

Back to School: Career Tech101

What is Career Technical Education?

Career technical education is an essential component of the total educational system in the United States. Career technical education provides students and adults with the technical skills, knowledge and training necessary to succeed in specific occupations and careers. It also prepares students for the world of work by introducing them to workplace competencies that are essential no matter what career they choose. And, career technical education takes academic content and makes it accessible to students by providing it in a hands-on context.

The U.S. Secretary of Education, Rod Paige, strongly supports more hands-on learning in America's schools. "I think that the emphasis [on hands-on learning] should be increased. In fact, I don't see the sharp delineation between the hands-on part and the academic part. I think it is closer together than we give credit for it being. Especially as we move forward and telecommunication picks up speed and we are going to be required to find some synergism between those 2 ideas." (U.S. Chamber of Commerce, April 4, 2002)

Where is Career Technical Education offered?

11,000 secondary schools currently offer career technical education courses. These schools vary from comprehensive high schools with career technical education programs to high schools solely devoted to career technical education, In fact, 66% of all public secondary schools have one or more career technical education programs with approximately 96 percent of high school students taking at least one career technical education course during their secondary studies. (National Center for Education Statistics [NCES])

Career technical education does not end with high school. Over 2,600 postsecondary sub-baccalaureate institutions, such as community colleges, technical institutes, skill centers, and other public and private colleges, also offer career technical education. (NCES).

For more information about career technical education in your state, visit the NASDCTEc web site list of state career technical education leaders.

What occupational areas are covered by Career Technical Education?

Career technical education has a broad range of course offerings, something for everyone! There are courses and programs that range from exploratory – helping you figure out where your strengths are and what interests you – to specific technical training. Many states organize their career technical education offerings around career clusters. Career clusters identify pathways from secondary school to postsecondary school, and the workplace, so students can have a smooth transition from high school to their next step in life, whether that is college and/or a career. Several years ago, the U.S. Department of Education organized

federal reporting requirements around the following 16 career clusters, which represent the breadth of programs areas that are part of CTE.

- Agriculture and natural resources
- Architecture and construction
- Arts, A/V Technology and communications
- Business and administration
- Education and training
- Finance
- Government and public administration
- Health science
- Hospitality and tourism
- Human services
- Information technology
- Law and public safety
- Manufacturing
- Retail/wholesale sales and services
- Scientific research and engineering
- Transportation, distribution and logistics

What is unique about Career Technical Education?

- **Relevancy:** Students often ask the question, ‘why do I need to know this?’ Career technical education answers the question by adding relevancy to rigorous coursework through methods such as contextual teaching and learning and applied academics. Because students see the relevance of what they are learning, they tend to be more engaged in their education. In fact, NCES reports that career technical education students are more likely to report that their schoolwork is meaningful, their courses are interesting, and that learning will always be an important part of their lives.
- **Secondary-postsecondary cooperation:** Career technical education has innovative programs that promote effective transitions between secondary and postsecondary education. For example, the Tech Prep program introduced in the federal Perkins legislation is a cooperative arrangement between secondary and postsecondary institutions to provide four years of advanced technical training. The result is a certificate or associates degree in a more advanced program that could not have been offered by the high school or college alone. There are opportunities for students to gain post secondary credit or advanced standing while still in high school, as well as take community college courses.
- **Accountability:** Today, accountability and assessment are the driving forces behind education reform. Career technical education pioneered a system of accountability to measure state, local and student achievement years before accountability was the buzzword in Washington. Career technical education has always had an accountability system with the employer community, making sure that students were prepared to meet the latest demands of the labor market. Career technical educators share as a goal and are committed to high-level academic preparation of all students.
- **Employer partnerships:** Long before the recent surge of business interest in education reform, career technical education has had employers at the table when designing programs, curriculum, etc. National partnerships with employers like Cisco and organizations like Automotive Youth Educational System (AYES) and the Hospitality

Business Alliance provide mutually beneficial opportunities for both educators and employers.

Career Technical Education: A partner in workforce development

Unfortunately, our nation's economy is jeopardized by the significant skills gap that exists today. Recent research by the National Alliance of Business (NAB) identified that nearly 40% of recent job applicants lack the skills necessary to perform the job they applied for. Economic growth is stifled by this skills gap. According to NAB, in 1993, 27% of businesses viewed the lack of skilled workers as a barrier to growth. In 1998, this number jumped to 70%. Better utilization and additional investment in our nation's career technical education system can help with these challenges and assure that our nation regains its footing on the path of economic success and growth.

Career technical education: A partner in economic development

Career technical education plays an important role in economic development. We hear from businesses around the country that the reason they have re-located to a particular state is because of the quality of its career technical education system. Companies like BMW in Alabama and South Carolina and Ciba in Georgia considered the quality and capabilities of the state's career technical education system as a critical factor in their decision to re-locate or build in that state. Career technical education provides education and training for new employees and upgrading of skills for current employees. With the rate and pace of technological change, the partnership between these businesses and the career technical education community is critical to a company's bottom line and our national economic health.

Career technical education: A partner in ensuring No Child Is Left Behind

No Child Left Behind is built on four principles that state directors feel career technical education compliments:

Closing the Achievement Gap: With the passage of Perkins III, Congress changed the expectations for the career technical education community by requiring that career technical education students be held to the same academic standards as all other students. This sea change in policy, whereby career technical education was no longer viewed as a second chance educational system but a partner in the first chance system, was applauded and embraced by state directors. Building on efforts to increase the integration of academic and career technical education coursework, career technical education has been successful in impacting student academic achievement.

- In President Bush's home state of Texas, career technical students increased their TAAS scores by over 90% from 1994 to 2001, while traditional academic students only increased their scores by 48%.
- There is evidence that minority students in career technical education programs are making progress in closing the achievement gap. Between 1996 and 1999, minority

students involved in schools that are part of the High Schools That Work network increased their math performance by 20 points (from 267 to 287). In addition, average academic achievement scores improved in reading, math and science.

While states are making great strides, the achievement gap persists. Career technical education is a committed partner in closing this achievement gap and ensuring that all students have the academic foundation necessary for success in post secondary education and careers.

Focusing on What Works: Career technical education believes strongly that we should focus our resources on programs that have proven track records. Some of the best secondary reform models find their roots in career technical education, such as High Schools That Work, career academies, smaller learning communities, and theme-based high schools. In fact, a 1999 *Education Week* article highlights that High Schools That Work was one of only two reform initiatives that had strong evidence of positive effects on student achievement.

Reducing Bureaucracy, Increasing Flexibility: Perkins III was a step in the right direction. The federal legislation focused on setting high expectations for achievement and relied on the expertise of the field to determine how to achieve their negotiated performance goals. This new flexibility was embraced by state and local career technical educators.

Increasing Options for Students: Career technical education is a diverse system, serving youth and adults at the secondary, postsecondary and adult levels. The system incorporates myriad occupational areas, as evidenced by the sixteen career clusters mentioned earlier. This diversity is a great strength when developing educational plans for students that learn in a variety of ways and have many interests.

Career technical education provides individuals with options in life. By providing students at the secondary level with everything from career guidance, information, and exploration to specific occupational training, students are prepared for careers and further education. Making good decisions about careers or post secondary education is enhanced by students having a plan for the career of their choice, which includes a solid understanding of the education and skills necessary to succeed in that field. In addition, we know that not all students transition directly from high school to post secondary education and some require the skills obtained in secondary programs to be able to support their post secondary education. Career technical education opens doors to students' minds, education and careers.

Is there a demand for Career Technical Education?

America needs skilled workers at an alarming rate, and this will only intensify in the coming years. Consider these facts:

- Since 1988, unskilled workers declined from 14.2% to 13.2% of the labor force, and will account for only 12.7% by 2010. (NAB)
- Skilled workers comprise 65% of the workforce, up from 45% in 1991. (BLS)
- In 1993, 27% of businesses viewed the lack of skilled workers as a barrier to growth. In 1998, this number jumped to **70%**. (NAB)

- By the year 2020, there could be a worker shortage of up to 10 million for skilled jobs. (NAM)
- Those in the skilled trades averaged an unemployment rate of 2% in 1999, almost half the rate the general workforce. (Embry-Riddle University)
- Since 1991, training budgets for businesses have increased twice as fast as the growth in private sector employment. (NAB)
- The workforce is aging: workers over 35 comprise over 60% of the workforce, and this trend will continue for the next 30 years (NAB). New workers will be needed to fill these positions as the current workforce retires.

How are Career Technical Education programs funded?

Each year, the federal government invests over \$1 billion in funding provided under the Carl D. Perkins Vocational and Technical Education Act Amendments of 1998 (P.L. 105-332). 62% of Perkins is spent to fund career technical education programs at the secondary level, 38% at the postsecondary level.

Despite receiving over \$1 billion annually from the federal government, Perkins funding has not kept pace with inflation or the needs of the community, and has realized a 19% decrease in *real dollars* over the last decade in funding (NCES Report 2000-068). In addition, costs for career technical education can be much higher than for traditional academic coursework. To try to make up for the increased costs of offering career technical education, state government leaders use a variety of funding formulas. More information can be obtained about state funding formulas from Financing Vocational Education.

How can you benefit from Career Technical Education?

Every **parent** wants their child to be successful. Success translates into many things; certainly a successful career equates to something that individuals find enjoyable and from which they receive appropriate compensation. Career technical education helps students identify their strengths, explore career options, and prepare for their chosen career areas. Career technical education also provides relevancy to what the student is learning in their academic coursework, often providing the incentive and motivation for a students to excel. Michael Kowloski, a parent in Virginia has seen it first hand, "My daughter was a moderately successful student in high school, but lacked the initiative and motivation needed to truly get ahead. She got excited about DECA, the Marketing Education career and technical student organization, and flourished while preparing a research project. Tylar learned a lot during the process, but most importantly, she finally connected effort with success. Now that revelation has begun to carry over into all aspects her life, both in and out of school."

For **students**, career technical education offers benefits to students pursuing careers requiring specific technical skills, as well as providing a strong foundation for those pursuing post secondary education. It is an integral part of the total educational mission, contributing to the goals of high academic achievement, student retention and motivation and the development of general workplace and life skills. Students participating in these programs are prepared to be successful in their next step in life, whether that is college, a career or both! Take Paul Johnson, a graduate from the Red River Vo-Tech air conditioning program, who is working for

an air conditioning and heating company before he goes on to become an engineer. Things didn't always look so bright for Paul who has a learning disability, and says, "I was told by some that I would never succeed in life, because I couldn't read," Johnson said. "This disability is not an excuse to get out of things. And, people who have disabilities usually have strengths in other places." Paul attributes his success to his experiences at Red River and hopes to go on and help other kids with disabilities succeed also.

Business leaders can be assured that students who receive career technical education are prepared to enter the workforce because it draws its curricula, standards, and organizing principles from the workplace. The workplace provides the context, objectives and organizing constructs for instruction and assessment. The workplace also defines the standards of performance necessary, including those required for academic, technical and employability skills. According to Gene Longo of Cisco Systems, "Career technical education bridges the gap between academics and the workplace. Students of career technical education consistently are prepared for the demands of a job and have the necessary skills of critical thinking and creative problem solving that many in the workforce sorely lack. I believe that a program of academics instruction combined with career technical education should be the cornerstone of our educational system."

We believe career technical education should be foremost in the minds of **policymakers** because it is a critical and integral component of the workforce development system, providing the essential foundation for a thriving economy. Society's economic engine is driven by a well-prepared, educated and qualified workforce. Preparation of that workforce requires solid academics, good work ethics and specific technical skills as well as the ability to communicate, work with others, solve problems and use information. Career technical education contributes directly to this preparation by providing a curriculum tied to specific workplace requirements. It enhances the interaction of education and work, bringing the benefits of real world problems and resources to the educational enterprise. Congressman Johnny Isakson (R-GA) makes the case for quality career technical education, "Today in the highly technological society we live in, a technical education whether it be from a college or through a good technical institution can be of immeasurable help for students. So I would encourage all of those who might be listening who are looking to go to the job market don't limit your horizons. Your college degree is important and I would never diminish it, but equally comparable is the importance of a technical degree today whether it is from a college or university or from a competent technical school" (June 24, 2002, National Public Radio).