UNITED STATES

Career Technical Education (CTE) Profile

NAPE
National Alliance for Partnerships in Equity Education Foundation

Career and Technical Education

CTE provides secondary and postsecondary students with academic and technical skills and knowledge to prepare for the current and future workforce. The federal legislation that funds CTE, the Carl D. Perkins Career and Technical Education Act, was most recently reauthorized in 2018 as the Strengthening Career and Technical Education Act for the 21st Century (Perkins V).

With the reauthorization of Perkins, CTE is well positioned to fulfill the provisions of next-generation education and workforce legislation (current and proposed) such as the Higher Education Act, Workforce Innovation and Opportunity Act (WIOA), and Cybersecurity Skills Integration Act, as well as important advances in industry such as apprenticeships, automation, and artificial intelligence, which aim to ensure the United States' global competitiveness.

To realize our business, economic, and human potential, we must close equity gaps by gender, race and ethnicity, and special population status (see p. 4) in high-skill, high-wage, in-demand programs and programs of study. This CTE Profile summarizes key data that can support this effort across the country.

High-Skill, High-Wage, In-Demand: Middle Skill and STEM Jobs

The pipeline to middle-skill and STEM jobs loses young people at every level of the education system. Thus, the supply of sufficiently trained workers will not meet the demand of key industries.

Fast Facts for the United States

From 2017 to 2027…

Computing jobs will grow by **14%**.[1]

Engineering jobs will grow by **7%**.[1]

Advanced manufacturing jobs will grow by **12%**.[1]

And…

49% of working families below 200% of poverty level with no postsecondary experience.[2]

39% of students who enter an associate's degree program graduate within 6 years.[1]

62% of students who enter a bachelor's degree program graduate within 6 years.[1]

Good Jobs That Pay without a BA in the United States (2015)[3]

The Georgetown Center for Education and the Workforce explored the job market for workers with postsecondary credentials up to and through an associate's degree and focused on good jobs that provide family-sustaining wages. The Center's findings include the following:

- *"There are 30 million jobs that pay for workers without a BA.*
- *These good jobs pay an average of $55,000 per year.*
- *Shifts in the economy have offset the losses of good jobs in blue-collar sectors with new good jobs in skilled-services industries.*
- *Whites still have the largest share of good jobs, even though their share has declined. Latinos have experienced the largest share of good jobs. There has been little growth for African Americans.*
- *Across postsecondary pathways, for the next 55 million job openings (until 2020): 35% will require at least a bachelor's, 30% will require some college or an associate's degree, and 35% will not require education beyond high school."*

NAPE has prepared a CTE profile for each state, with number of jobs, percentage of non-BA workers, and median earnings for the Top 5 industries and occupations in the state. See napequity.org/profiles.

Skills Equity Policies That Expand Access to Middle-Skill Jobs[4]

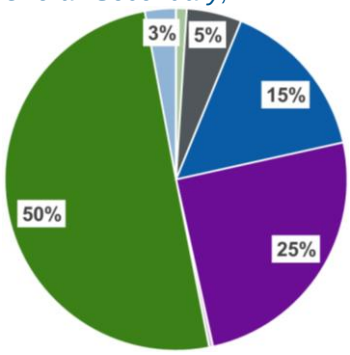
The National Skills Coalition has identified policies that can "expand equitable access to middle-skill training, credentials, and careers—particularly for those who have faced barriers to economic opportunity."[4]

The policies are…	No. of states with these policies in place
Integrated education and training	18
Stacked credentials	19
Job-based financial aid	24
Alignment of these elements in a single policy	12

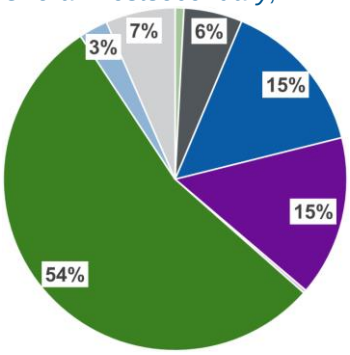
Enrollment and Equity Gaps in the United States

Overall and CTE Participant Enrollment by Race and Ethnicity

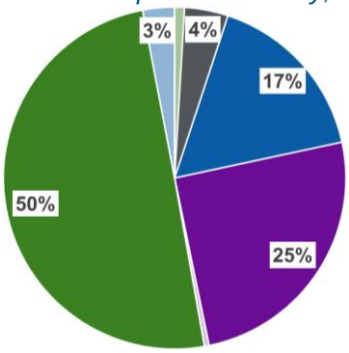
Overall Secondary, FY17[5]



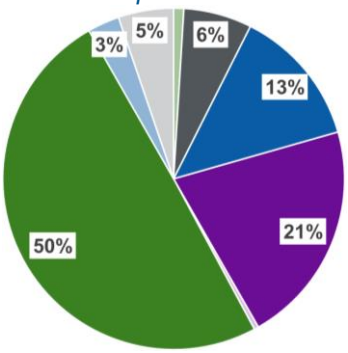
Overall Postsecondary, FY14[6]



CTE Participant Secondary, FY17[7]



CTE Participant Postsecondary, FY17[7]



American Indian/Alaska Native (AI/AN)

Asian or Asian/Pacific Islander

Black/African American

Hispanic/Latino

Native Hawaiian or Other Pacific Islander (NHOPI)

White

Two+ Races

Unknown

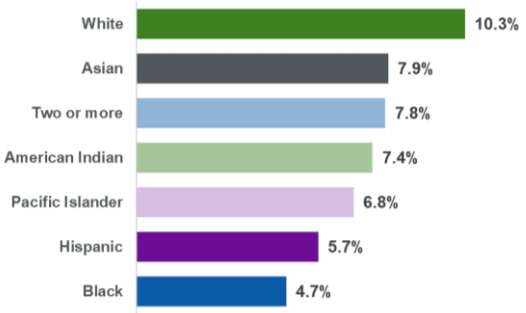
Percentages < 3% are not shown.

Participant = A student who has earned 1 or more credits in any CTE program area.

Participation in Dual Enrollment by Student Group (FY16)[8]

The Community College Research Center reports that dual enrollment is positively related to many positive outcomes, including college enrollment and persistence, greater credit accumulation, and higher college GPA.[9]

Percentage of students within a student group that participates in dual enrollment in the U.S.



The Education Commission of the States reports that the "research makes clear that CTE dual enrollment improves outcomes for traditionally underserved students." CTE dual enrollment students, particularly low-income and male students, are more likely to earn a high school diploma, enroll in a bachelor's program, and enroll in college full time. Dual enrollment allows students to try out different career paths, which increases engagement and success.[10]

Nontraditional Performance Indicators[7]

Under Perkins IV, states reported on the participation and completion of students in nontraditional programs of study, which are defined as leading to occupations in which less than 25% of a particular gender is employed.[4] In Perkins V, these data will be reported for CTE concentrators (i.e., secondary students who have completed two courses in a CTE program or program of study and postsecondary students who have earned at least 12 credits within a CTE program or program of study or completed such program if less than 12 credit hours total).

Many high-skill, high-wage, in-demand jobs provide family-sustaining wages, yet there are still major disparities by gender and race/ethnicity.

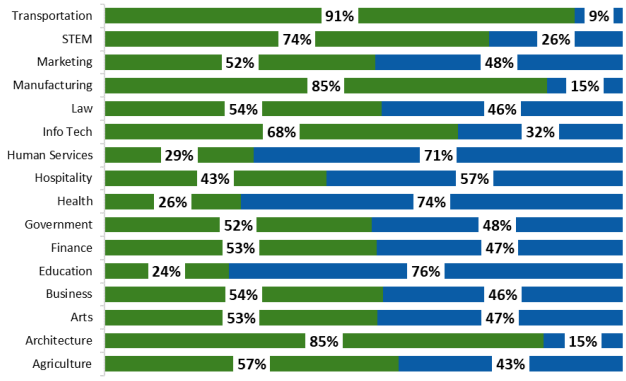
NAPE has prepared a CTE profile for each state, which provides the FY17 indicators for secondary and postsecondary completion, by gender and race/ethnicity. See napequity.org/profiles.

Concentrator Enrollment[7]

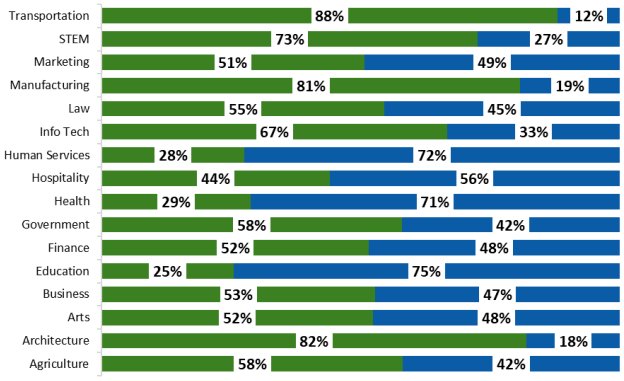
Of the 16 career clusters in CTE, 7 lead to high-skill, high-wage, in-demand STEM-related careers (Agriculture, Architecture, Health, Information Technology, Manufacturing, STEM, and Transportation, Distribution, and Logistics) and include programs that prepare students for nontraditional careers. Six of these clusters have a preponderance of programs that lead to nontraditional careers for women, and Health Sciences has many programs that lead to nontraditional careers for men. (= male, = female)

Secondary

FY17

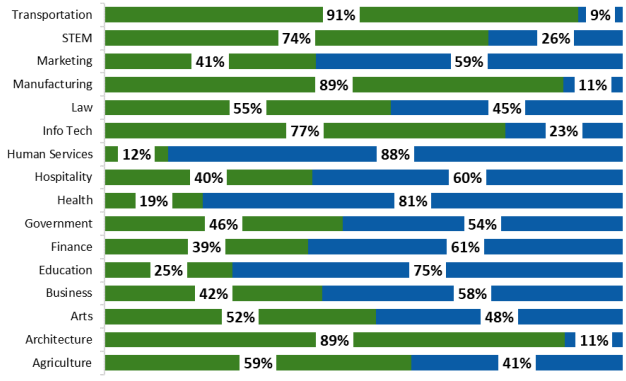


FY16

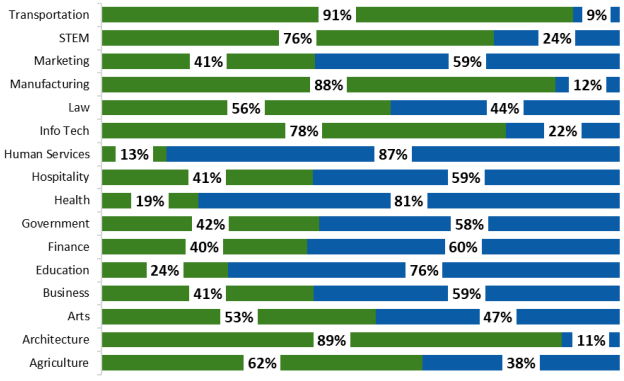


Postsecondary

FY17



FY16



Perkins V

Perkins V requires alignment of secondary and postsecondary education with business and industry needs and focuses on high-quality programs leading to high-skill, high-wage, in-demand careers in the region and state. States are required to engage a broad group of stakeholders to develop state and local plans to implement Perkins V. This process entails periodic equity gap analyses at the state and local levels to identify and address disproportionality and equity gaps for students based on gender, race and ethnicity, and special populations (defined below). Funds must be devoted to addressing and closing those gaps to ensure equitable access, inclusion, and outcomes.

The Equity Provisions in Perkins V…

- Increase targeted resources for special populations
- Require reporting of core indicators by gender, race, and special population status
- Require use of funds for career exploration and awareness
- Provide funding flexibility to states to close equity gaps
- Require use of funds to meet the needs of special populations
- Require states and locals to conduct an equity participation and performance gap analysis

Special Populations

Perkins IV	***Perkins V***
Individuals with disabilities	Individuals with disabilities
Individuals from economically disadvantaged families, including foster children	Individuals from economically disadvantaged families, including low-income youth and adults Youth who are in, or have aged out of, the foster care system
Individuals preparing for nontraditional fields	Individuals preparing for nontraditional fields
Single parents, including single pregnant women	Single parents, including single pregnant women
Displaced homemakers	Out-of-workforce individuals
Individuals with limited English proficiency	English learners
	Homeless individuals
	Youth with a parent who is a member of the armed forces and is on active duty

U.S. Department of Education

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Notes

Please refer to the following sources for the data reported in this fact sheet:

1. Education Commission of the States at http://vitalsigns.ecs.org/; 2. Working Poor Families Project at http://www.workingpoorfamilies.org/indicators/#; 3. Georgetown Center on Education and the Workforce, *Good Jobs That Pay without a BA* (2017), at https://goodjobsdata.org/wp-content/uploads/Good-Jobs-wo-BA.pdf (most recent data are for 2015) and *Recovery: Job Growth and Education Requirements through 2020* (2013), at https://cew.georgetown.edu/cew-reports/recovery-job-growth-and-education-requirements-through-2020/; 4. National Skills Coalition at https://www.nationalskillscoalition.org/resources/publications/file/Scan-Summary-Final.pdf; 5. National Center for Education Statistics, ELSI Table Generator, at https://nces.ed.gov/ccd/elsi/tableGenerator.aspx;
6. National Center for Education Statistics at https://nces.ed.gov/Datalab/TablesLibrary/TableDetails/12282?dataSource=IPEDS&ipedsSubject=3&ipedsYear=127&subjectId=3&topicId=6&rst=true, most recent data are for FY14; 7. Perkins Data Explorer at https://cte.ed.gov/; 8. Community College Research Center at https://ccrc.tc.columbia.edu/easyblog/access-dual-enrollment-advanced-placement-race-gender.html ; 9. Community College Research Center at https://ccrc.tc.columbia.edu/media/k2/attachments/dual-enrollment-research-overview.pdf; 10. The Education Commission of the States at https://www.ecs.org/clearinghouse/01/11/50/11150.pdf.