

Career Technical Education: A Partner For Effective High School Reform

By Ramona Schescke

Over the last decade, high schools have taken center stage in the federal education policy debate. At the beginning of this debate, discussions centered on establishing rigorous academic standards and aligned assessment systems through No Child Left Behind (NCLB). As the debate matures, many stakeholders are looking to Career Technical Education (CTE) as a key partner. How and why CTE is at the table varies from state to state. At the federal level, the reauthorized Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) lays groundwork for establishing a more aligned and supportive relationship between academic and technical education. This brief highlights ways CTE can contribute to high school reform, as well as shares some of the legislative proposals the National Association of State Directors of Career Technical Education Consortium (NASDCTEc) is promoting be incorporated in any secondary school reform proposal.

What's so unique about CTE and how can it support student success?

CTE increases student engagement: Students often fail to see the connection between what they learn in high school and successful entry into postsecondary education and/or beginning a career.¹ CTE's contextual teaching model brings relevance to academic content and thereby engages and motivates students with real-world learning opportunities².

CTE is the intersection between rigorous academic, technical, and employability skills, resulting in capable, engaged, career-ready individuals.

CTE prepares students to be flexible, adaptive and have transferable skills: Today's economy requires not only academic and technical expertise but also "21st century skills."³ *Tough Choices or Tough Times*, a report released by the New Commission on the Skills of the American Workforce, states:

...candidates will have to be comfortable with ideas and abstractions, good at both analysis and synthesis, creative and innovative, self-disciplined and well organized, able to learn very quickly and work well as a member of a team and have the flexibility to adapt quickly to frequent changes in the labor market as the shifts in the economy become ever faster and more dramatic.⁴

CTE provides learners with important skills such as problem solving, teamwork, and the ability to locate and use information. CTE student organization programs such as FFA's *LifeKnowledge*[®],⁵ SkillsUSA's *Career Skills Education Program*,⁶ and DECA's *Senior Management Institute*⁷ help students master life skills not just for the workplace, but for application in all aspects of life.

CTE closes the skilled workforce gap and increases America's competitiveness: In today's global economy, where change is constant and highly skilled workers are the competitive advantage, America is falling behind.⁸ The vast majority of American manufacturers are experiencing a serious shortage of qualified employees, which in turn is having a significant impact on the ability of our nation, as a whole, to compete in the global economy.⁹ CTE is preparing our current and future workforce to be successful in these high demand, high skill careers. CTE achieves this by aligning programs to rigorous academic and technical content and preparing individuals for successful completion of recognized industry credentials and certifications.¹⁰

How can these positive aspects of CTE be translated into effective high school reform policy?

To demonstrate how CTE can contribute to reforming our nation's public education system, NASDCTEc has developed the following high school reform principles which translate the good things that CTE does into effective high school reform policy.

Increase the high school graduation rate.

A recent NCES report found that one out of every four students who start high school does not graduate with a high school diploma four years later.¹¹ The Urban Institute found that the graduation rate for the class of 2001 was 68 percent.¹² Clearly, these graduation rates are not acceptable and the policy debate rages about what to do to show a modest, let alone a bold, increase.

CTE has been proven to increase the graduation rate by providing students with relevancy to their education. On average, states report that 86 percent of CTE students graduate with a diploma. In *“Dropouts and Career and Technical Education,”* a study by the Center on Education and Training for Employment, it was found that the risk of dropping out was highest when students took no CTE courses and lowest when students completed three Carnegie units in CTE subjects for every four Carnegie units of academic subjects. In particular, a high-risk student with no CTE courses was about four times as likely to drop out as a high-risk student with a 3:4 CTE/academic course-taking ratio.¹³ And four out of five dropouts said that there should be more opportunities for real-world learning within the academic environment, including more experiential learning.¹⁴

Integrate academic and CTE curricula.

An integrated academic and CTE curricula offered through a program of study* as described in Perkins IV should be encouraged, recognized, and supported under NCLB. Teachers can work across subject matter disciplines to integrate curricula so that students experience real-world application of academic concepts.¹⁵ The *Math-in-CTE* study, conducted by the National Research Center for Career Technical Education, found that students who followed a CTE curriculum enhanced with mathematics outperformed their peers on math assessments, including college placement tests.¹⁶ These students did not take more math electives; they just took a course that applied math to a topic in which they already had interest and placed it within a framework of relevancy. A prior study under the former National Center for Research in Vocational Education supported the conclusions of the *Math-in-CTE* study as well:

We also found evidence for the effectiveness of integrating academic content into the vocational curriculum. Increases in the proportion of students within a school saying that their academic and vocational teachers were working together to improve their math skills were associated with gains for those schools in mathematics. Similarly, there was an increase in reading achievement in those schools for which there was an increase in the proportion of students who felt their academic and vocational teachers were working together to improve their reading and writing skills.¹⁷

Encourage accelerated learning programs, including dual and concurrent coursework.

Dual enrollment courses provide an opportunity for collaboration between secondary and postsecondary programs (fulfilling a purpose of Perkins IV) and give students a head start on their career.

Accelerated learning programs and strategies (e.g. advanced placement courses, dual/concurrent enrollment and Tech Prep programs) offer postsecondary credit for coursework taken while the student is still in high school. By eliminating duplication of course content, these accelerated learning opportunities streamline a student’s educational pathway across learner levels and result in significant savings in the cost of postsecondary education. Accelerated learning options help students make a smooth and successful transition into postsecondary education.

Dual enrollment increases academic performance and educational attainment of students,¹⁸ and gives students a head start on their career, playing a role in participants’ accelerated progress and success at earning college certificates and degrees.¹⁹ Washington has an accelerated program called *Running Start*, intended to provide 11th and 12th grade students a program option consisting of attendance at certain institutions of higher education and the simultaneous earning of high school and college/university credit.²⁰ The Washington State Board of Community and Technical Colleges reported that *Running Start* students complete more of the credits they

attempt, with better grades, than other recent high school graduates who are attending college, with education dollars saved by taxpayers, parents and students in 2005-06 estimated at more than \$71.3 million.²¹

Encourage states to align secondary graduation with postsecondary entrance requirements.

This alignment is critical to ensure reduction in postsecondary remediation and greater student success in completing postsecondary education. More than two-thirds of the states have begun to align standards to postsecondary and workplace expectations through Achieve’s ‘American Diploma Project,’ a coalition that includes 32 states.²² These states have taken concrete steps to align standards, raise graduation requirements and increase the value of the high school diploma so that all high school graduates are better prepared for postsecondary education and careers.²³ There are several ways that CTE can be a key partner:

- Including rigorous integrated or contextual courses that align with academic content standards offers increased pathways students can take to earning a diploma.
- Using programs of study to connect education to the relevant issues in students’ lives and to their goals for the future in a concrete way is exactly what is needed to keep them in school and learning.
- Technical honors diplomas that feature CTE endorsements add value to the standard diploma.
- Diplomas that include CTE coursework that aligns with industry expectations, building a bridge to future employment opportunities for students, hold greater value for students and their potential employers.²⁴

Furthermore, the price of remediation is high, costing students nearly \$1.4 billion in direct expenses and over \$2.3 billion in potential earnings if they are unable to complete their degrees due to remediation. Taxpayers provide about \$1 billion dollars a year to cover the direct and indirect instructional costs of remedial courses through subsidies community colleges receive from state and local governments.²⁵

Comprehensive career guidance, including career and academic counseling, should be offered no later than middle school, with support of a personalized graduation plan.

It is essential that parents and students are informed about options and expectations, including postsecondary entrance requirements, and employment options. In a Ferris State University study, 78% of students said that their parents were the top adult influence on their career decision-making, so parents must be prepared to discuss important career issues.²⁶

Counselors can identify personal skills, interests and abilities in students, thus offering CTE courses in a particular career pathway that align with the selection, development and achievement of a student’s career choice. **

Many organizations are supporting personalized graduation plans, to assist students, their families, and school personnel in charting the best course to achieve educational and career goals, and to increase engagement and achievement. ²⁷ Quality career guidance is needed at all stages of one’s working life, and the American School Counselor Association suggests developing and maintaining an academic and career plan starting in elementary grades. ²⁸ The States Career Clusters’ Initiative has developed sample [career pathway plans of study](#) to help students, parents and counselors to see that academic and technical coursework can be organized to ensure rigorous content, relevance in instruction and lead to myriad options including the workplace and advanced postsecondary studies.

Conclusion

As the education policy debate continues to evolve and the focus of the debate narrows in on specific strategies and interventions that work, CTE stands ready to be a key partner in reforming our nation’s public education system. CTE has many pedagogical and content contributions to offer. Federal policy must be crafted to remove barriers of collaboration between learner levels and systems and instead should encourage flexibility in how students learn and define their pathways to success. CTE creates positive outcomes for students and should be supported and encouraged in any federal policy focused on high schools.

Full endnotes can be found at www.careertech.org/uploaded_files/Career_Technical_EducationEndnotesLinks_0s.doc.

*Career and Technical Programs of Study described in section 122(c) (1) (A) of The Carl D. Perkins Career and Technical Education Act of 2006 (A) the career and technical programs of study, which may be adopted by local educational agencies and postsecondary institutions to be offered as an option to students (and their parents as appropriate) when planning for and completing future coursework, for career and technical content areas that--

- (i) incorporate secondary education and postsecondary education elements;
- (ii) include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, nonduplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education;
- (iii) may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and
- (iv) lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Endnotes

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 - ¹⁸ Krueger, Carl (2006). Education Commission of the States Policy Brief *Dual Enrollment: Policy Issues Confronting State Policymakers*.
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 - ²² Achieve, Inc. American Diploma Project Network.
 - ²³ Achieve, Inc. (2007). *Closing the Expectations Gap: An Annual 50-State Progress Report on the Alignment of High School Policies with the Demands of College and Work*.
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 - ** American School Counselor Association (2004). ASCA National Standards for Students. Alexandria, VA. The National Standards are part of the educational reform agenda for the school counseling profession. The ASCA's national standards: Academic Development, Career Development, and Personal/Social Development, lists one of the competencies under Career Development, as *Acquire Career Information*, and includes the indicator *Identify personal skills, interests and abilities and relate them to current career choice*.