

## Delivering Career Technical Education

There is a lot of confusion about what Career Technical Education (CTE) is, some of which comes from the many forms CTE can take. CTE can start as early as elementary school, extend through high school, include postsecondary education and training, and even encompass workforce development programs. It can also be delivered at a wide variety of types of institutions. This diversity of programs and systems is both a strength – allowing more learners to participate in CTE in their communities – and a challenge when it comes to the broader public understanding of what CTE really is and how it can be delivered across the country.

To help clarify the many faces of CTE, here is a cheat sheet on CTE's primary delivery systems:

**Comprehensive High Schools** are “traditional” high schools, offering CTE courses and programs of study, often as electives. Over 80 percent of public school districts offer CTE through comprehensive high schools.<sup>2</sup>



**Technical/Vocational High Schools** are high schools within a school district that primarily or solely offer CTE programs. Many of these schools may be career academies or have multiple career academies within them. Others may be area technical centers. Thus, it is common for these schools to be available to learners across a district or county to attend full or part time to access CTE-specific courses. There are approximately 1,550 public high schools that fall within this category.<sup>3</sup>

**Area Technical Centers** are co-located sites where CTE is delivered to learners from multiple local school districts across a county or other larger regional area. Some area CTE centers serve only high school learners, while others serve both high school learners and adults. The centers may be *shared-time*, offering primarily technical training and credit, or *full-time*, providing learners with both academic and technical training and credit. Area CTE centers are often cost effective because they allow schools, districts or regions to pool resources and build economies of scale with qualified instructors and cutting-edge technology. As of the most recent national survey of ATCs, there were 1,200 area CTE centers in 41 states,<sup>4</sup> serving a little more than half of all public school districts.<sup>5</sup>



**Career Academies** are either small schools or “schools-within-a-school” that provide a college preparatory curriculum in the context of a career-oriented theme. Today, there are approximately 7,000 career academies serving one million learners in a range of specializations.<sup>6</sup> There are a number of prominent career academy models, including National Academy Foundation and Linked Learning, supported by organizations such as Ford Next Generation Learning and National Career Academy Coalition. About a quarter of all public high schools offer specialized career academies.<sup>7</sup>



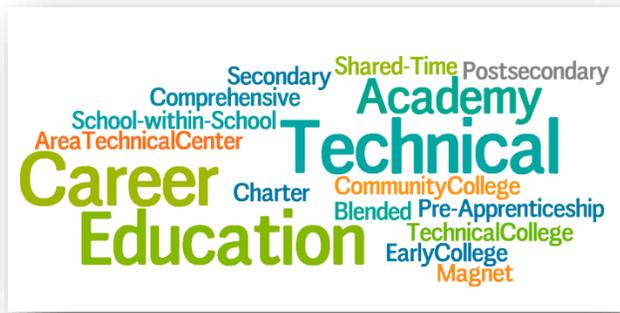
### Specialized Spotlight: P-TECH



**P-TECH** (Pathways in Technology Early College High School) schools are a specialized form of technical/vocational high schools created by IBM that involve a collaboration between secondary and postsecondary institutions and industry partners, allowing students to graduate with both a high school diploma and a two-year postsecondary degree in a Science, Technology, Engineering or Mathematics-related field. Throughout the curriculum, students participate in work-based learning and intensive mentorship opportunities. Launched in 2011, the P-TECH network is global, with 122 P-TECH schools currently operating across 11 U.S. states.<sup>1</sup> For more information, visit [ptech.org](http://ptech.org).



**Community & Technical Colleges** are two-year educational institutions offering programs leading to associate degrees, diplomas, certifications and/or their equivalents. Community colleges are more likely to include both career-focused and transfer programs, preparing learners to continue on to four-year institutions. Some community colleges can now grant four-year degrees. Technical colleges are more likely to emphasize career-focused programs and certifications. However, these institution types largely overlap. There are nearly 950 public community/technical colleges – along with 100 nonprofit and 670 for-profit two-year institutions – in the United States.<sup>8</sup>



**Early College High Schools** are schools that link secondary and postsecondary study by allowing high school learners to attend and receive credit for college courses during their secondary studies, often on a no- or low-cost fast track to an associate degree. In most early college high schools, learners have the opportunity to graduate in four or five years with a high school diploma and an associate degree.

**Pre-Apprenticeship/Youth Apprenticeship** programs prepare learners for Registered Apprenticeship training. A pre-apprenticeship typically takes place in a classroom and/or lab setting, but may also involve work-site visits, job-shadowing or other activities outside the program facility to provide exposure to the work environment. In many places, completion of a youth apprenticeship program – by learners under the age of 21 – will count towards a year or more of the full Registered Apprenticeship requirements. Models vary from state to state, and state and federal investments in youth apprenticeship models continue to grow.<sup>9</sup>



CTE can also be offered through charter schools, magnet schools, virtual schools, and private, for-profit postsecondary institutions. There is no wrong way to deliver CTE, and each of the models described above has both advantages and drawbacks – as well as incredibly successful programs and not-so-successful programs. What is most important to focus on is the *quality* of the programs being delivered, regardless of the delivery system.

<sup>1</sup> PTECH. (2020). PTECH United States. Retrieved from <https://www.ptech.org/p-tech-network/our-schools/usa/>  
<sup>2</sup> National Center for Education Statistics (NCES). (2018). *Career and Technical Education Programs in Public School Districts: 2016-17*. Retrieved from <https://nces.ed.gov/pubs2018/2018028.pdf>  
<sup>3</sup> NCES. Common Core of Data. 2018-19. Retrieved from <https://nces.ed.gov/ccd/elsi/tableGenerator.aspx>  
<sup>4</sup> NCES. (2008). *Career and Technical Education in the United States: 1990 to 2005: Statistical Analysis Report*. Retrieved from <https://nces.ed.gov/pubs2008/2008035.pdf>  
<sup>5</sup> NCES. (2018). *Career and Technical Education Programs in Public School Districts: 2016-17*. Retrieved from <https://nces.ed.gov/pubs2018/2018028.pdf>  
<sup>6</sup> National Career Academies Coalition. Retrieved from <https://www.ncacinc.com/nsop/academies>  
<sup>7</sup> NCES. (2008). Schools and Staffing Survey (SASS), "Public School Questionnaire". 2007–08. Retrieved from <http://nces.ed.gov/surveys/ctes/tables/h01.asp>  
<sup>8</sup> NCES. (2011). Integrated Postsecondary Education Data System. Retrieved from <http://nces.ed.gov/datalab/tableslibrary/viewtable.aspx?tableid=8460>  
<sup>9</sup> SHRM. (2019). *Youth apprenticeships: A solution to the labor shortage?* Retrieved from <https://www.shrm.org/hr-today/news/all-things-work/pages/youth-apprenticeships.aspx>