



CTE WORKS!



CTE Works for High School Students

- The average high school graduation rate in 2018 for CTE concentrators was 94%, compared to the national adjusted cohort graduation rate of 85%. (Perkins Collaborative Resource Network, customized Consolidated Annual Report data; U.S. Department of Education, Office of Elementary and Secondary Education, Consolidated State Performance Report, 2010-11 through 2017-18)
- CTE is associated with reduced rates of dropout and higher rates of on-time graduation, particularly CTE courses taken in 11th and 12th grades. (Gottfried and Plasman, Linking the timing of CTE coursetaking with high school dropout and college-going behavior, *American Educational Research Journal*, 2017)
- Arkansas high school students with more exposure to CTE are more likely to graduate, enroll in a two-year college, attain employment and earn higher wages and are just as likely to pursue a four-year degree as their peers. (Dougherty, *CTE in high school: does it improve student outcomes?*, Thomas B. Fordham Institute, 2016)
- CTE high school students in Florida who earn an industry certification are more likely to graduate on time, enroll in postsecondary education and earn higher wages. (ExcelinEd and Burning Glass, *Where the Credentials Meet the Market*, 2019)
- Employers overwhelmingly say that the most valuable employee skills are soft or employability skills such as professionalism, teamwork and

written and oral communication. The blend of technical, academic and employability skills that CTE programs provide best prepare students for fast-growing and high-earning jobs. (Orrell, *STEM without fruit: How noncognitive skills improve workforce outcomes*, American Enterprise Institute, 2018)

- CTE students and their parents are three times more likely to report being "very satisfied" with the real-world learning component of their education than non-CTE students and parents. (Advance CTE, *The Value and Promise of CTE: Results from a National Survey of Parents and Students*, 2017)
- Advanced CTE coursetaking in high school is associated with higher wages. Workers see a 2% wage increase for each upper-level CTE course taken. (Kreisman and Stange, *Depth over breadth: The value of vocational education in U.S. high schools*, *EducationNext*, 2019)

CTE Works for Postsecondary Students and Adults

- There are about 30 million "good jobs" —jobs that pay a median income of \$55,000 or more and require education below a bachelor's degree. Postsecondary CTE programs enable many people to earn associate degrees, postsecondary certificates and industry credentials that qualify them for these good jobs. (Georgetown University Center on Education and the Workforce, *Good Jobs*

that Pay Without a BA, 2017; Georgetown University Center on Education and the Workforce, *Three Educational Pathways to Good Jobs: High School, Middle Skills, and Bachelor's Degree*, 2018)

- About 17 million workers nationwide use science and engineering expertise and technical knowledge, which can be gained through postsecondary CTE programs, in their occupations, but do not possess a bachelor's degree. (National Science Board, *Science and Engineering Labor Force*, Science & Engineering Indicators 2020, 2019)
- Individuals with associate degrees in CTE fields can earn up to \$10,000 more per year than those with associate degrees in other fields. (Georgetown University Center on Education and the Workforce, *The Overlooked Value of Certificates and Associate's Degrees*, 2020)
- Shorter term CTE credentials can be as valuable as bachelor's degrees. According to research in Texas, Colorado and Virginia, graduates with technical or applied science associate degrees out-earn bachelor's degree holders by \$2,000 to \$11,000. This is a high return on a modest investment—average tuition and fees for U.S. public two-year institutions are less than half of tuition and fees for four-year colleges. (Schneider, *Higher Education Pays*, College Measures, 2013; College Board, *Average published undergraduate charges by sector*, 2019–20)
- Adults who complete Washington State's Integrated Basic Education and Skills Training (I-BEST) program, which teaches basic skills in a CTE context, are significantly more likely to enroll in college courses, complete core college math and English classes and earn twice as many college credits than those in other basic skills programs. (Pathways for Advancing Careers and Education, *Washington State's I-BEST Program in Three Colleges: Implementation and Early Impact Report*, 2018)

CTE Works for Businesses and the Economy

- Occupations in the skilled trades, information technology, sales and marketing, driving and logistics, construction, customer support and health care are some of the top jobs employers are having trouble filling in the United States. CTE plays a critical role in training workers in these areas. (ManpowerGroup, *Talent Shortage 2020: U.S. Data Edition*, 2020)
- The skills gap may leave an estimated 2.4 million manufacturing jobs unfilled between 2018 and 2028, while many of the almost 17.2 million workers employed in infrastructure jobs are nearing retirement. (Deloitte and The Manufacturing Institute, *The Skills Gap and Future Work Study*, 2018; Kane, *Aging and in need of attention: America's infrastructure and its 17 million workers*, *The Avenue*, 2019)
- Many of the 30 million good jobs available without a bachelor's degree are found in the skilled trades, health care and hospitality. (Georgetown University Center on Education and the Workforce, *Good Jobs that Pay Without a BA*, 2017)
- Communities across the nation benefit from CTE. Oklahoma's economy reaps a net benefit of \$3.5 billion annually from graduates of the CareerTech System. Wisconsin taxpayers receive \$12.20 in benefits for every dollar invested in the technical college system. Colorado Community College System alumni in the workforce contribute \$5.1 billion annually to the state economy. (Snead, M. C., *The Economic Contribution of CareerTech to the Oklahoma Economy: Cost-Benefit Analysis of Career Majors (FY11)*, 2013; Wisconsin Technical College System, *The Technical College Effect*, 2016; Colorado Community College System, *Fact Sheet: The Economic Value of the Colorado Community College System*, 2017)