

# CTE Monthly

September 2015

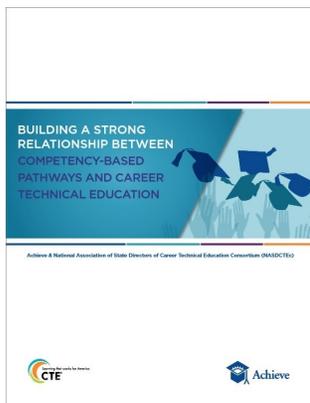
## CTE Quick Facts

### Did you know?

- ▶ Philadelphia CTE students' on-time graduation rate was 22 percent higher than non-CTE students, even when their reading and math performance was similar.<sup>i</sup>
- ▶ Completers of a Linked Learning pathway, which integrates technical and academic education, earn as much as \$2,500 more annually in the 8 years after high school graduation than non-completers.<sup>ii</sup>

## New Publication: CTE and Competency-based Education

A [new brief](#) from NASDCTEc and Achieve identifies opportunities for collaboration, integration and strengthened relationships between competency-based pathways (CBP) and CTE leaders.



It explores the leverage points and challenges to integrating CTE into a CBP system and, where possible, offers examples of how states and districts have started the journey to do so. Key questions are provided to help states and districts consider how CTE is, can and should be a part of their CBP strategies.

## Career Spotlight



these trends for the foreseeable future. Eighty-five percent of Health Science occupations fall within the health care industry—a portion of the American economy which accounts for roughly 18 percent of GDP.<sup>iv</sup> Overall this Career Cluster is expected to grow by 23 percent between 2008 and 2018.<sup>v</sup>

Given that this Career Cluster is so large and is projected to increase substantially in size in the coming years, the educational demands of Health Science occupations are an increasingly important harbinger for the educational requirements of the wider American economy. It is projected that by 2020, about 82 percent of jobs in this Career Cluster will require some form of post-secondary education or training beyond a high school diploma.<sup>vi</sup> About one-third of this demand for postsecondary education will stem from middle-skill occupations requiring more than a high school diploma, but less than a bachelor's degree.

CTE programs throughout the country are helping to prepare students of all ages to address the growing demands of this sector. The Medical Sciences Program offered at [Bollman Technical Education Center](#) in Thornton, Colorado, is one such program. This area career technical center offers 16 career pathways aligned with the National Consortium for Health Science Education standards—an important component for any program within the Health Science Career Cluster.

The program boasts an impressive record of success—it graduated all of its students in the 2013-14 school year, including the one-third of the class who were low-income students. Even more impressive is that each of these graduates earned at least one industry-recognized credential, while 95 percent went on to further postsecondary education or training. A 2014 NASDCTEc Excellence in Action Award winner, more information about the program can be found [here](#).

## Research on Applied, Work-based Learning

The data keeps rolling in to show that applied and work-based learning are extremely important to employers and students:

- 70.8 percent of surveyed college students and recent grads think work-based learning should be a requirement of postsecondary education.<sup>vii</sup>
- 88 percent of employers think that college and universities should provide applied learning. Most employers prefer job candidates who have completed an internship, field project or similar applied experience.<sup>viii</sup>
- 58 percent of students want workforce preparation, but only 35 percent think college was effective at readying them for the workforce.<sup>ix</sup>

CTE on the secondary and postsecondary levels, with its focus on hands-on learning in a variety of settings, is key to building the skills employers and students need.

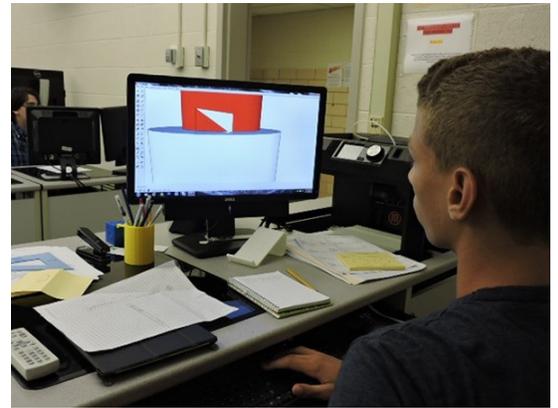
i Socolar, "District study: Students in career and technical education programs do well," *The Philadelphia Public School Notebook*, January 15, 2015.  
 ii Hoachlander, *Linked Learning: Pathways to College and Career*, February 2014.  
 iii Georgetown Center on Education and the Workforce, NRCCTE and NASDCTEc, *Career Clusters: Forecasting demand for high school through college jobs: 2008-2018*, 2011.  
 iv The World Bank, *Health expenditure, total (% of GDP)*.  
 v Georgetown Center on Education and the Workforce, NRCCTE and NASDCTEc, *Career Clusters: Forecasting demand for high school through college jobs: 2008-2018*, 2011.  
 vi Georgetown Center on Education and the Workforce, *Healthcare*, 2012.  
 vii Watson, "Students See Value of Internships," *Diverse*, July 6, 2015.  
 viii Hart Research Associates, *Falling Short? College Learning and Career Success*, 2015.  
 ix McGraw-Hill Education, *2015 Workforce Readiness Survey*.

### Dayton Regional STEM Center

The Springfield-Dayton, Ohio, region is investing in the UAV industry. To grow the workforce in this emerging area, the [Dayton Regional STEM Center](#) (DRSC) is partnering with local high schools and industry to develop curriculum in modeling and simulation.

The first course in this curriculum, the Modeling and Simulation: Survey Course, has enhanced interest in and understanding of career opportunities in modeling and simulation, according to student feedback. In addition, DRSC is in the midst of developing and piloting the Modeling and Simulation: Surveillance and Response Course, to help students develop skills in modeling and simulation using UAV interface technologies while exposing them to associated STEM careers. Activities include simulating how an unmanned aircraft monitors natural disasters and creating a mobile application that uses UAV data.

DRSC, which supports schools and educators with professional development, training and curriculum design for STEM teaching and learning, also offers free online K-12 curriculum and videos.<sup>x</sup>



Northmont High School student Elijah Clements builds a virtual model in Solidworks as part of the Modeling and Simulation: Survey Course. Photo courtesy of DRSC.

### Student Spotlight

Christopher Sanchez, a student from Ontario High School, California, wasn't sure about the future when he enrolled in the [Baldy View Regional Occupational Program](#) (ROP) Heating-Ventilation-Air Conditioning (HVAC) class. However, his teacher, Steve Hayden, was able to engage his attention and spark his interest. According to Christopher, "It was fun. It was like an investigation, trying to figure out and troubleshoot the problems with the equipment." Christopher went on to become a helpful presence in the class and to pass it with flying colors, earning an HVAC certificate.



This material was approved for publication on the California Association of Regional Occupational Centers and Programs (CAROCP) website. The full story may be viewed at [www.ROCPInspire.org](http://www.ROCPInspire.org).

After high school graduation, Christopher found himself working three jobs to make ends meet. He decided to apply for a job with Bassett HVAC Services, where he is now employed as a maintenance technician and is on his way up the ladder. The company sponsored his Environmental Protection Agency certification and his Universal License. Christopher says his life has been changed, and credits Baldy View ROP and educator Steve Hayden.<sup>xi</sup>

### States Active in CTE Policy in 2015

2015 has already been an active year for CTE and workforce development legislation on the state level, according to a [National Skills Coalition policy round-up](#).

Relevant laws and policies includes the following:

- **Nebraska** legislation assists lower-income residents to pursue non-credit, in-demand training at community colleges.
- A bill in **Oregon** provides community college tuition grants to students who enroll in postsecondary education shortly after high school or getting a GED, and earn a 2.5 GPA.
- **Colorado** is designing career pathways for construction and related trades, IT and health care.
- **California** has a new Adult Education Block Grant to support adult education consortia.
- **Georgia** will provide tax credits to employers for employees who participate in adult basic skills programs.
- Work-based learning is supported in legislation from **California, Colorado and Washington**.
- **Arkansas and Maine** are funding employer-driven training.

In addition, **California, Florida and Virginia** enacted laws related to the Workforce Innovation and Opportunity Act, focusing on the importance of career pathways and sector strategies.<sup>xii</sup>

x ACTE, [CTE: The Key to Economic Development in Aerospace and Defense](#), 2015.

xi California Association of Regional Occupational Centers and Programs [website](#).

xii National Skills Coalition, [2015 State Legislative Round-up](#), July 2015.



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