High School CTE Course Taking in Washington State: An Overview Focused on Access and Equity

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Authors

Donya Karimi, Ph.D.
Education Research and Data Center

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About the ERDC

The research presented here uses data from the Education Research and Data Center, located in the Washington Office of Financial Management. ERDC works with partner agencies to conduct powerful analyses of learning that can help inform the decision-making of Washington legislators, parents and education providers. ERDC's data system is a statewide longitudinal data system that includes de-identified data about people's preschool, educational and workforce experiences. In Fiscal Year 2019, ERDC was awarded a five-year Statewide Longitudinal Data System (SLDS) Grant, which involves using our data system to examine educational equity issues in Washington's public educational systems. ERDC is one of 28 grantees across the country who are participating in the FY19 SLDS Grant Program.

Address

Education Research and Data Center
1500 Jefferson St SE
Olympia, WA 98501
Mailstop: 43124

Phone

360-902-0599

Email

erdc@ofm.wa.gov

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Executive summary

As the knowledge-based economy is growing globally, jobs in high-technology fields are expanding in the job market. According to the U.S. Department of Education, Career and Technical Education (CTE) coursework is designed to prepare students for college, careers and to challenge race and gender inequity patterns within professions. In Washington, CTE programs are organized into career clusters comprising jobs and industries related to skills or products. The state of Washington has adopted 16 career clusters and in this study eight career clusters are categorized as Science, Technology, Engineering and Mathematics (STEM and STEM related) fields and eight as non-STEM fields (see Table 1). Washington high school graduation requirements include one credit of "occupational" education. As a result, nearly all graduates take at least one CTE course. However, CTE concentrators are students who enrolled in at least two credits in a single career cluster within their four-year high school career.

This study aims to describe the characteristics of Washington public high school students who are CTE concentrators and their post-high school activities, including postsecondary enrollment and participation in apprenticeships. Additionally, this study examines students' concentrator status by career cluster, indicating a focus on STEM or non-STEM careers. This study analyzes data from five cohorts of first-time ninth-graders between the 2011 and 2015 school years who graduated on time and obtained a high school diploma between 2014 and 2018.

Key findings:

1. Males are more likely than females to enroll in courses in the STEM career cluster.
2. Asian students are more likely to enroll in courses in STEM career clusters, while Black students are less likely to enroll in courses in STEM career clusters.
3. Other than race and gender, there are no other differences between the students' characteristics and course enrollment in STEM and non-STEM career clusters.
4. A higher percentage of students who are CTE non-concentrators are enrolled in schools in the rural school district than CTE concentrators, which matches the overall high school enrollment pattern.
5. Among CTE concentrators, a higher rate of students in rural school districts enrolled in STEM career cluster courses than in non-STEM career clusters.
6. College enrollment and apprenticeship participation are similar between CTE concentrators in STEM and non-STEM career clusters.

Why is it important to examine high school CTE course enrollment outcomes?

"Career and Technical Education (CTE) promotes and supports locally-based middle and high school programs that provide 21st-century academic and technical skills for all students. Whether you plan to go to work straight out of high school or eventually earn a Ph.D., whether you have a clear career goal or just want to learn something practical and new, you can benefit from CTE."

-Washington Office of Superintendent of Public Instruction

From a federal and state perspective, the attention on CTE has grown over the past two decades. The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) provides funds to each state for Career and Technical Education programming. Perkins IV requires programs of study to include rigorous academic and career/technical content that leads to an industry-recognized credential, postsecondary certificate, or degree and has opportunities for students to earn dual credit or dual enrollment. The Strengthening Career and Technical Education for the 21st Century Act (Perkins V) was signed into law July 31, 2018, to ensure career and technical education programs meet the demands of the 21st-century economy, including preparing students for careers in STEM fields.

Research on career and technical education programs have found that CTE programs offer multiple student advantages. CTE coursework can prepare students for college and careers. It also can challenge race and gender inequity patterns within STEM professions (U.S. Department of Education, 2014). Students who enroll in dual credits are more likely to graduate high school and attend college (Field, 2020; Villarreal, 2017). Previous studies examined whether taking CTE courses benefits students in the long run when compared to taking non-CTE coursework. Dougherty's (2018) study indicates that students who take CTE courses are more likely to graduate on time from high school. Brunner, Dougherty, & Ross (2019) also found that male students enrolled in CTE programs had higher earnings than those not enrolled in CTE programs shortly after leaving high school. Kreisman and Villero's (2021) study concludes that taking CTE courses reduces the gap in education outcomes across races/ethnicities. Theobald, Goldhaber, Gratz, & Holden's (2019) study on postsecondary outcomes for students with learning disabilities in Washington State found that the employment rate after high school graduation is higher among students with learning disabilities who were CTE concentrators than other students with learning disabilities. However, Fletcher's study (2012) indicates that racial and ethnic identities impact students' CTE enrollments in STEM fields. It is important for educators to understand the influence of student characteristics such as a student's socio-economic status in determining school progress toward providing a rigorous curriculum that prepares every student for college and careers (Walton & LaLonde, 2013).

Washington high school graduation requirements include one credit of "occupational" education. As a result, nearly all graduates take at least one CTE course. However, OSPI and ERDC distinguish between CTE concentrators and non-concentrators when it comes to federal reporting requirements. CTE concentrators are students who enrolled in at least two credits in a single career cluster within their four-year high school career. The state of Washington has adopted 16 career clusters, however, similar to many other states, Washington does not categorize CTE pathways into STEM and non-STEM career clusters. This

study, therefore, categorized CTE career clusters into STEM (and STEM-related) and non-STEM career clusters based on an approach by Hamilton, et al. (2015) and the state of Illinois Department of Education.[1] For example, a student may take Computer and Information Systems Security/ Information Assurance course and Computer Systems Networking and Telecommunications course to be a CTE Concentrator in Information Technology Cluster, which is one of the eight STEM career cluster.

Table 1: Career and Technical Education STEM and non-STEM Career cluster

STEM Clusters	Non-STEM Clusters
Agriculture, Food and Natural Resources	Arts, A/V Technology and Communications
Architecture and Construction	Business Management and Administration
Finance	Education and Training
Health Science	Government and Public Administration
Information Technology	Hospitality and Tourism
Manufacturing	Human Services
Science, Technology, Engineering and Mathematics	Law, Public Safety, Corrections and Security
Transportation, Distribution and Logistics	Marketing

Considering the importance of the CTE program in reducing the gap in education outcomes across races and ethnicities, this study focuses on CTE concentrators. This analysis examines patterns and disparities in CTE course enrollment, emphasizing differences in CTE students that concentrated on STEM career clusters as opposed to non-STEM career clusters. This study also looks at longer term outcomes for these groups of students, specifically college enrollment and apprenticeship participation.

[1] For additional information on career clusters, see Hamilton, et al. (2015).

Research questions

This study addresses the following research questions:

1. **What are the characteristics of Washington State students who complete requirements to earn CTE concentrator status in STEM and non-STEM career cluster areas?**

2. **What percentage of CTE concentrators enrolled in a postsecondary institution immediately after graduation by STEM and non-STEM career cluster areas?**

3. **What percentage of CTE concentrators participated in apprenticeship programs after they graduated from high school by STEM and non-STEM career cluster areas?**

Data and analytical approach

Data Sources. The data for this report comes from the ERDC P20W data warehouse. The High School Outcomes Cohort Data includes selected data elements that represent the experiences of Washington public high school students and their transition into the workforce and/or postsecondary education. If a student ever enrolled in a Washington public high school between ninth and 12th grades, then they are included in this dataset[2]. This data warehouse links administrative records from several contributing education state agencies. Data sources for this report include the Office of Superintendent of Public Instruction (OSPI), Comprehensive Education Data and Research System (CEDARS), the Washington State Board for Community and Technical Colleges (SBCTC) data warehouse and the Public Centralized Higher Education Enrollment System (PCHEES) housed at the Office of Financial Management (OFM). Apprenticeship data comes from the Department of Labor & Industries (L&I) data warehouse.

According to OSPI[3], CTE courses are classified as either exploratory or preparatory. All CTE courses incorporate a knowledge of career options, as well as leadership and employability skills. Leadership opportunities are possible through student participation in related Career and Technical Student Organizations (CTSOs).[4] Exploratory courses, as the name suggests, serve as an introduction to a CTE program. Preparatory courses expand upon the content of exploratory courses in a sequenced progression of technically intensive and rigorous courses. Tech Prep is a cooperative effort involving high schools, community and technical colleges, and the community to develop integrated academic and technical programs. Through Tech Prep students can earn college credit while in high school by taking courses on the high school or skill center campus.

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[2] See the HS data mart dictionary for a description of the DataMart.
[3] See "Career and Technical Education Advisory Committees," on the OSPI website [http://www.k12.wa.us/CareerTechEd/Forms/AdvisoryBrochure.pdf]

[4] Examples of CTSOs include Future Business Leaders of America, SkillsUSA, Future Business Leaders of America/Phi Beta Lambda (FBLA), and DECA.

The definition of a CTE concentrator is "students who enroll in two or more CTE courses beyond the exploratory level in a single cluster) until grades 11 and 12" (State of Washington Workforce Training and Education Coordinating Board, 2018-2019).

Cohort Description. This study analyzes data from five cohorts of first-time ninth-graders who were either CTE concentrators or CTE completers (students who have completed 360 hours of instruction in a CTE program with a letter grade of D or better). The cohorts include students who entered ninth grade between the 2011 and 2015 school years and graduated on time between 2014 and 2018. A student's cohort year is determined by adding four years to the year they entered ninth grade. It is referred to as the Graduation Requirements Year by OSPI, as it is the year for which the student is held accountable for meeting the requirements for graduation. For example, if a student first enrolled in ninth grade in 2011 (2010-2011 school year), then their cohort year is 2014 (2013-2014 school year). Cohort 1 consists of first-time ninth-graders in the 2010-11 school year who would be expected to graduate in four years in the 2013-14 school year. Cohort 5 consists of first-time ninth-graders in the 2014-15 school year who would be expected to graduate in four years in the 2017-18 school year (see Table 2).

Table 2: Cohort

First-time ninth graders' school year	High school graduation	First time ninth graders' school year	CTE concentrators
2010-11	**2013-14**	38,061	32,632
		18.7%	18.3%
2011-12	**2014-15**	39,424	34,895
		19.4%	19.5%
2012-13	**2015-16**	40,616	35,735
		20.0%	20.0%
2013-14	**2016-17**	41,750	36,358
		20.5%	20.4%
2014-15	**2017-18**	43,669	38,872
		21.5%	21.8%
Total		203,520	178,492
		100.0%	100.0%

Analysis. This study utilizes descriptive analysis to compare student characteristicts between CTE concentrators and CTE completers who were not concentrators. Cross-sectional samples also measure the differences in students CTE course enrollment and if they enrolled in a STEM cluster in high school

between 2010-11 and 2017-18 school year. This study also examines college enrollment and apprenticeship participation for CTE concentrators who complete STEM and non-STEM career clusters.

The analysis of the selected cohorts allows us to observe whether students enrolled in college immediately[5] or participated in an apprenticeship[6] immediately following graduation. As mentioned previously, nearly every high school student in Washington takes some CTE courses because graduation requirements include one credit of "occupational" education. However, this study focuses on CTE concentrators who are students who enrolled in two credits in a single career cluster within their four-year high school career between the 2010-11 and 2014-15 school years. CTE non-concentrators are students who enrolled in some CTE course credit, but less than two credits in a single career cluster within their four-year high school career between 2011 and 2015. Restricting the analysis sample to CTE concentrators observed for four consecutive years allows us to observe course-enrollment histories throughout high school for CTE concentrators and to compare their outcomes with CTE non-concentrators.

This study analyzes high school CTE course enrollment in Washington State by STEM and non-STEM career cluster and the following student characteristics:

- Gender
- Race and ethnicity
- Special education
- Multilingual learner
- Homelessness
- Eligible for free or reduced-price lunch (FRPL)

What did we learn about Washington CTE concentrators in STEM and non-STEM career cluster areas and student characteristics?

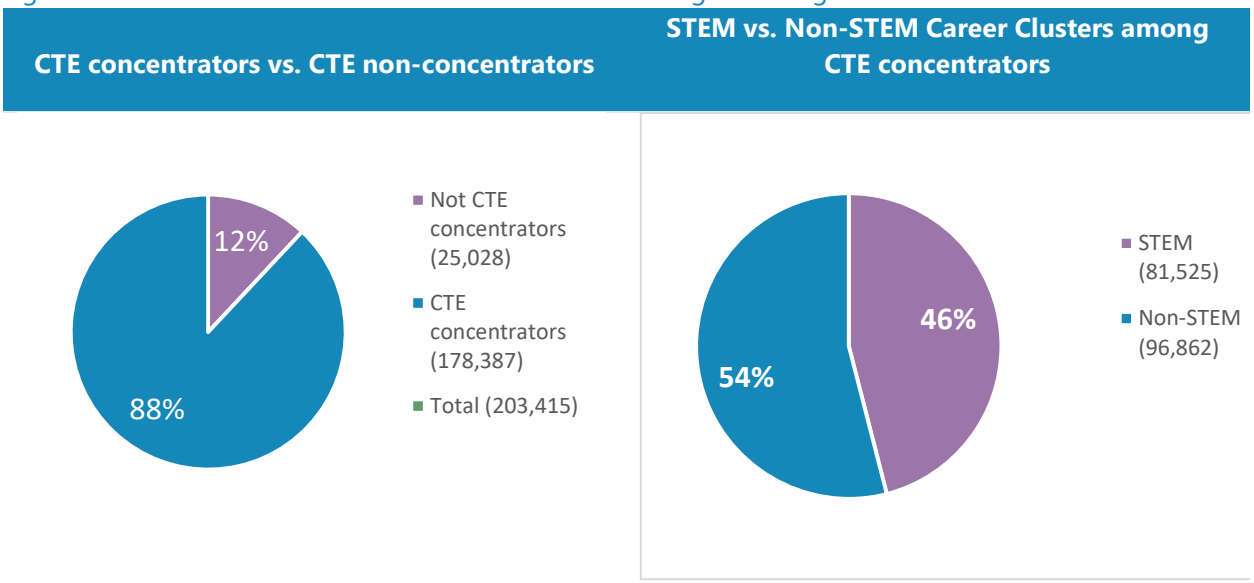
This section summarizes the key takeaways from the cross-sectional descriptive analysis. Cross-sectional samples depict the differences in students' characteristics between not CTE concentrators, CTE concentrators in courses fitting within the STEM and non-STEM career cluster. Detailed tables that support corresponding findings can be found in Appendix B.

[5] College enrollment rate is calculated by (total number of the graduation class enrolling in WA public institutions in one year after high school graduation)/(total number of the graduation class).

[6] Apprenticeship participation is calculated by (total number of the graduation class enrolling in WA apprenticeship programs in one year after high school graduation)/(total number of the graduation class).

As Figure 1 shows, 88% of the students who graduated between 2014 to 2018 met the criteria of CTE concentrators. Of CTE concentrators, a lower percentage enrolled CTE credits fitting within the STEM career cluster (46%) compared to courses that do not meet the STEM career cluster definition (54%).

Figure 1: CTE concentrators' status and career cluster for high school graduates between 2014-2018

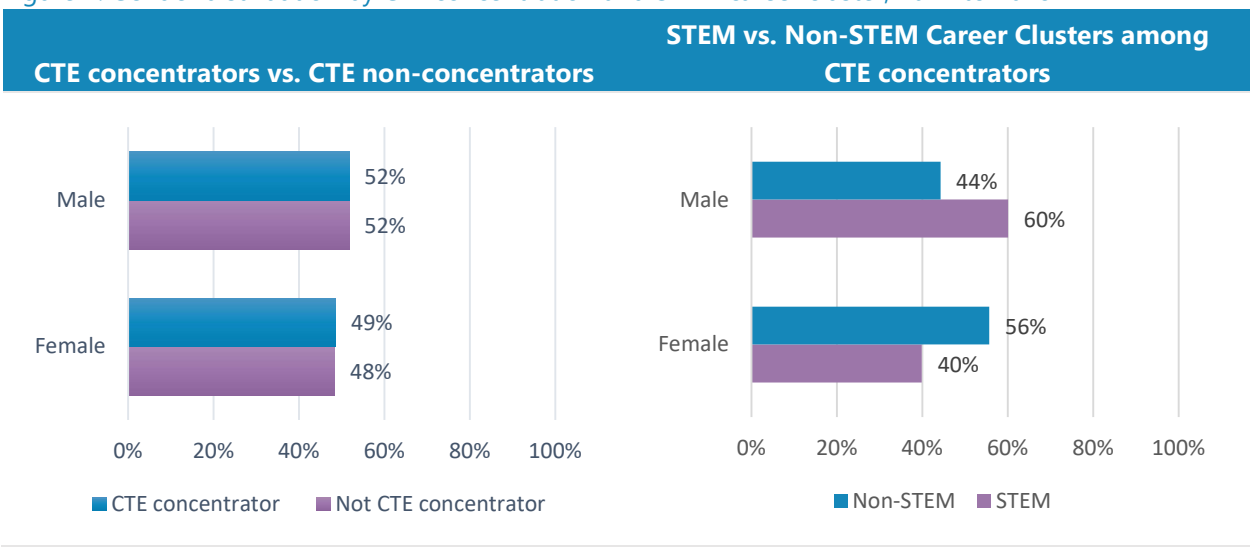


Gender

Figure 2 indicates that 52% of CTE concentrators and CTE non-concentrators are male, and 48% are female. However, 60% of the Washington public high school CTE concentrators who satisfied a STEM career cluster are male, and only 40% are female, whereas 44% of the Washington public high school CTE concentrators who satisfied a non-STEM career cluster are male and 56% are female[7]. The proportion of male and female students is the same for CTE concentrators and CTE non-concentrators, matching the overall distribution of males and females in the high school graduate cohorts. However, male students are overrepresented in STEM cluster courses, while women are overrepresented in the non-STEM cluster courses.

[7] Data on non-binary students was not available for this study.

Figure 2: Gender distribution by CTE concentration and STEM career cluster, 2014 to 2018



Race and Ethnicity

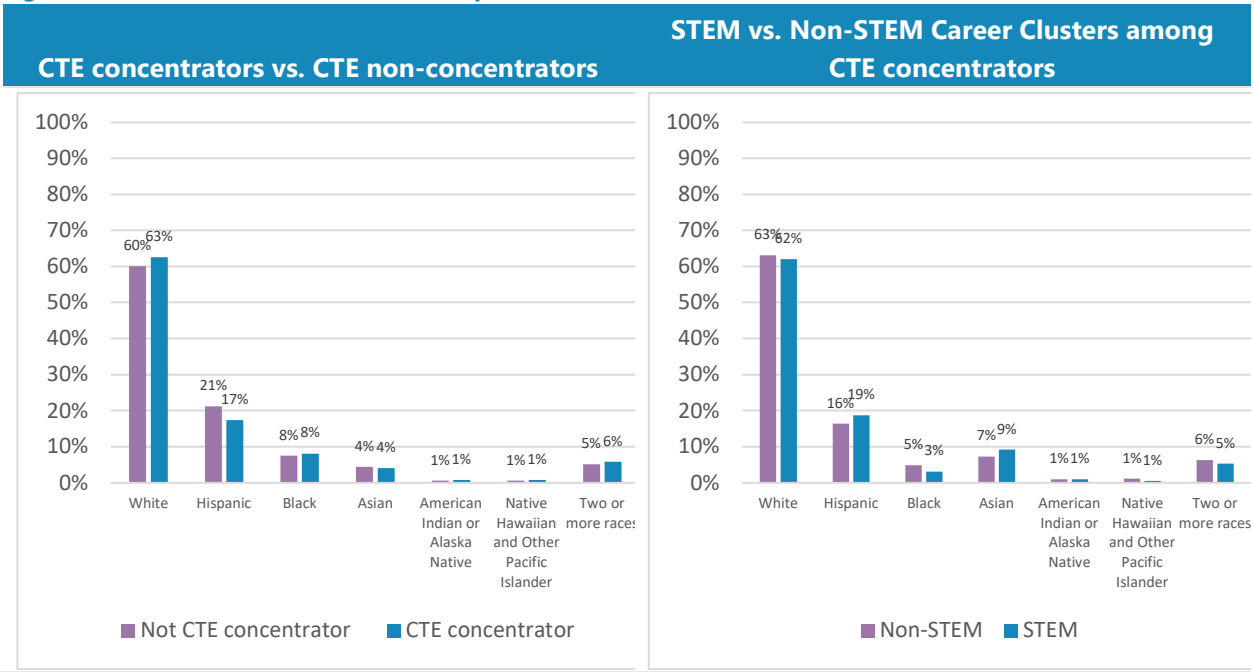
Figure 3 indicates that 60% of CTE non-concentrators and 63% of CTE concentrators identified as white. The percentage of CTE concentrators in Washington who identify as Hispanic or Latino is 17%, and the percentage of CTE non-concentrators in Washington who identify as Hispanic, or Latino is 21%. With the statewide cohort, among both CTE and CTE non-concentrators, 8% of students identify as Black and 4% as Asian. The percentage of students who identify as two or more races for CTE concentrators in Washington is 5% and for CTE non-concentrators is 5%.

Among the CTE concentrators, 62% of those who satisfied a STEM career cluster identify as white, and 63% of those in a non-STEM career cluster identify as white. Among the CTE concentrators, 19% of those satisfying a STEM career cluster identify as Hispanic or Latino and 16% of those satisfying a non-STEM career cluster identify as Hispanic or Latino. The figure shows that 3% of those who satisfied a STEM career cluster identify as Black, and 5% of those in a non-STEM career cluster identify as Black. Among CTE concentrators 9% of those who satisfied a STEM career cluster identify as Asian, and 7% of those in a non-STEM career cluster identify as Asian. Also, among CTE concentrators in a STEM career cluster, 5% identify as two or more races and among CTE concentrators in a non-STEM career cluster, 6% identify as two or more races.

Figure 3 indicates that a slightly higher percentage of statewide CTE concentrators identify as white than CTE non-concentrator cohort. Among the CTE concentrator sample, almost the same percentage of student enrolled in courses fitting within the STEM and non-STEM career cluster identify as white. A slightly lower percentage of CTE concentrators in Washington identify as Hispanic or Latino than CTE non-concentrators. Among the CTE concentrators, the percentage of students who identify as Hispanic or Latino in courses fitting within the STEM career cluster is higher than the percentage of students who identify as Hispanic or Latino in courses fitting within the non-STEM career cluster.

With the statewide cohorts, students who identify as Asian, Black, or two or more races are almost equally distributed among CTE and CTE non-concentrators. However, a higher percentage of non-STEM career cluster students identify as Black than STEM career cluster students. The pattern of students identifying as Black in STEM and non-STEM career clusters aligns with the previous research by Fletcher (2012) and Hamilton, Malin, & Hackman (2015) indicating that Black students are less likely to be employed in STEM fields. In comparison, a slightly higher rate of statewide CTE concentrators in STEM career clusters identify as Asian than CTE concentrators in non-STEM career clusters as Asian. These findings also are consistent with previous research indicating that Asian students are more likely to enroll in STEM career clusters than non-STEM career clusters in high school (Laird, Alt, & Wu,2009; Hamilton, Malin, & Hackman, 2015).

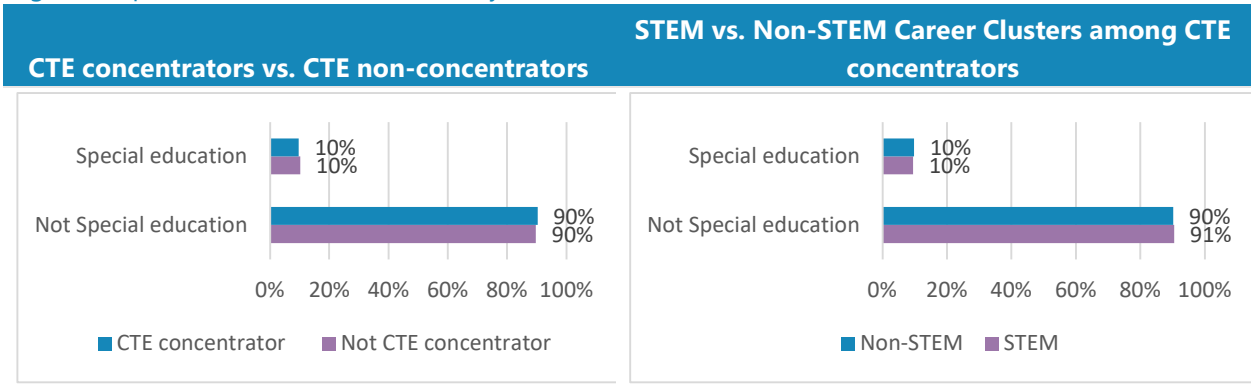
Figure 3: Racial and ethnic distribution by CTE concentration and STEM career cluster, 2014 to 2018



Students enrolled in Special Education.

Figure 4 shows that students in special education are equally distributed among CTE concentrator and CTE non-concentrator status and in STEM and non-STEM career clusters. The distribution of students in special education in STEM and non-STEM career clusters matches the overall population of students which suggests no disparity in enrollment in courses in STEM and non-STEM career clusters.

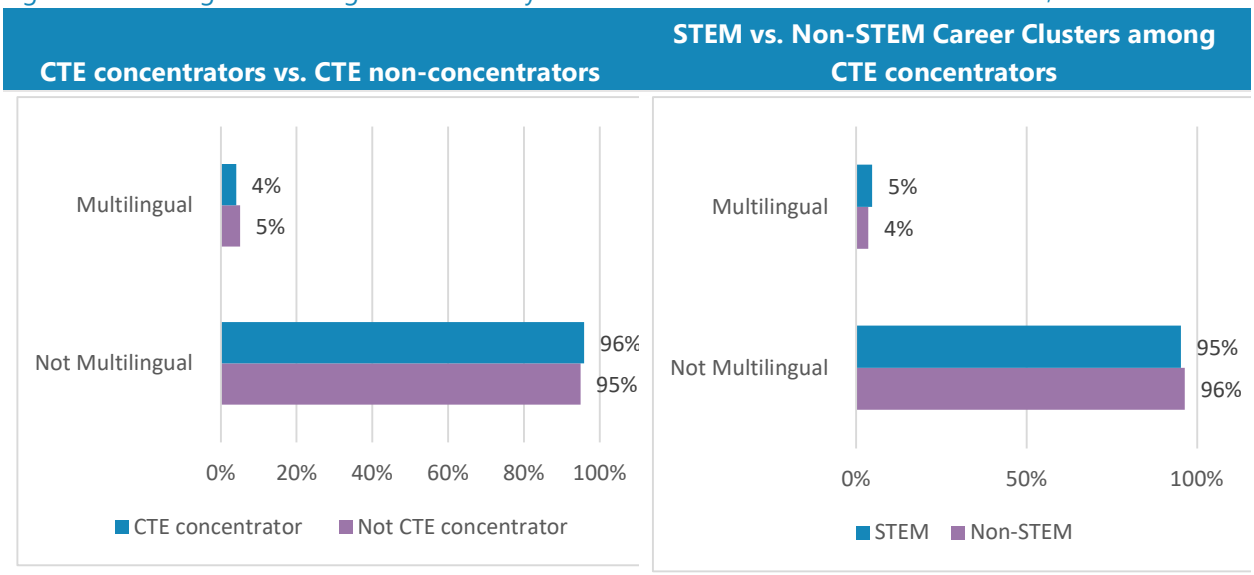
Figure 4: Special Education distribution by CTE concentration and STEM career cluster, 2014 to 2018



Students participating as Multilingual Learners.

Figure 5 shows that multilingual learners are equally distributed among CTE concentrator and CTE non-concentrator status. The distribution of multilingual students in STEM and non-STEM career clusters matches the overall population of students which suggests no disparity in course enrollment in STEM and non-STEM career clusters.

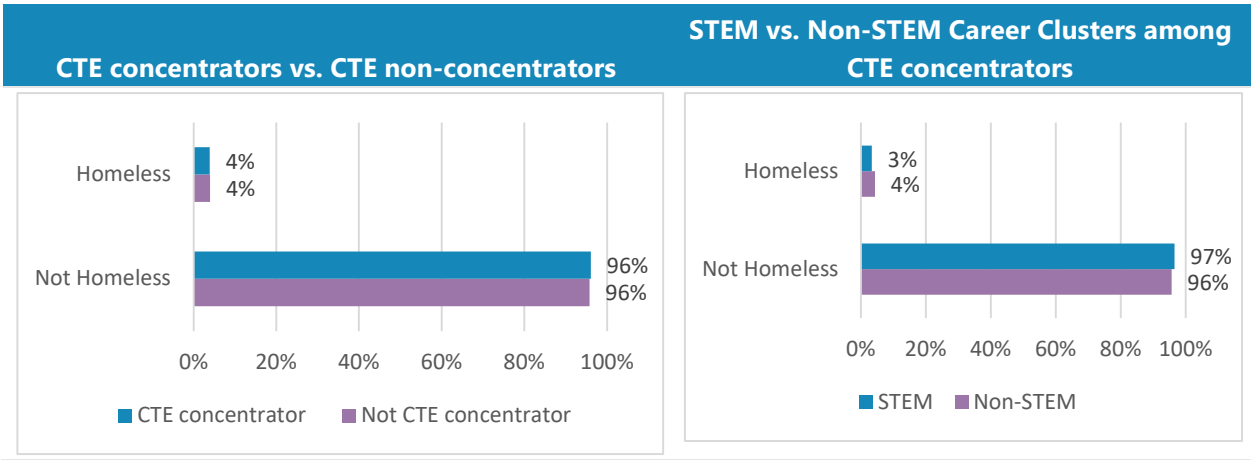
Figure 5: Multilingual Learning distribution by CTE concentration and STEM career cluster, 2014 to 2018



Students Experiencing Homelessness.

Figure 6 shows that students who experienced homelessness are equally distributed among CTE concentrators and CTE non-concentrators. The distribution of students who experienced homelessness in STEM and non-STEM career clusters matches the overall population of students which suggests no disparity in course enrollment in STEM and non-STEM career clusters.

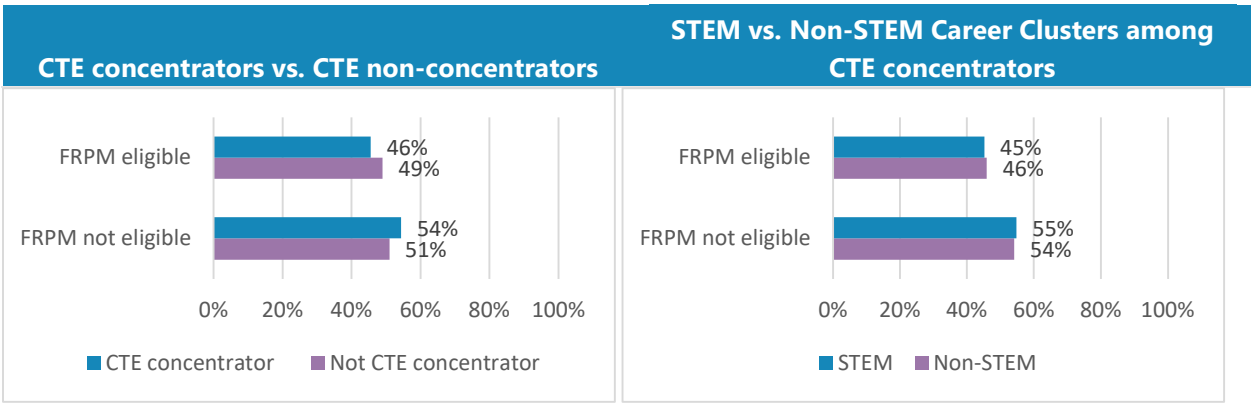
Figure 6: Students Experiencing Homelessness distribution by CTE concentration and STEM career cluster, 2014 to 2018



Students eligible for Free/Reduced Price Meals

Figure 7 shows that 46% of CTE concentrators and 49% of CTE non-concentrators sample are eligible for free or reduced-price lunch. Among the CTE concentrators, 45% of those satisfying a STEM career cluster are eligible for free or reduced-price lunch and 46% with a non-STEM career cluster are eligible for free or reduced-price lunch. Thus, a higher percentage of CTE non-concentrators are eligible for free or reduced-price lunch than the CTE concentrators. Among the CTE concentrators, a slightly lower percentage of students satisfying a STEM career cluster are eligible for free or reduced-price lunch (45%) than non-STEM career cluster (46%).

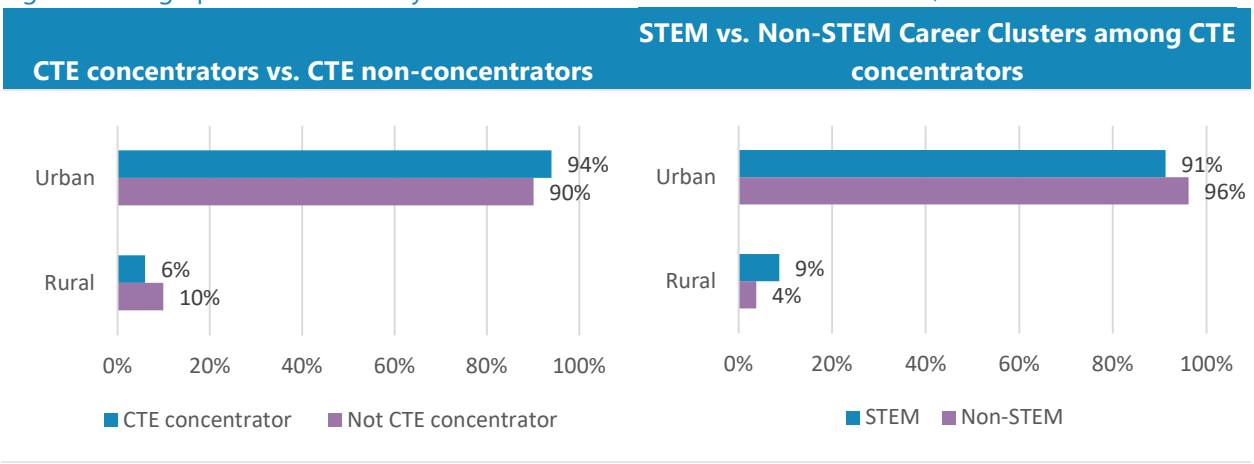
Figure 7: Students eligible for Free/Reduced Price Meals distribution by CTE concentration and STEM career cluster, 2014 to 2018



Geographic Locale.

Figure 8 shows that 6% of CTE concentrators are in a rural school district[8], and 10% of CTE non-concentrators are in rural school districts. Among the CTE concentrator sample, 9% of those satisfying a STEM career cluster are in rural school districts and 4% of those satisfying a non-STEM career cluster are in rural school districts. Thus, a higher percentage of students who are CTE non-concentrators are enrolled in schools in rural school districts than CTE concentrators, which matches the overall high school enrollment pattern. However, among CTE concentrators, a higher percentage of students enrolled in courses in the STEM career clusters are in rural school districts than in the non-STEM career clusters, which suggests students enrolled in rural school districts are overrepresented in the STEM career clusters.

Figure 8: Geographic distribution by CTE concentration and STEM career cluster, 2014 to 2018

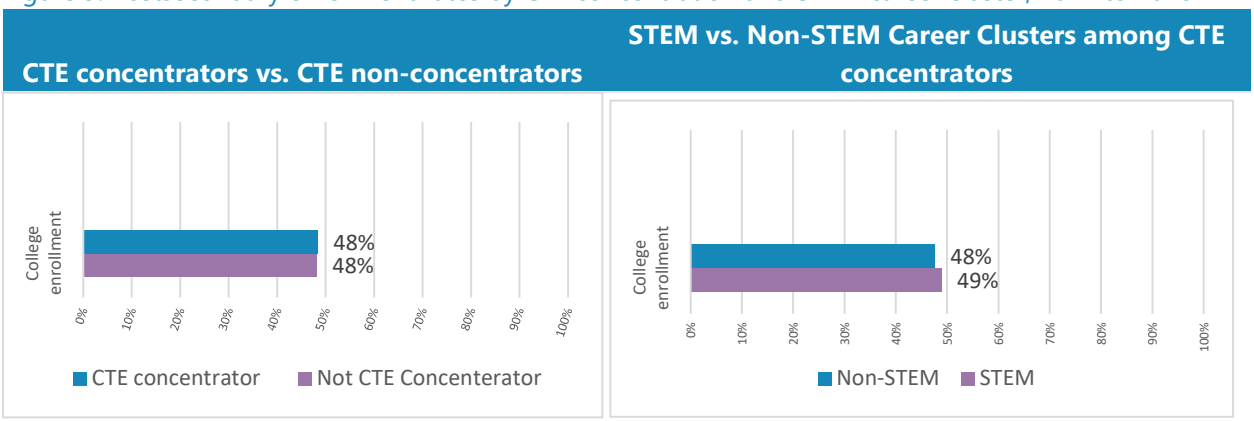


Postsecondary Enrollment Immediately following Graduation.

Figure 9 shows the rate of college enrollment in the fall after high school graduation for students in Washington State. The figure shows that the rate of college enrollment for CTE and CTE non-concentrator is the same (48%). The college enrollment for students who enrolled in the STEM career clusters is slightly higher (49%) than the college enrollment for students who enrolled in the non-STEM career clusters (48%).

[8] All territory, population, and housing units located outside of urbanized areas and urban clusters. Rural school districts in Washington are administrative districts that provide educational services in rural areas of Washington state. These are arbitrarily defined as school districts with enrollments of less than 1,000 students and no more than three schools.

Figure 9: Postsecondary enrollment rates by CTE concentration and STEM career cluster, 2014 to 2018



Participation in Apprenticeship Programs.

The apprenticeship participation rate is only 1% for all student groups including CTE concentrators, CTE non-concentrators, STEM and non-STEM career clusters. The data suggest that the apprenticeship participation follows the course enrollment pattern in both STEM and non-STEM career clusters.

What did we learn from this study?

This study provides a descriptive analysis of Washington State high school CTE concentrators by career cluster. This study pays a particular attention to student demographic characteristics in STEM versus non-STEM career clusters and further investigates whether they attended college or participated in apprenticeship programs the year after high school graduation. There were no notable differences in student characteristics of CTE concentrators in STEM and non-STEM course enrollment except for gender and race and ethnicity.

This study indicates that CTE concentrators satisfying a STEM career cluster included substantially greater male than female participation (60% male, 40% female). In contrast, the non-STEM career cluster showed the reverse as females dominate non-STEM course enrollment (44% male, 56% female). Our findings on the underrepresentation of females in STEM career clusters are consistent with national data on female's under-enrollment in STEM courses (NCWGE, 2012; NWLC, 2007). Female and male distribution in CTE career clusters is much like gender distribution in the labor market. The U.S. Bureau of Statistics (2015) shows that females are overrepresented in lower-paying occupations. There tends to be fewer women in STEM occupations that often have higher salaries than non-STEM occupations (NCWGE, 2012; NWLC, 2007).

Concerning race and ethnicity, Black (8%) and Asian (4%) students were equally distributed among CTE concentrators and CTE completers who were not concentrators. However, when we limit our focus to STEM programming among CTE concentrators, Black students are underrepresented in the STEM career cluster. These racial and ethnic differences in STEM course enrollment are consistent with Fletcher's study (2012), indicating that Black students are less likely to be employed in STEM fields than other races. Our findings indicate that the proportion of students identifying as Asian is higher in the STEM career cluster

than non-STEM career cluster. These outcomes are consistent with Laird, Alt, & Wu study (2009), suggesting that Asian students are more likely to attend STEM courses in high school than students from other racial groups.

Students can only take CTE coursework if it is available in high school. Thus, our study also includes an analysis of CTE course enrollment in high schools located in urban and rural areas. Our findings indicate that only 6% of CTE concentrators in high schools are in rural areas, while 94% of CTE concentrators in high schools are in urban areas. Rural students constitute 9% of students who satisfied a STEM career cluster. 91% of students who satisfied a STEM career cluster are from urban areas.

This study did not investigate the CTE participation in each school separately to find the gender and racial/ethnicity differences within each school. Availability of CTE courses and STEM courses could vary across schools and drive observed gender, racial and ethnic differences. For example, as mentioned above, students in rural districts are disproportionately represented in the STEM cluster group. It is possible that racial and ethnic differences in STEM course enrollment are based on the school's location and demographics rather than the student's interest in STEM or non-STEM career clusters. Additional research is needed to determine whether the results are different if consider the distribution of CTE and STEM courses across schools.

This study compared the outcomes of STEM and non-STEM career clusters and did not investigate 16 different CTE courses offered under STEM and non-STEM career cluster separately (see Table 1). Thus, it seems necessary to investigate the student characteristics in all 16 CTE pathways separately to understand Washington State CTE programs better.

This study also investigates the rate of college enrollment and apprenticeship participation among CTE and CTE non-concentrators. The findings of this study do not indicate any differences in college enrollment between CTE and CTE non-concentrators (48%). Among CTE concentrators, the college enrollment rate for those students who satisfied a STEM career cluster (49%) is only one percentage point higher than that for those who satisfied a non-STEM career cluster (48%). The apprenticeship participation for all study groups is as low as 1%.

The study does not examine CTE career clusters and labor market participation to analyze the employment and earning the status of CTE concentrators after high school graduation. This is an important area for future studies as CTE programs aim to lead to social mobility and decrease inequity in the labor market and earning distribution. Thus, additional research is needed to determine if Washington State's CTE programming enhances students' chances in the labor market.

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Appendix A: Definition of measures

FRPM eligible- a student who, at any point since the 2011 school year, was eligible for free- or reduced-price meals.

Gender- the gender reported with the student's first high school enrollment record

Homeless- a student who was considered homeless as defined in McKinney-Vento Act, Section 725(2) at any point during high school.

Multilingual learner- a student who, at any point since 2011 to 2015 school year, received State Transitional Bilingual Instruction Program services, excluding Title III services for American Indian/Native Alaskan students.

Race and ethnicity- the race and ethnicity reported with the student's first high school enrollment record**.**

Special education- a student who, at any point since 2011 to 2015 school year, received special education and other disability-related services.

Urban- all territory, population, and housing units located within urbanized areas and urban clusters. Urban Cluster (UC) is densely settled area that has a census population of 2,500 to 49,999. A UC generally consists of a geographic core of block groups or blocks that have a population density of at least 1,000 people per square mile, and adjacent block groups and blocks with at least 500 people per square mile. A UC consists of all or part of one or more incorporated places and/or census designated places; such a place(s) together with adjacent territory; or territory outside of any place. See central place, extended place, urban, urbanized area.

Appendix B: Tables

Table 3: CTE concentration and STEM career cluster, 2014-2018

		CTE non-concentrators	CTE concentrators	STEM	Non-STEM
CTE/STEM		25,028 12.3%	178,389 87.7%	81,525 40.1%	96,862 47.6%
Gender	Female	12,097 48.3%	86,468 48.5%	32,496 39.9%	53,972 55.7%
	Male	12,931 51.7%	91,921 51.5%	49,029 60.1%	42,890 44.3%
Race/Ethnicity	White	15,037 60.1%	111,738 62.6%	50,582 62.0%	61,154 63.1%
	Asian	1,107 4.4%	7,276 4.1%	2,550 3.1%	4,726 4.9%
	Hispanic/Latino	5,296 21.2%	31,059 17.4%	15,220 18.7%	15,839 16.4%
	Black	1,872 7.5%	14,501 8.1%	7,476 9.2%	7,025 7.3%
	American Indian or Alaska Native	300 1.2%	1940 1.1%	957 1.2%	983 1.0%
	Native Hawaiian and Other Pacific Islander	150 0.6%	1480 0.8%	448 0.5%	1032 1.1%
	Two or more races	1264 5.1%	10,393 5.8%	4291 5.3%	6102 6.3%
Homelessness		1,053 4.2%	6,915 3.9%	2,790 3.4%	4,125 4.3%
FRPM		12,255 49.0%	81,327 45.6%	36,854 45.2%	44,471 45.9%
Special Education		2,575 10.3%	17,215 9.7%	7,767 9.5%	9,448 9.8%
Multilingual learner		1,266 5.1%	7,322 4.1%	3,800 4.7%	3,522 3.6%

		CTE non-concentrators	CTE concentrators	STEM	Non-STEM
Geographic	Rural	2,480	10,773	7,058	3,714
		9.9%	6.0%	8.7%	3.8%
	Urban	22,546	167,614	74,466	93,147
		90.1%	94.0%	91.3%	96.2%
College Enrollment		12,106	85,993	39,897	46,096
		48.4%	48.2%	48.9%	47.6%
APP-Participation		273	1,691	1,021	670
		1.1%	0.9%	1.3%	0.7%