

## **Career-Technical Education: Preparing college- and career-ready Ohioans to build economic vitality**

### **INTRODUCTION**

Ohioans agree that the key to a long-term, sustainably healthy economy is a workforce that is educated, skilled, and prepared for current and future careers.

For fifty years, the Ohio career-technical education system (CTE) has been consistently preparing young men and women for success in the workplace. CTE has done so through cutting-edge programs developed in partnership with business, industry, and other educational institutions.

High quality career and technical education can ensure Ohio's future competitiveness through increased student engagement; the innovative integration of math, science and literacy skills; and meeting the needs of both employers and the economy.

Career-technical education (CTE) prepares both high school youth and adults for a wide range of careers in the 21<sup>st</sup> century economy. These careers may require varying levels of education – from high school and postsecondary CTE certificates to two and four-year college degrees.<sup>1</sup>

While a continuing emphasis is being placed on getting more students to attend college, there is growing evidence that the state of the economy has changed people's approach to career paths, showing a renewed interest in CTE and community colleges. Larger numbers of students are seeking technical programs, certificates and two-year degrees as an entrée into today's and future job markets.

And, as state and national leaders search for the means to strengthen the current economy, recognizing CTE's role in economic development and viability is more important than ever.

For example, national organizations such as Partnership for 21<sup>st</sup> Century Skills have identified both skills and learning styles that will make graduates successful in business and industry. Because of the nature of career-technical education, many of those skills and learning styles—such as teamwork, hands-on learning, the ability to use technology as a tool, an understanding of the global economy and global issues, and others—have long been a part of CTE. Traditional schools are now working to integrate the classroom structures that have been common in CTE for decades.

Also, Ohio has taken a lead role in integrating secondary and postsecondary education, which helps to underscore the value of CTE in postsecondary education. In moving governance of the state's adult workforce development programs from the Ohio Department of Education to the Board of Regents, and by emphasizing collaboration

between secondary and post-secondary institutions, Ohio is validating the work done by CTE in creating pathways for students to continue their education after high school graduation.

Investing in CTE yields big returns. For example, in Washington State, for every dollar invested in secondary CTE programs, the state earns \$7.11 in additional tax revenues. In Connecticut, every public dollar invested in Connecticut’s Community Colleges returns \$16.40 over the course of the students’ careers. Connecticut’s economy annually receives roughly \$5 billion in income from the colleges and their students.<sup>2</sup> (For additional economic impact data, refer to the following page.)

The purpose of this white paper is to familiarize its readers with Ohio’s CTE system and emphasize its importance to Ohio’s economic recovery and sustainability.

## **SEVENTH GRADE AND BEYOND: CREATING A SMOOTH PATHWAY TO ACADEMIC AND CAREER SUCCESS**

Since its inception in the 1960s, Ohio’s CTE system has invested over 2 billion dollars in capital improvement funds to build, expand and maintain an infrastructure to serve the state’s workforce development and training needs.

CTE is unique among educational institutions, providing clear goals and pathways to the next level of success—and even, in many cases, offering a head start into the next level.

- **Career Exploration**

Students in Ohio’s schools learn about careers and explore a variety of options beginning in the seventh and eighth grades. For many of those students, career education is provided by one of 91 Career-Technical Planning Districts. At this age, they also learn about career-technical educational opportunities available during their high school years.

- **Secondary CTE**

Ohio has one of the most comprehensive and accountable systems of secondary career and technical education in the nation. Currently 600 individual school districts belong to one of 91 Career-Technical Planning Districts (CTPDs). CTPDs ensure that Ohio’s high school students are offered a wide variety of program options in 16 career fields, including:

- Agricultural and Environmental Systems
- Arts and Communications
- Business and Administrative Services
- Construction Technologies
- Education and Training

- Engineering and Science Technologies
- Finance
- Government and Public Administration
- Health Sciences
- Hospitality and Tourism
- Human Services
- Information Technology
- Law and Public Safety
- Manufacturing Technologies
- Marketing
- Transportation Systems

The CTPDs are comprised of 49 joint vocational school districts (JVSDs) and 42 comprehensive/compact school districts. According to data from the Ohio Department of Education, CTPDs served 127,085 secondary CTE students in 2008-2009.

CTE programs are developed to meet the current and future workforce needs of the communities served as well as the state and global markets. A close relationship with business and industry ensures that the curriculum is relevant to those needs.

These secondary CTE programs are designed to provide skills and, in many career fields, professional certification that will allow high school graduates to immediately enter the skilled workforce.

Through several options, those same graduates are also prepared to succeed in college.

- **College readiness**

Students in Ohio's career-technical programs prepare for college in a variety of ways.

First, strong academic classes at the career-technical centers allow students to continue the path begun during their first two years of high school. In its infancy, CTE focused primarily on career skills; in the 21<sup>st</sup> century, however, high-quality core academic classes allow those students to continue along an academic path even as they learn career skills. A typical school day includes half the day in a career lab and half the day in upper-level academic classes.

CTE students can also earn college credit before they even receive their high school diploma.

Dual enrollment programs provide students with the opportunity to take college-level courses at the career center. Upon successful completion, they receive high school credit as well as college credit that is transferable to any Ohio college or university.

Students can also earn articulated credit—college credit that is valid in specific programs in specific colleges, based on the career program taken at the secondary level. The goal of these programs is to provide an integrated pathway of education and experience that starts in high school, continues through both two- and four-year colleges and leads to success in a chosen technical career field.

One way this is done is through the Ohio College Tech Prep program, which prepares students for high skill, high demand careers such as information technologies, health care services and engineering in a competitive global economy, Ohio’s three fastest employment growth arenas.<sup>3</sup> According to Ohio Department of Education data, there were 22,989 secondary Tech Prep students in 2008-2009.

Another means of providing articulated college credit is through articulation agreements between the CTPD and colleges and technical schools. These agreements recognize that CTE students are doing college-level work in their career programs, and award the appropriate credit to those students who choose to complete the post-secondary work in that career field. It’s not uncommon for a CTPD to have dozens—or even hundreds—of articulation agreements with colleges and technical schools, providing students with a wide range of options for beginning post-secondary education at an advanced level.

- **Adult Workforce Education**

Adult Workforce Education (AWE) centers provide labor market-driven, post-secondary workforce education and training in 91 career-technical planning districts throughout the state. The centers are highly responsive and flexible in meeting the needs of employers to provide customized business services in training their incumbent workers. Services at local AWE centers include:

- Career guidance/counseling
- Comprehensive assessment services
- Financial aid assistance
- Employability/job readiness instruction
- Job placement assistance
- Short term training targeted toward high-skill, high-wage, high-demand occupations
- Training that leads to industry-recognized credentials
- Specialized services for employers

Adult Workforce Education Full-Service Centers (FSCs) provide Ohio business and industry a cost efficient, educationally sound way to train and upgrade the skills of their personnel.

During the 2008-2009 school year, AWE served the long- and short-term workforce training needs of 99,346 adults.

- **The Ohio Community College System**

As a complement to, and an extension of Ohio's 91 CTPDs, the state has 23 public community and technical colleges strategically located around the state, all of which have collaborative working relationships with CTPDs, College Tech Prep, and Adult Workforce Education.

These institutions typically offer five facets of education:

- **Transfer Education** – The traditional two-year student will then transfer to a four-year institution to pursue a BS/BA degree.
- **Career Education** – The traditional two-year student will graduate with an Associate Degree and directly enter the workforce.
- **Developmental Education** – Remedial education for high school graduates who are not academically ready to enroll in college-level courses.
- **Continuing Education** – Non-credit courses offered to the community for personal development and interest.
- **Industry Training** – Contracted training and education wherein a local company pays the college to provide specific training or courses for their employees.<sup>4</sup>

Total enrollment in Ohio's community college system as of the fall of 2007 was 177,106 with 109,928 being part-time status and 67,178 being full-time students.<sup>5</sup>

According to the Ohio Association of Community Colleges' research, the employment rate for Ohio Community college graduates who have earned an associate degree is projected to increase by nearly 19% over the next 10 years.

The graduation rate for science and math students attending Ohio's community colleges regularly outshines that of community colleges throughout the rest of the nation.

For example, 67% more engineering technology students graduate from Ohio community colleges than the national average and 26% more degrees are awarded in the health professions and related clinical services. Additionally, 90 percent of associate degree nursing students passed the 2005 Ohio Registered Nurse Exam.<sup>6</sup>

## **ACCOUNTABILITY FOR SUCCESS**

CTE in Ohio is a proven entity. For the past fifty years both federal and state rules and regulations have required that CTE be accountable for the dollars invested on its behalf. Subsequently, accountability has become a way of life for CTE and data are gathered and reported annually regarding its educational and employment related successes.

Workforce data show that CTE students are successful when they complete school. According to a 2001 Russell Sage Foundation study, CTE graduates are 10-15% more likely to be in the labor force, and earn 8-9% more than graduates of academic programs.<sup>7</sup>

Numerous research data over the years support the assertion that secondary CTE graduates, when compared to their cohort age group with similar characteristics, achieve employment quicker, work for longer periods of time, and earn significantly higher annual wages.

Furthermore, a 2004 National Assessment of Vocational Education Independent Advisory Panel found that CTE students completing the New Basics curriculum (4 years of English and 3 years each of math, science and social studies) rose from 19 percent to 52 percent.<sup>8</sup> And secondary CTE students who graduate with a career and technical education concentration are 2½ times more likely to be employed while pursuing postsecondary education than are “college prep” students, according to the Southern Region Education Board (SREB).<sup>9</sup>

From a community college perspective, 87 percent of the 2005 associate degree graduates were employed within Ohio, or attending college within the state, six months after their graduation. The average annual salary for 2005 Ohio associate degree graduates six months after their graduation was \$35,648. The comparable salary for bachelor degree graduates of Ohio four-year universities was \$33,218. This difference is largely attributable to the greater concentrations of associate degree graduates in high demand, high paying fields such as health and engineering.<sup>10</sup>

The number of employed persons trained through EnterpriseOhio Network two-year campuses on a noncredit basis totaled 164,805 in FY 2006. More than half of the 4,481 Ohio companies served were small businesses.<sup>11</sup>

For the sake of brevity, this paper will not elaborate further on the indicators of success associated with CTE at the secondary and postsecondary levels. Additional accountability data and information are available upon request.

## **CONCLUSION AND RECOMMENDATIONS**

As noted in the introduction, the purpose of this white paper is to familiarize its readers with Ohio's CTE system and emphasize its importance to Ohio's economic recovery and sustainability initiatives. While CTE does not stand alone as the answer to Ohio's economic vitality, it is certainly an important player in any ultimate policy considerations that aim toward a brighter employment and economic future.

CTE is a proven statewide system that is already in place and it boasts an ongoing legacy of success in addressing the state's workforce development requirements. The CTE system is aligned with Ohio's current and future workforce training and transitional worker needs, has a flexible and rapid response capability, and is cutting edge in responding to emerging technologies that could provide the stimulant to Ohio's economy.

- **Recommendations**

In view of Ohio CTE's proven track record and its statewide presence, the following recommendations are made for consideration by state political leaders and policy makers:

1. CTE is recognized as an efficient and effective vehicle for providing relevant education for the 21<sup>st</sup> century as well as entry level and incumbent worker training and retraining throughout the state.
2. CTE is perceived and marketed as an attractive economic development and worker training resource for the recruitment and retention of business and industry throughout Ohio.
3. CTE is given assurance of representation on statewide panels and commissions dealing with funding for public education.
4. CTE is given priority consideration in the allocation of federal/state funds directed toward workforce development and training initiatives.

## Footnotes

<sup>1</sup> *CTE's Role in American Competitiveness*. ACTE Issues Brief, October 2006.

<sup>2</sup> *Investing in CTE Yields Big Returns*. [acteonline.org](http://acteonline.org), CTE Research & Information, undated.

<sup>3</sup> Ohio College Tech Prep Website.

<sup>4</sup> *Community College*. Wikipedia.

<sup>5</sup> Ohio Board of Regents, October 2009.

<sup>6</sup> Ohio Association of Community Colleges. [CollegeBound.net](http://CollegeBound.net)

<sup>7</sup> Rosenbaum, J.E. *Beyond College for All*. New York: Russell Sage Foundation, 2001.

<sup>8</sup> *National Assessment of Vocational Education: Final Report to Congress*, 1994, p.94.

<sup>9</sup> Boesel, D., Hudson, L., Deich, S., and Masten, C. *National Assessment of Vocational Education Final Report to Congress, Volume II, Chapter Six, "Employment Outcomes."* Washington, D.C. US Department of Education, Office of Educational Research and Improvement, 1994.

<sup>10</sup> *Community College Facts*. Ohio Association of Community Colleges Website.

<sup>11</sup> *Ibid.*