



CTE WORKS!



CTE Works for High School Students

- A ratio of one CTE class for every two academic classes minimizes the risk of students dropping out of high school. (Plank et al., *Dropping Out of High School and the Place of Career and Technical Education*, National Research Center for CTE, 2005)
- The more students participate in Career Technical Student Organization activities, the higher their academic motivation, academic engagement, grades, career self-efficacy, college aspirations and employability skills. (Alfeld et al., *Looking Inside the Black Box: The Value Added by Career and Technical Student Organizations to Students' High School Experience*, National Research Center for CTE, 2007)
- CTE concentrators improved their 12th grade NAEP scores by eight points in reading and 11 in math, while students who took no CTE courses did not increase their math scores and only increased reading by four points. (Department of Education, *National Assessment of Vocational Education*, 2004)
- Students at schools with highly integrated rigorous academic and CTE programs have significantly higher achievement in reading, mathematics and science than do students at schools with less integrated programs. (Southern Regional Education Board, *Linking Career/Technical Studies to Broader High School Reform*, 2004)

- CTE students were significantly more likely than their non-CTE counterparts to report that they had developed problem-solving, project completion, research, math, college application, work-related, communication, time management and critical thinking skills during high school. (Lekes et al., *Career and Technical Education Pathway Programs, Academic Performance, and the Transition to College and Career*, National Research Center for CTE, 2007)
- In a 2006 report for the Gates Foundation, 81 percent of respondents said that more learning opportunities that make the classroom relevant to the real world would have helped them to finish high school. (Bridgeland et al., *The Silent Epidemic: Perspectives of High School Dropouts*, Bill and Melinda Gates Foundation, 2006)

CTE Works for Adults

- Students in programs that blend basic skills and occupational training to generate more contextualized learning are far more likely than similar adult students to improve basic skills and earn college-level credits. (Jenkins et al., *Educational Outcomes of I-BEST, Washington State Community and Technical College System's Integrated Basic Education and Skills Training Program: Findings from a Multivariate Analysis*, CCRC Working Paper No. 16, 2009)
- Participation in skills-training programs increased wages and earnings, raised the probability and

consistency of employment, and led to work in higher-quality jobs. (Maguire et al., *Job Training That Works: Findings from the Sectoral Employment Impact Study*, Sectoral Employment Initiative: Public/Private Ventures (7), May 2009)

- CTE gives individuals in transition a way to begin a new career with a chance to reinvent themselves. MSNBC reported in March 2009 that many people who have been laid off during the economic crisis are taking this opportunity to go back to school and get retrained for a new career. CTE programs at the postsecondary level are poised to serve this population. (Wolk, *Reinventing America: Stories from the Front*, MSNBC, March 10, 2009, www.msnbc.msn.com/id/29496604)

CTE Works for Businesses and the Economy

- Skilled trade workers, engineers and IT staff are the top three jobs employers are having trouble filling in the U.S., and CTE can play a critical role in training workers in these areas. (Manpower Group, *Talent Shortage Survey Results*, 2012)
- More than 80 percent of respondents in the 2005 National Association of Manufacturers' Skills Gap Report indicated that they are experiencing a shortage of qualified workers overall—with 13 percent reporting severe shortages and 68 percent indicating moderate shortages. CTE plays a vital role in helping American business close this gap by building a competitive workforce for the 21st century. (National Association of Manufacturers and Deloitte Consulting LLP, *2005 Skills Gap Report: A Survey of the American Manufacturing Workforce*)
- Middle-skill jobs, jobs that require education and training beyond high school but less than a bachelor degree, are a significant part of the economy. Of the 46.8 million job openings created by 2018, 30 percent will require some college or a two-year associate degree. (Carnevale et al., *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, Georgetown University Center on Education and the Workforce, 2010)
- Occupations requiring an associate degree are projected to grow faster than those requiring a bachelor degree. (BLS, *Occupational Outlook Handbook, 2012-13 Edition*)
- By 2018, the U.S. will need at least 4.7 million new workers with postsecondary certificates, according to the Georgetown University Center on Education and the Workforce. (Carnevale et al., *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, Georgetown University Center on Education and the Workforce, 2010)
- A person with a CTE-related associate degree or credential will earn an average of at least \$4,000 more a year than a person with a humanities associate degree—and those with credentials in high-demand fields such as healthcare can average almost \$20,000 more a year. (Jacobson et al., *Pathways to Boosting the Earnings of Low-Income Students by Increasing Their Educational Attainment*, 2009)
- According to the state of Washington, for every dollar spent on secondary CTE students, taxpayers will receive \$9 back in revenues and benefits. (Washington State Workforce Training and Education Coordinating Board, *2011 Workforce Training Results*, 2011)
- According to the Georgetown University Center on Education and the Workforce, 43 percent of young workers with licenses and certificates earn more than those with an associate degree, 27 percent of young workers with licenses and certificates earn more than those with a bachelor's degree, and 31 percent of young workers with associate degrees earn more than those with a bachelor's degree. (Georgetown University Center on Education and the Workforce, *Valuing Certificates*, Presentation, 2009)
- In Virginia, graduates of occupational/technical associate degree programs out-earn non-occupational associate degree graduates by about \$6,000 and bachelor degree graduates by almost \$2,500 statewide. (Schneider et al., *The Earning Power of Recent Graduates from Virginia's Colleges and Universities*, College Measures, 2012)