



**WRITTEN TESTIMONY OF  
THE NATIONAL ASSOCIATION OF STATE DIRECTORS OF CAREER TECHNICAL  
EDUCATION CONSORTIUM  
ON THE REAUTHORIZATION OF THE  
CARL D. PERKINS CAREER AND TECHNICAL EDUCATION ACT**

Hearing on “Preparing Today’s Students for Tomorrow’s Jobs: A Discussion on Career and Technical Education Training Programs.”

Thank you for the opportunity to share my thoughts on Career Technical Education, or CTE. As the Deputy Commissioner of Education in Vermont, I am responsible for our innovation and transformation agenda, with particular focus on CTE, including standards, assessments, accountability, educator quality, school effectiveness, Federal programs, and public assurance of our State education system.

This year, I also have the honor of serving as the President of the National Association of State Directors of Career Technical Education Consortium. Established in 1920, the Consortium serves as the professional society of state and territory agency heads responsible for public CTE at the secondary, postsecondary, and adult levels in all fifty states, five U.S. territories, and the District of Columbia.

As you take up the important work of reauthorizing the federal investment in Career Technical Education, I appreciate the opportunity to share insights based not only upon my experiences in Vermont, but on those of my colleagues across the country. The federal investment in CTE is vitally important and has been, and continues to be, a major driver of change and innovation in CTE.

If I were to ask you “What is Career Technical Education?” many of you would have different answers. These responses would be driven by your own experiences and observations of CTE programs in your district. And none of your answers would be wrong. This is because CTE is diverse and responsive to the needs of the community, students and employers it serves.<sup>1</sup> CTE

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<sup>1</sup> U.S. Department of Education, Office of Planning, Evaluation and Policy Development. National Assessment of Career and Technical Education: Interim Report, 2013. Of note, The share of public high school graduates who are CTE investors, earning 3 or more occupational credits, was 38% in 2004. The share of CTE explorers, who earn three or more CTE occupational credits in more than one occupational area, increased to 21% in 2004.

serves 12 million students of all ages - middle school through adults – across the country.<sup>2</sup> There are CTE programs in every state and in every type of community setting - urban, suburban and rural. And CTE programs are offered at myriad types of educational settings - comprehensive high schools, career academies, theme-based CTE high schools, community colleges, technical colleges, regional technical centers, and technical institutes. This diversity is a strength and a testament to the responsiveness of the CTE leadership and programs. But it is also this diversity that makes the unity behind a common vision for the future of CTE so unique and compelling.

### **High-Quality CTE: Preparing Students for Jobs of the Future**

In 2010, in recognition of the changing economic forces, and to further advance the CTE field, State CTE Directors agreed upon a common vision for CTE. This vision was informed by key stakeholder groups in industry, the broader education community, and government representatives. The vision, agreed to by all the states, charted a progressive agenda that leveraged the opportunities presented by the federal legislation. The vision honors the rich history of vocational education. It holds us accountable for the ongoing transformation of programs to be responsive to the needs of the economy. And it charts a bold and progressive course for the future that seeks to break down the silos between academic and technical education, and between secondary and postsecondary education. It calls for employers to be co-developers, co-owners of CTE programs. It demands data-driven decision-making. And it cements our commitment to a delivery system organized by the 16 Career Clusters® and delivered through comprehensive programs of study.

This vision guides our federal policy priorities and our actions, and is comprised for five interconnected principles:

#### **Principle 1: CTE is critical to ensuring that the United States leads in global competitiveness.**

Education is critical to ensure the global competitiveness of the United States, and some stakeholders and policymakers even consider it an issue of national security. State CTE Directors recognize the importance of delivering CTE programs that meet the needs of the labor market and the global economy and, thus, drive the nation's ability to compete globally.

How is CTE responding to the global economy? In the southeastern part of the United States, CTE is part of state economic development strategies. States like South Carolina, which worked with BMW to build their U.S. operations in Greenville/Spartanburg. Or Alabama, which is home to a Toyota plant. Oklahoma brought in the aerospace industry. Louisville, Kentucky, has GE. And right outside the beltway, Virginia won the bid for VW. These companies are locating to these states because of their workforce – and CTE plays an important part of ensuring that current and future workers are prepared for careers in that regional economy.

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<sup>2</sup> U.S. Department of Education, Office of Vocational and Adult Education. Carl D. Perkins Career and Technical Education Act Consolidated Annual Reports, 2011-2012.

Also, CTE is introducing new programs to meet the needs of the modern economy like mechatronics, culinology, biotechnology, nano-technology, green energy, etc. Today's CTE students are prepared with adaptable skills and knowledge for the ever-changing economy. These students have focus. They have drive. They have expertise. They have work experience, in large part due to their participation in the Career Technical Student Organizations. They have what employers want. At a time when employers complain that graduates are not prepared to fill job vacancies, CTE is delivering. If you attend national Career Technical Student Organization competitions like SkillsUSA, which was held in Louisville this summer, you'll see students walk away with not only a medal of recognition for their performance in a particular competitive event focused on technical skills, but also multiple job offers which often include support for continued education.

Another example of this innovation and responsiveness to the needs of the economy and the demand of the modern learner is the Vermont Virtual Academy<sup>SM</sup>. The virtual academy provides an alternative to the traditional in-classroom k-12 experience and instead allows students to learn at their own pace in an environment of their choosing through their computer and an Internet connection. Increasingly, online schools such as Vermont's Virtual Academy have helped to improve student performance and achievement through a more flexible and modern delivery system. This blended learning approach lends itself well to Vermont's priority Career Clusters, Information Technologies and STEM. This dynamic and innovative educational programs seeks to fulfill the constantly evolving needs of every student.

I recently heard about a student who was able to take part in this program. Kevin, a student at Spaulding High School in Vermont, is involved in a number of team sports for his school along with a leadership position on the student council. He is also a budding entrepreneur and recently opened his own lawn care business. Ultimately, he would like to go on to college and become an Engineer. According to Kevin, "The things I read and learn in my class each day, make me feel more confident in what I plan on doing after college." The CTE programs and blended learning opportunities such as our Virtual Learning Academy offered through Vermont's Virtual Learning Cooperative have helped clearly Kevin realize his full potential.

**Principle 2: CTE actively partners with employers to design and provide high-quality, dynamic programs.**

CTE's partnership with employers is one of the most treasured aspects of our history and continues to be at the heart of our programs today. Our vision statement calls for an even stronger partnership with employers by having business and industry having an increased role in the design and delivery of CTE programs of study.

Across the nation, CTE leaders are collaborating with business and industry. For example, Union Pacific Railroad works with local schools through their Direction Recruitment Education and Mentoring (DREAM) program in which employees provide students with career, educational and social guidance. The mentoring program serves as a vehicle to develop students' self-esteem and confidence in their personal and career ambitions as they explore the business world.

Partnerships with employers provide students with real-world and real-work problems to solve. They provide teachers and faculty with externships and students with internships, work-based learning experiences and mentorship. These experiences are essential for students to test the waters and gain early exposure to a variety of career fields. This exploration of what students like to do and are good at can help them find focus and confidence – which leads to higher aspirations. We see this over and over.

We believe federal CTE legislation can help promote improved employer-education engagement and partnerships, including requiring local advisory committees comprised of employers and education stakeholders to actively partner in the design and delivery CTE high-quality programs of study. Further, comprehensive career guidance and development programs and personalized learning plans beginning in middle school are essential to helping expand access to CTE and ensuring more students have the support they need to learn about careers, explore options, understand the necessary course of study and experiences essential to be successful in their college and career journey.

### **Principle 3: CTE prepares students to succeed in further education and careers.**

As described earlier, CTE has evolved considerably over the last decade. High-quality CTE programs prepare students to be successful by providing adaptable skills and knowledge, thereby ensuring flexibility to transition careers as interests change, opportunities emerge, technology advances, and the economy transforms. It is no longer acceptable or appropriate to talk about college or careers. It must be college and careers.<sup>3</sup>

This transformation in expectation from “or” to “and” is underscored by the data. Researchers project that, by 2020, 35% of jobs will require at least a bachelor’s degree and 30% will require some postsecondary education.<sup>4</sup> Focusing on preparing secondary CTE students for postsecondary education is paying off; the college attendance rate for CTE students increased by nearly 32% between 1982 and 1992, and the trend continues.<sup>5</sup> Even so, more work needs to be done. Only 70% of high school graduates study at a postsecondary institution immediately after high school, and far fewer complete a degree or credential.<sup>6</sup> Improving transitions between secondary and postsecondary education is one of the most efficient ways to lead students to postsecondary success. Thus, the focus of the federal investment on preparation for both college and careers and the linkages between the learner levels is absolutely necessary.

One way CTE has been successful at promoting learner level alignment is through decades of work around dual and concurrent enrollment. A recent Community College Research Center study found that dual enrollment students in Florida were more likely to earn a high school

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<sup>3</sup> Career Readiness Partners Council’s Career Readiness Definition: <http://www.careerreadynow.org/>

<sup>4</sup> Carnevale, Anthony, Nicole Smith, and Jeff Strohl, “Recovery: Job Growth and Education Requirements Through 2020,” *Georgetown University Center on Education and the Workforce*, June 2013.

<sup>5</sup> U.S. Department of Education, Office of the Under Secretary, Policy and Program Studies Service, “National Assessment of Vocational Education: Final Report to Congress,” Washington, D.C., 2004.

<sup>6</sup> National Science Foundation, “Science and Engineering Indicators 2012,” Arlington, VA, 2012, <http://www.nsf.gov/statistics/seind12/c1/c1s4.htm>.

diploma, go on to college, persist at that level for longer, and have a higher postsecondary grade point average than their peers.<sup>7</sup>

In recent years, efforts in states like Alabama, Colorado, Georgia, Ohio, West Virginia and Pennsylvania have expanded toward statewide initiatives to promote acquisition and portability of postsecondary credits while students are still in high school. In addition, we have seen the expansion of the inclusion of Advanced Placement courses in CTE programs of study. And there are some programs out there that really have taken this to a whole new level. Ballard Memorial High School in Ballard County, Kentucky provides students in the school's Health Science program the opportunity to graduate high school and earn an associate's degree from Western Kentucky Community & Technical College at the same time.

These opportunities give students a head start on college and lessen the economic burden of attending postsecondary institutions. Employers, too, benefit from these partnerships as they are able to confidently hire qualified individuals to fill job vacancies.

The quality of CTE educators cannot be overlooked as a major component to student success. In Vermont, state leaders have developed an innovative CTE teacher professional development program that will start in the 2013-2014 school year. Vermont will now not only have one of the best licensing programs for CTE teachers initially licensed to teach, but will now also have a seamless pathway to earning a Bachelor's degree in Career and Technical Education in a 3+2 program in partnership with the state college system. As the economy evolves and the needs of the labor market change, CTE students are uniquely positioned to thrive in a globally-competitive environment with the skills and knowledge base first acquired through rigorous CTE programs taught by knowledgeable, prepared CTE instructors.

#### **Principle 4: CTE is delivered through comprehensive programs of study aligned to the National Career Clusters Framework.**

States have largely embraced the National Career Clusters<sup>®</sup> Framework, which includes 16 Career Clusters and 79 Career Pathways, as the organizer for modern CTE. With Perkins funding and requirements as the national catalyst, CTE is transitioning its delivery model of CTE programs to programs of study. What's different about programs of study?

Programs of study are designed to seamlessly link a student's secondary and postsecondary education through a structured sequence of academic and CTE courses that leads to a postsecondary-level credential. In a program of study, the standards, curriculum, and assessments are aligned, thereby ensuring coordination and seamless delivery of instruction and transitions for students. Relevant work-based learning opportunities, Career Technical Student Organizations, comprehensive career planning, and leadership development are offered. And there is evidence that programs of study are producing positive outcomes. A study conducted through the National Research Center for Career and Technical Education last year

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<sup>7</sup> Karp, Melinda Mechur, Juan Carlos Calcagno, Katherine L. Hughes, Dong Wook Jeong, & Thomas Bailey, "Dual Enrollment Students in Florida and New York City: Postsecondary Outcomes," Community College Research Center 37, February (2008): <http://ccrc.tc.columbia.edu/media/k2/attachments/dual-enrollment-student-outcomes-brief.pdf>.

found that students who were enrolled in a program of study had better test scores, better secondary GPAs, and made more progress towards graduation than their peers.<sup>8</sup>

In addition, states have been working to add clarity and rigor to academic and technical instruction at the high school level, with the goal of better preparing students for college and careers and, thus, improving the nation's ability to be globally competitive. Perkins requires CTE programs to be aligned to rigorous, state-adopted academic and CTE standards that define what students should know and be able to do after completing instruction in a program of study. To that end, CTE has been an advocate for college and career-ready standards. Last year, State CTE Directors from 42 states, the District of Columbia and Palau, embraced the opportunity to improve CTE through high-quality, voluntary CTE standards, organized by Career Cluster, that define what students should know and be able to do after completing instruction in a program of study.

Programs of study also promote coordination and collaboration between secondary and postsecondary partners. Consortia efforts that protect funding streams but promote statewide collaboration have proven vital to improving the capacity and scalability of CTE programs of study. Consortia can provide a unified state effort towards comparable quality of educational and training programming across all subsets of the population. They also ensure equitable geographic access for students, spanning middle school through high school, apprenticeships and college, as well as lifelong learning. Additionally, consortia help develop performance assessments of a valid and reliable nature to further improve the state's accountability system., help define new competency models and strategies to strengthen the link between CTE programs and the needs of the labor market and the economy.

**Principle 5: CTE is a results-driven system that demonstrates a positive return on investment.**

Finally, CTE embraces the critical importance of accountability and data-driven decisions. Data have consistently illustrated CTE's positive return on investment. The fiscal impact of a reduced drop-out rate, cost savings for employers, and other positive impacts on regional, state, and national economies show how investment in CTE results in positive economic gains on the whole. Wisconsin's technical colleges return a public benefit of \$10.65 for every dollar invested, and taxpayers in Los Angeles County see a 10 percent return on their investment in the county's community colleges.<sup>9</sup> These are just a few of the many examples where CTE is yielding positive economic results across the country.

In Washington's Workforce Training and Education Coordinating Board commissioned one of the most compelling studies on the return on investment for CTE. Composed of nine representatives from business, labor, and government, the board found that CTE students in Washington earn more on average, and thus pay back the state's investment in their education

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<sup>8</sup> Castellano, M., Sundell, K., Overman, L. T., & Aliaga, O. A., "Do Career and Technical Education Programs of study Improve Student Achievement? Preliminary Analyses From a rigorous Longitudinal Study," *International Journal of Educational Reform*, 21 (2012): 98-118.

<sup>9</sup> Association for Career and Technical Education, "Investing in Career & Technical Education Yields Big Returns."

through increased tax revenue. Ultimately, the return on investment for CTE students in Washington was an impressive seven times the original public investment.<sup>10</sup>

Unfortunately, the sort of data Washington is able to compile is not available to every state due to limitations of their data systems. There is a need to create common definitions across the states, common performance measures across similar federal education and workforce programs and to increase alignment across K-12 education, postsecondary education and workforce data systems.

## Conclusion

In 2006, the language in the Perkins Act was updated from “vocational and technical education” to “career and technical education.” This transition was more than just a name change. It represented a fundamental shift in philosophy from CTE being for those who were not going to college to a system that prepares students for both employment and postsecondary education. CTE leaders embraced the goals of Perkins IV. We strengthened the integration of high-quality academic and technical education programs, further emphasizing that students participating in CTE must meet the same rigorous academic standards as all other students. Many states went beyond the law’s minimal program of study requirements. We made great progress in improving our data systems. And as a result, CTE students have succeeded. The national average graduation rate for CTE students is over 90 percent, while the average national graduation rate for all students is less than 74 percent.<sup>11</sup> CTE students are out-performing academic benchmarks:

CTE Indicator	Target Performance	Actual Performance
Reading/Language Arts (Secondary):	67%	72%
Mathematics (Secondary):	59%	63%
Technical Skill Attainment (Secondary):	68%	75%
Technical Skill Attainment (Postsecondary):	70%	82%

And 70 percent of CTE concentrators stayed in postsecondary education or transferred to a 4-year degree program (compared to the overall average state target of 58%) and transitioned to postsecondary education or employment by December of the year of graduation.<sup>12</sup>

Career Technical Education is learning that works for America. My colleagues and I from across the nation believe that in that the federal investment is vital to ensuring that we achieve the

<sup>10</sup> “CTE: An Investment in Success,” *Workforce Training and Education Coordinating Board*, Olympia, Washington, <http://www.wtb.wa.gov/Documents/CTESuccess.pdf>.

<sup>11</sup> U.S. Department of Education, Office of Vocational and Adult Education, “Carl D. Perkins Career and Technical Education Act of 2006, Report to Congress on State Performance, Program Year 2007–08,” Washington, D.C., 2010.

<sup>12</sup> U.S. Department of Education, “FY 2010 Annual Performance Report,” Washington, D.C., 2011. <http://www2.ed.gov/about/reports/annual/2010report/fy2010-apr.pdf>.

vision we put forth in 2010 – ensuring that all students have access to high-quality CTE programs. As we look to the future, imagine an education and workforce system that rewards innovation, cohesively supports different learning styles, equally values different interests and talents, nimbly adapts and responds to technology and workplace needs, and prepares all students for career success through multiple pathways. Our nation’s economic vitality hinges on our commitment to invest in and ensure the preparedness, efficiency, innovation, creativity and productivity of the U.S. workforce, and CTE is instrumental to our success.