	897	112	14%
	Total	1,877	1,443	1,719	-158	-8%
Credit Colleges Total	CTE	2,787	1,970	2,180	-607	-22%
	Non-CTE	2,561	2,635	2,851	290	11%
	Total	5,348	4,605	5,031	-317	-6%
College of Continuing Education	CTE	6,388	8,186	10,382	3,994	63%
	Non-CTE	2,500	3,656	2,858	358	14%
	Total	8,888	11,842	13,240	4,352	49%
District	CTE	9,175	10,156	12,562	3,387	37%
	Non-CTE	5,061	6,291	5,709	648	13%
	Total	14,236	16,447	18,271	4,035	28%

Note. The table above excludes 1,312 Certificates of Program Completion (91% of which were CTE) from the College of Continuing Education in 2019-20, and 1,542 in 2020-21 (97% CTE); this data was unavailable in 2018-19.

CTE 30-59 Unit Certificates were impacted significantly by the COVID-19 pandemic. They decreased from 450 in 2018-19 to 158 in 2019-20. This is likely due to the nature of courses required for these certificates: the top 30-59 Unit CTE Certificate in 2018-19 was in Cosmetology, for which 62 fewer certificates were awarded in 2019-20 compared to 2018-19 (75 certificates in 2018-19, 13 in 2019-20). Other 30-59 unit certificates that saw large decreases included Visual & Performing Art/Graphic Design and Aviation Maintenance (see Table 9).

On the other hand, non-CTE 30-59 Unit Certificates increased from 2018-19 to 2019-20, as many more students were awarded certificates in CSU General Education and Intersegmental General Education Transfer (222 in 2018-19, 639 in 2019-20, and 737 in 2020-21).

COVID-19 led to a **sharp decrease** in students receiving CTE 30-59 Unit Certificates, with programs such as Cosmetology, Aviation Maintenance, and Dental Assisting seeing large decreases.

Over the same period, the number of students receiving non-CTE 30-59 unit certificates in General Education increased dramatically.

Table 8. Districtwide Awards, by CTE/non-CTE and Degree Type

	2018-19		2019-20		2020-21	
	CTE	Non-CTE	CTE	Non-CTE	CTE	Non-CTE
Bachelor's Degree	15	---	28	---	27	---
AA/AS	814	1,297	839	1,029	950	1,155
AD-T	632	997	590	951	667	950
Certificate 60+	54	---	31	---	16	---
Certificate 30-59	450	262	158	652	192	741
Certificate 8 or 16*	822	5	324	3	328	5
CE Certificate of Completion	6,388	2,500	8,186	3,656	10,382	2,858
Total	9,175	5,061	10,156	6,291	12,562	5,709
% of Awards in Year	64%	36%	62%	38%	69%	31%

Note 1. CCCC supported certificates changed criteria in 2019-20. The "Certificate 8 or 16" row includes 8 and 16 units certificates in 2019-20 and 2020-21, and 12 or 18 unit certificates in 2018-19.

Note 2. Excludes non-state supported awards.

Table 9. Top 10 30-59 Unit CTE Certificates in 2018-19, with 2019-20 and 2020-21 Counts

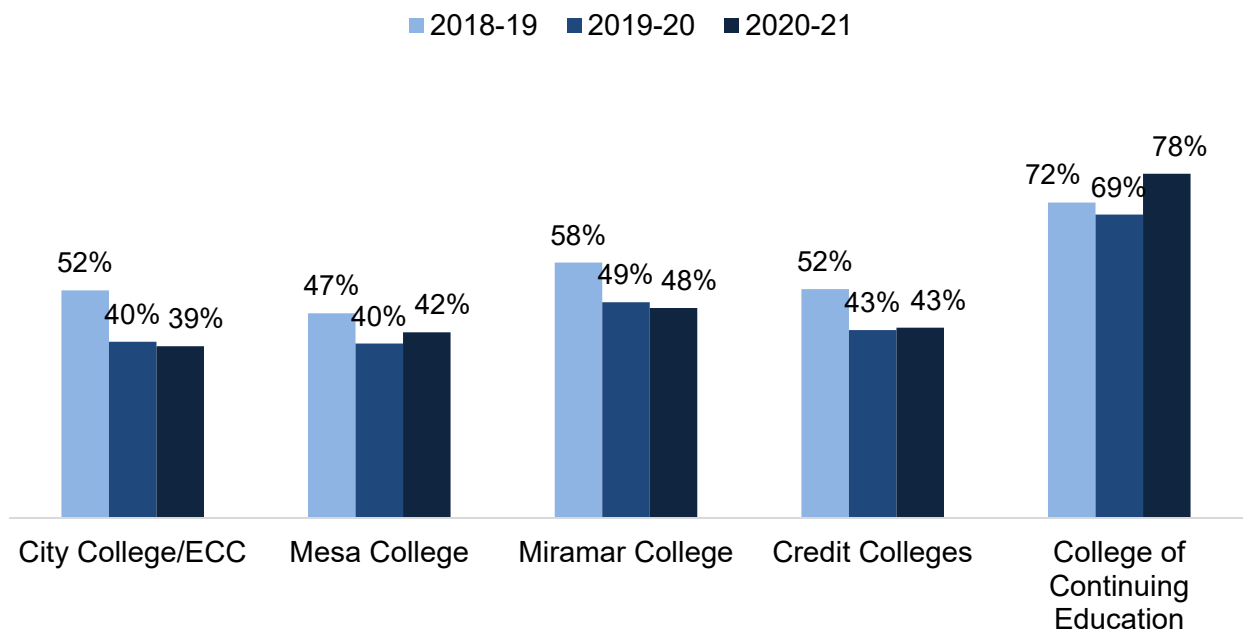
Award Description	2018-19	2019-20	2020-21	Decrease 2018-19 to 2019-20
Cosmetology	75	13	7	-83%
Paralegal	34	21	40	-38%
Behavioral Sci-Alcohol & Drug	31	18	18	-42%
Vis & Perf Art-Art Graphic Design	25	2	6	-92%
Aviation Maint Tech-Powerplant	22	7	7	-68%
Aviation Maint Tech-Airframe	21	7	7	-67%
Dental Assisting	20	5	22	-75%
Business Administration	18	1	6	-94%
Culinary Arts/Mgt-Hospitality	17	2	6	-88%
Fire Technology	16	3	1	-81%

6. CTE Awards % of all awards: Districtwide, 69% of awards were CTE (Credit Colleges: 43%, Continuing Education: 78%). As total CTE awards decreased at the colleges from 2018-19 to 2020-21, so has the proportion of total awards that are CTE.

Miramar College awarded a higher proportion of CTE awards in 2020-21 (48%) compared to City College (39%) and Mesa College (42%).

As the College of Continuing Education has increased total awards since 2018-19, the number of CTE awards has increased 63% while non-CTE awards increased 14% (see Table 7). This has led to an increase in the proportion of all awards that are CTE, from 72% in 2018-19 to 78% in 2020-21.

Figure 7. Percent of All Awards that are CTE

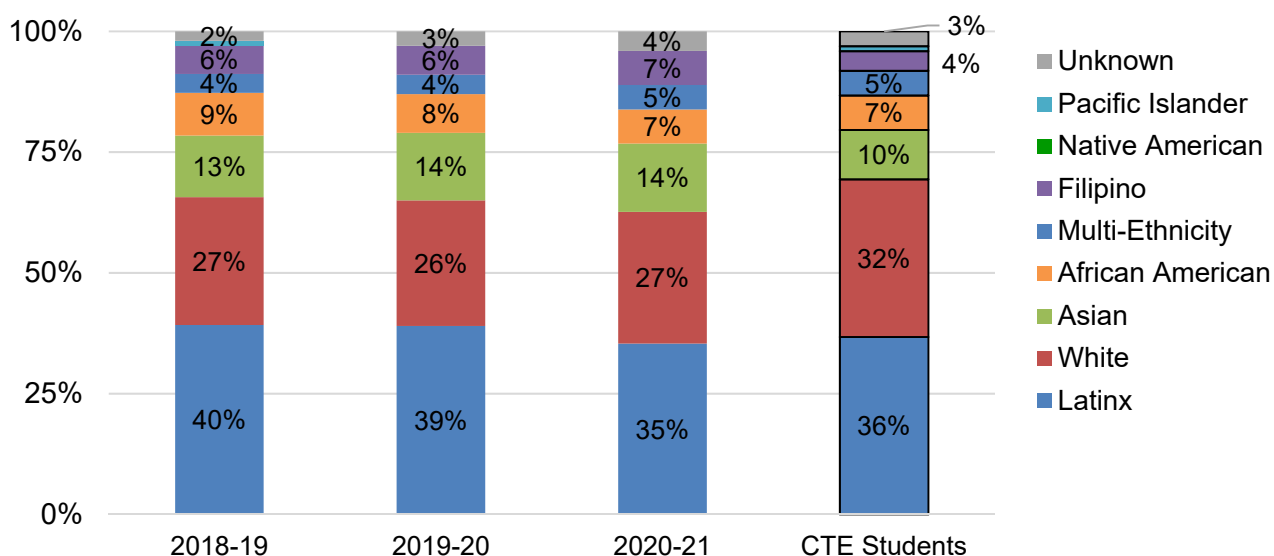


7. CTE Awards Earner Demographics: Compared to all students enrolled in CTE courses, students who earned CTE awards were more likely to be Asian and less likely to be white, more likely to be female, and more likely to be 30 or older.

Award Earner Gaps by Ethnicity: Compared to enrolled in CTE courses, award earners were more likely to be Asian (+3% to +4%) from 2018-19 to 2020-21. CTE award earners were also less likely to be white (-5% to -6%). It should be noted that representation of Latinx students among award earners decreased 5% from 2018-19 to 2020-21.

6,127 students earned CTE awards districtwide in 2020-21, an increase of 22% from 2018-19. The count of Asian, Filipino, and Multi-ethnicity students earning awards increased at higher rates (+33%, +54%, and +47%), the count of Latinx and Native American students increased at lower rates (+9% and +14%), and count of African American and Pacific Islander students decreased (-5% and -23%). See Table 10 on the next page for more detail.

Figure 8. Ethnicity of CTE Award Earners, Districtwide, 2018-19 to 2020-21



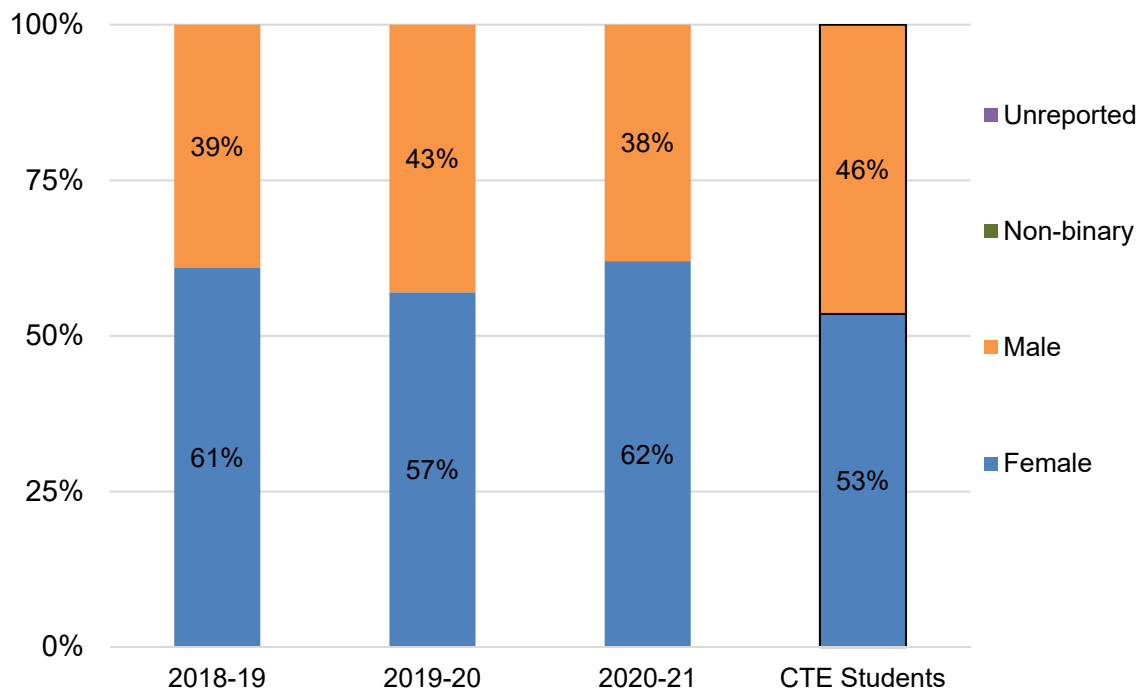
Note. CTE Students is all CTE-enrolled students, unduplicated across 2018-19 to 2020-21.

Table 10. CTE Award Earner Counts, 2018-19 to 2020-21

	2018-19	2019-20	2020-21	Diff. 18-19 to 20-21	% Change 18-19 to 19-20
African American	429	470	407	-22	-5%
Asian	645	870	861	216	33%
Filipino	288	379	444	156	54%
Latinx	1,979	2,436	2,155	176	9%
Multi-Ethnicity	190	249	280	90	47%
Native American	14	17	16	2	14%
Pacific Islander	31	23	24	-7	-23%
Unknown	93	196	267	174	187%
White	1,339	1,602	1,673	334	25%
Total	5,008	6,242	6,127	1,119	22%

Award Earner Gaps by Gender: Compared to students enrolled in CTE courses, award earners were more likely to be female (+4% to +9%) from 2018-19 to 2020-21.

Figure 9. Gender of CTE Award Earners, 2018-19 to 2020-21



Note. CTE Students is all CTE-enrolled students, unduplicated across 2018-19 to 2020-21.

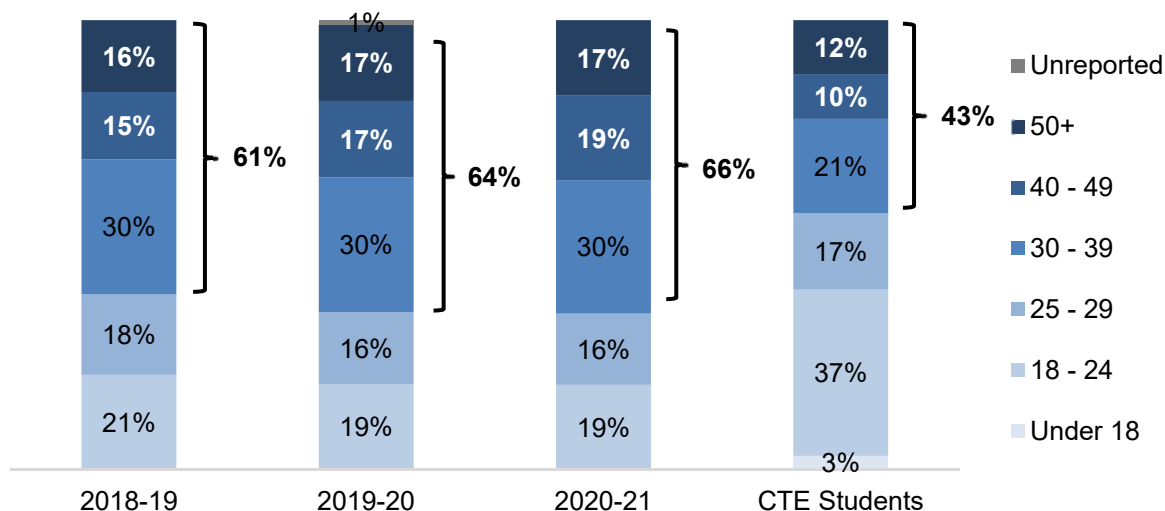
Table 11. CTE Award Earner Counts, 2018-19 to 2020-21

	2018-19	2019-20	2020-21	Diff. 18-19 to 20-21	% Change 18-19 to 20-21
Female	3,047	3,531	3,805	758	25%
Male	1,961	2,698	2,305	344	18%
Non-Binary	n/a	1	0	n/a	n/a
Unreported	0	12	17	17	---
Total	5,008	6,242	6,127	1,119	22%

Award Earner Gaps by Age Group: Compared to students enrolled in CTE courses, award earners were more likely to be 30 years or older (+18% to +23%).

While the count of CTE award earners under 30 grew moderately (18-24: +8%, 25-29: +5%), the count of award earners 30 or over increased significantly (+25% to +48%).

Figure 10. Age Group of CTE Award Earners, 2018-19 to 2020-21



Note. CTE Students is all CTE-enrolled students, unduplicated across 2018-19 to 2020-21.

Table 12. Count of CTE Award Earners, by Age Group

	2018-19	2019-20	2020-21	Diff. 18-19 to 20-21	% Change 18-19 to 20-21
Under 18	0	7	2	2	---
18-24	1,048	1,188	1,136	88	8%
25-29	904	972	952	48	5%
30-39	1,478	1,847	1,852	374	25%
40-49	772	1,069	1,142	370	48%
50+	806	1,092	1,025	219	27%
Unreported	0	67	18	18	---
Total	5,008	6,242	6,127	1,119	22%

8. CTE Award Earner Gaps, Credit and non-Credit: Demographics differ significantly between credit and non-credit institutions, and credit and non-credit award earners showed different gaps compared to CTE students at each institution.

There were 2.5 more CTE award earners from the College of Continuing Education than from the credit colleges in 2019-20, and 3 times more in 2020-21. The below paragraphs summarize gaps in award earners from CTE students at the credit colleges and the College of Continuing Education separately, from 2019-20 to 2020-21.

Credit Award Earner Gaps: Compared to all credit CTE students in 2019-20 and 2020-21, CTE award earners from the credit colleges were more likely to be Asian and Filipino (2% to 3%), and less likely to be Latinx (2% to 4%) and white (2% to 3%). Credit CTE Award earners were also more likely to be female (7%), and less likely to be 18-24 (-7% to -6%) compared to credit CTE students. See tables 19 to 21 in the Appendix for more detail.

Non-credit Award Earner Gaps: Compared to all non-credit CTE students in 2019-20 and 2020-21, CTE award earners from the College of Continuing Education were more likely to be Asian (2% to 3%) and less likely to be white (-2% to -4%) in both 2019-20 and 2020-21. Latinx students saw decreased representation in award earners from 2019-20 to 2020-21, from 41% of non-credit CTE award earners to 35%.

Non-credit CTE award earners were 2% to 4% more likely to be between the ages of 30 and 49 compared to all non-credit CTE students, and 6% less likely to be 50 or older. See tables 22 to 24 in the Appendix for detail.

Subsequent analysis of CTE awards should consider gaps between students and award earners by program. Because of large differences in the demographics of programs (i.e. Computer Information Sciences is heavily male-dominated, while Child Development is heavily female dominated), representation of award earners *by program* should be included in subsequent reporting on CTE outcomes.

9. Completion of 9+ CTE Units: Several groups were disproportionately impacted in earning 9+ CTE Units in some years: African American and Native American students in 2020-21, non-Binary students in 2019-20 and 2020-21, and younger (18-24) and the oldest (50+) students.

Disproportionate impact (DI) occurs when a group achieves a benchmark at a significantly lower rate than a reference group – usually the highest-achieving group. For this analysis, “significantly lower” was defined as instances where the rate at which one group earned 9+ CTE units was less than 80% of the rate at which the reference group earned 9+ CTE units.

Overall, 21% of CTE students earned 9+ CTE units in 2018-19, 2019-20, and 2020-21. The count of students achieving this benchmark decreased 11% across the last three years, from 6,721 in 2018-19 to 5,988 in 2020-21.

Table 13 below indicates instances in which groups achieved this benchmark at disproportionately lower rates than the reference group (the group which achieved the benchmark at the highest rate, excluding small groups). The reference group for each category is included with gray background and italics.

For example, 18% of African American CTE students earned 9+ CTE units in 2020-21. 23% of Asian students earned 9+ CTE units that year. The rate for African American students (18%) is 78% of the rate for Asian students (23%), so this is an instance of disproportionate impact.

Table 13. DI Groups and Years: Percent of CTE Students who earned 9+ CTE Units at Disproportionately Lower Rates than the Reference Group

Category	Group	Disproportionately impacted in		
		2018-19	2019-20	2020-21
Ethnicity	African American	---	---	18%
	Native American	---	---	17%
	<i>Asian</i>	22%	23%	23%
Gender	Non-Binary	n/a	11%	13%
	<i>Female</i>	22%	21%	21%
Age	18-24	19%	20%	---
	40-49	20%	21%	---
	50+	18%	19%	19%
	<i>25-29</i>	25%	26%	24%

Note 1. Gender data for non-binary students was not available in 2018-19.

Note 2. Students under 18 earned 9+ CTE units at less than 80% of the reference group in all years, but are excluded from the DI analysis.

Note 3. Includes enrollments at the credit colleges only. Excludes credit by exam.

CTE Employment Outcomes Survey

- 10. Employment Rate: On average, about three-quarters of CTE students from SDCCD were employed after they stopped enrolling or completed a program from 2018 to 2020. Between 63% and 73% of students had an occupation related to their field of study. COVID-19 likely contributed to a 6% to 11% decrease in employment in 2020 compared to 2019.**

Reported employment rates¹ in 2020 were between 70% and 78%, 6% to 11% lower than the prior year.

Students from SDCCD generally reported employment rates similar to or above the statewide average. COVID-19 may have impacted SDCCD CTE students more strongly than others across the state, as reported decreases in employment at SDCCD are larger than across the state (-5%).

Over the last three years, SDCCE students have reported lower rates of employment than students from the credit colleges (City/ECC: 82%, Mesa: 77%, Miramar: 84%, SDCCE: 73%).

Table 14. Employment Rate, former CTE Students

	2018	2019	2020	3-Year Average	2019-2020 Difference
City/ECC	84%	84%	78%	82%	-6%
Mesa	81%	78%	71%	77%	-7%
Miramar	85%	89%	78%	84%	-11%
SDCCE	73%	77%	70%	73%	-7%
Statewide	81%	82%	77%	80%	-5%

63% to 73% of respondents reported employment in a field related to their program of study. Across the last three years, respondents from Miramar College reported higher rates of employment in related fields (75%) than the state (71%), and College of Continuing Education respondents reported lower rates (63%).

Table 15. Employment Rate in Occupation Related to Field of Study

	2018	2019	2020	3-Year Average	2019-2020 Difference
City/ECC	73%	74%	71%	73%	-3%
Mesa	73%	71%	67%	70%	-4%
Miramar	75%	78%	73%	75%	-5%
SDCCE	61%	64%	66%	63%	2%
Statewide	70%	71%	71%	71%	0%

¹ Employment rate includes those Employed At One Job, Self-Employed, and Employed At More Than One Job in the year after the student stopped enrollment or completed a program.

11. Wage Growth and Program Satisfaction: Across the last three years, respondents at the Credit Colleges reported hourly wage gain of between 47% and 51%, similar to but marginally lower than the statewide average. Respondents from the College of Continuing Education reported lower hourly wage gain across the last three years (24%). Nearly all respondents were satisfied with the education or program of study.

Similar to trends observed in reported employment rates, the difference from 2019 to 2020 is larger at the credit colleges than the statewide average (City/ECC: -29%, Mesa: -12%, Miramar: -12%).

Among respondents from the credit colleges, this growth relates to hourly wage growth in dollars of between \$7.70 and \$8.59 across the last three years, similar to the statewide average (\$8.43). Students from the College of Continuing Education reported wage gains of \$4.58.

Table 16. Hourly Wage Growth, % Change, former CTE students, compared to Wages pre-CTE Coursework

	2018	2019	2020	3-Year Average	2019-2020 Difference
City/ECC	56%	63%	34%	51%	-29%
Mesa	38%	60%	48%	49%	-12%
Miramar	47%	53%	40%	47%	-12%
SDCCE	19%	26%	26%	24%	0%
Statewide	53%	56%	56%	55%	0%

Nine out of ten students were satisfied with the education they received at City, Mesa, and Miramar Colleges, and the College of Continuing Education.

Table 17. Percent of former CTE students Satisfied with CTE coursework

	2018	2019	2020	3-Year Average	2019-2020 Difference
City/ECC	91%	90%	91%	91%	1%
Mesa	94%	92%	93%	93%	1%
Miramar	96%	95%	96%	96%	1%
SDCCE	91%	93%	92%	92%	-1%
Statewide	91%	92%	92%	92%	0%

Talking Points

Report Finding	Discussion
<p>There was a large increase in the number of Nursing students from 2019-20 to 2020-21 (+45%). However, only 30% of Nursing students enrolled in CTE courses in each year (section #3).</p>	<p>The low rate of Nursing students in CTE courses suggests these students have many general education requirements to fulfill, or experience difficulty enrolling in courses required to complete their program.</p>
<p>Administration of Justice students are much more likely to be male and white, and more likely to be older, than CTE students. White students accounted for nearly half (45%) of Administration of Justice majors, and male students accounted for three quarters of the major (section #5).</p>	<p>As a key educator of future police officers and law enforcement professionals in the San Diego region, SDCCD should continue to explore and develop adoption of anti-racist pedagogies in Administration of Justice and similar courses, as well as explore outreach methods to increase diversity among this group of students.</p>
<p>Computer Information Sciences, a major connected to high-paying jobs in the San Diego region, continues to show under-representation of female and Latinx students. On the other hand, Child Development continues to show over-representation of female and Latinx students (section #5).</p>	<p>Increasing equitable access to career preparation pathways connected to high-wage, in-demand career pathways should remain a priority.</p>
<p>Completion of CTE Certificates was significantly impacted by the COVID-19 pandemic at the credit colleges in programs such as Cosmetology, Aviation Maintenance, and Dental Assisting.</p>	<p>Programs heavily reliant on on-campus instruction may benefit from additional support services to remove barriers to student completion.</p>
<p>African American, Native American, non-binary, and the oldest and youngest CTE students were disproportionately impacted in the rates at which they earned 9+ CTE units.</p>	<p>As the California Community Colleges move towards outcomes-based funding under the Student-Centered Funding Formula, increasing completion rates for all groups will become key to preserving funding in addition to furthering equity goals.</p>

Appendix

Table 18. CTE Major Students, by Ethnicity

	2019-20		2020-21	
	CTE Major	Non-CTE Major	CTE Major	Non-CTE Major
African American	7%	6%	7%	6%
Asian	9%	11%	9%	11%
Filipino	4%	5%	4%	5%
Latinx	38%	39%	39%	38%
Multi-Ethnicity	6%	7%	7%	7%
Native American	0%	0%	0%	0%
Pacific Islander	1%	0%	1%	0%
Unknown	3%	2%	2%	2%
White	32%	28%	33%	29%
Total	100%	100%	100%	100%

Students with a CTE major are less likely to be Asian and more likely to be white than non-CTE students.

Table 19. Proportion of CTE-major and non-CTE major students who Enrolled in CTE Courses

			2019-20	2020-21	Difference
City College/ ECC	CTE Major	Enrolled in CTE	68%	65%	-3%
		Did not enroll in CTE	32%	35%	3%
		Total	100%	100%	---
	Non-CTE Major	Enrolled in CTE	37%	38%	1%
		Did not enroll in CTE	63%	62%	-1%
		Total	100%	100%	---
Mesa College	CTE Major	Enrolled in CTE	69%	70%	1%
		Did not enroll in CTE	31%	30%	-1%
		Total	100%	100%	---
	Non-CTE Major	Enrolled in CTE	35%	35%	1%
		Did not enroll in CTE	65%	65%	-1%
		Total	100%	100%	---
Miramar College	CTE Major	Enrolled in CTE	81%	81%	0%
		Did not enroll in CTE	19%	19%	0%
		Total	100%	100%	---
	Non-CTE Major	Enrolled in CTE	43%	42%	-1%
		Did not enroll in CTE	57%	58%	1%
		Total	100%	100%	---

Note. Students are included in the "Enrolled in CTE" row if they enrolled a CTE course at any of the credit colleges or at the College of Continuing Education in the given academic year.

Table 20. Major Groupings by Subject, for Section 5

Major	Major Group
Business Administration for Transfer	Business
Business Administration	
Business Management	
Administration of Justice, Law Enforcement Specialization	Administration of Justice
Administration of Justice, Law Enforcement	
Administration of Justice for Transfer	
Child Development	Child Development
Fire Technology	Fire Technology
Computer and Information Sciences	Computer and Information Sciences

Table 21. Credit CTE Award Earners, by Ethnicity

	2019-20	2020-21	Credit CTE students
African American	7%	6%	6%
Asian	13%	12%	10%
Filipino	6%	7%	4%
Latinx	33%	35%	37%
Multi-Ethnicity	5%	6%	6%
Native American	0%	0%	0%
Pacific Islander	0%	0%	1%
Unreported	7%	2%	2%
White	30%	31%	33%

Differences of 2% or greater are indicated with a green cell background for over-representation, and a red cell for under-representation compared to all credit CTE students.

Note. Credit CTE students includes all CTE students enrolled at the credit colleges in 2019-20 and 2020-21, unduplicated.

Table 22. Credit CTE Award Earners, by Gender

	2019-20	2020-21	Credit CTE students
Female	57%	57%	50%
Male	43%	43%	49%
Non-binary	0%	0%	0%
Unreported	0%	0%	0%

Note. Credit CTE students includes all CTE students enrolled at the credit colleges in 2019-20 and 2020-21, unduplicated.

Table 23. Credit CTE Award Earners, by Age Group

	2019-20	2020-21	Credit CTE students
Under 18	0%	0%	4%
18 - 24	41%	42%	48%
25 - 29	22%	22%	18%
30 - 39	20%	21%	18%
40 - 49	7%	9%	8%
50+	6%	5%	5%
Unreported	4%	1%	0%

Note. Credit CTE students includes all CTE students enrolled at the credit colleges in 2019-20 and 2020-21, unduplicated.

Table 24. Non-credit CTE Award Earners, by Ethnicity

	2019-20	2020-21	Non-credit CTE Students
African American	8%	7%	8%
Asian	14%	15%	12%
Filipino	6%	8%	5%
Latinx	41%	35%	38%
Multi-Ethnicity	4%	4%	4%
Native American	0%	0%	0%
Pacific Islander	0%	0%	0%
Unknown	2%	5%	4%
White	24%	26%	28%

Differences of 2% or greater are indicated with a green cell background for over-representation, and a red cell for under-representation compared to all non-credit CTE students.

Note. Non-credit CTE students includes all CTE students enrolled at the College of Continuing Education in 2019-20 and 2020-21, unduplicated.

Table 25. Non-credit CTE Award Earners, by Gender

	2019-20	2020-21	Non-credit CTE Students
Female	57%	64%	61%
Male	43%	36%	38%
Non-binary	0%	0%	0%
Unreported	0%	0%	1%

Note. Non-credit CTE students includes all CTE students enrolled at the College of Continuing Education in 2019-20 and 2020-21, unduplicated.

Table 26. Non-credit CTE Award Earners, by Age Group

	2019-20	2020-21	Non-credit CTE Students
Under 18	0%	0%	0%
18 - 24	12%	10%	11%
25 - 29	14%	13%	14%
30 - 39	33%	34%	30%
40 - 49	20%	22%	18%
50+	21%	21%	27%
Unreported	0%	0%	0%

Note. Non-credit CTE students includes all CTE students enrolled at the College of Continuing Education in 2019-20 and 2020-21, unduplicated.