

## Career Technical Education & Student Achievement

**Students enrolled in Career Technical Education (CTE)** are increasingly high performers, with higher than average graduation rates and impressive postsecondary enrollment rates. Yet the greatest value comes when students are engaged in both **high-quality CTE** programs of study and a **rigorous academic** course load.

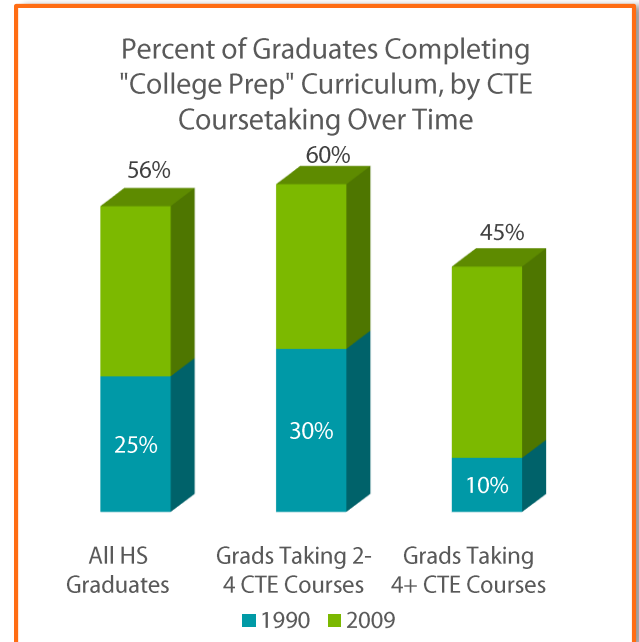
### CTE & High School Graduation

- The graduation rate for CTE concentrators is about 90 percent, approximately 10 percentage points higher than the national average.<sup>1</sup>
- In all but one state, CTE concentrators were more likely to graduate from high school than the average student. Two-thirds of states reported **CTE graduation rates** for the Class of 2011-12 that were 10 or more percentage points higher than the graduation rates for all students.<sup>2</sup>
- In **New York City**, the average graduation rate for students in CTE schools was 70 percent compared to 65 percent for those in non-CTE schools.<sup>3</sup>
- **Philadelphia** similarly found CTE boosts graduation, with 84 percent of CTE concentrators graduating compared to 62 percent of non-concentrators. The positive impact of CTE was most felt by minority students, with 83 percent of African American/Hispanic CTE students graduating compared to only 58 percent of their non-CTE peers.<sup>4</sup>
- In **Virginia**, CTE completers and non-completers had the same chances of enrolling in two-year colleges, persisting in two- and four-year colleges and earning a degree if they enrolled in college within one year of high school with the most significant factor being their completion of the Advanced Studies diploma.<sup>5</sup>

MYTH	FACT
"CTE serves only 'disadvantaged' students"	Ninety-two percent of high school students take some CTE, making it the norm for just about everyone. And, despite conventional wisdom, 33 percent of students in the highest socio-economic status (SES) quartile took three or more CTE credits, as well as 44 percent of students in the second highest SES quartile. <sup>6</sup>
"CTE is for non-college bound students"	Seventy-eight percent of CTE concentrators enroll in postsecondary education, full time, within two years of graduation. Within eight years, 50 percent of those concentrators earn a degree or certificate, compared to 58 percent of non-concentrators. <sup>7</sup> And, on top of that, about one third of all dual enrollment credits -- about 600,000 in all -- are earned in CTE courses. <sup>8</sup>
"All CTE is good" / "All CTE is bad"	There are significant differences in student outcomes based on the quality, delivery and area of focus of CTE programs across the country, making generalizations not only unfair, but impossible.

## CTE & Academic Achievement

- Forty-five percent of students say CTE courses provide them with **real-world examples** that help them better understand academic classes.<sup>9</sup>
- While it's true that participation in CTE courses does not necessarily raise student achievement on its own, early evidence shows that students engaged in high-quality CTE, like *programs of study*, do have higher achievement in academic subjects, such as English.<sup>10</sup>
- Students enrolled in programs of study through **California's** Linked Learning initiative were more likely to pass the state's 10<sup>th</sup> grade assessment (74 percent compared to 62 percent for non-participants) and be enrolled in college a year after graduation.<sup>11</sup>
- CTE students enrolled in science- or STEM-centric fields of study -- including agriculture, IT and engineering technology -- **scored at and above average** on the 12<sup>th</sup> grade National Assessment of Education Progress (NAEP) in science.
- In fact, the highest 12<sup>th</sup> grade NAEP scores in science were actually earned by CTE concentrators in agriculture, IT and engineering technology who also took more than three core science courses.<sup>12</sup>
- Between 1990 and 2009, the percent of CTE students completing a "college-prep" curriculum increased significantly. In fact, graduates who took between two and four CTE courses were the **most likely to complete a college-prep course load**.<sup>13</sup> This is likely attributable to increased academic requirements for all students as well as the broader range of students pursuing concentration in CTE.



## The Bottom Line

There is a complicated relationship between CTE and academic achievement. The evidence is often mixed and inconclusive because of the range in quality of existing programs and the changing demographics of CTE programs – which do still predominantly serve low-income and minority students but are increasingly serving all students, including those in high-income groups. What is clear, however, is that *high-quality* CTE engages students, helps them graduate and puts them on a path to success.

<sup>1</sup> Analysis of <http://cte.ed.gov/accountability/reports.cfm>

<sup>2</sup> [http://cte.ed.gov/docs/NACTE\\_FinalReport2014.pdf](http://cte.ed.gov/docs/NACTE_FinalReport2014.pdf)

<sup>3</sup> [http://b3cdn.net/nycss/69b14af447d2a8475a\\_r1m6brqrg.pdf](http://b3cdn.net/nycss/69b14af447d2a8475a_r1m6brqrg.pdf)

<sup>4</sup> [http://thenotebook.org/sites/default/files/CTE%20Presentation\\_Research%20Forum.pdf](http://thenotebook.org/sites/default/files/CTE%20Presentation_Research%20Forum.pdf)

<sup>5</sup> [http://www.cit.org/assets/1/7/AB\\_2--CTE\\_Research\\_Project-Jonas\\_Yamaguchi\\_Garland\\_Hall.pdf](http://www.cit.org/assets/1/7/AB_2--CTE_Research_Project-Jonas_Yamaguchi_Garland_Hall.pdf)

<sup>6</sup> [http://www.nrccte.org/sites/default/files/publication-files/nrccte\\_cte\\_typology.pdf](http://www.nrccte.org/sites/default/files/publication-files/nrccte_cte_typology.pdf)

<sup>7</sup> [http://cte.ed.gov/docs/NACTE\\_FinalReport2014.pdf](http://cte.ed.gov/docs/NACTE_FinalReport2014.pdf)

<sup>8</sup> <http://nces.ed.gov/pubs2013/2013001.pdf>

<sup>9</sup> [www.acteonline.org/uploadedFiles/Assets\\_and\\_Documents/Global/files/CTE\\_Info/Research/2014\\_NRCCUA\\_ACTE\\_Research\\_Report\\_Final.pdf](http://www.acteonline.org/uploadedFiles/Assets_and_Documents/Global/files/CTE_Info/Research/2014_NRCCUA_ACTE_Research_Report_Final.pdf)

<sup>10</sup> [http://www.nrccte.org/sites/default/files/publication-files/nrccte\\_mature\\_pos\\_final.pdf](http://www.nrccte.org/sites/default/files/publication-files/nrccte_mature_pos_final.pdf)

<sup>11</sup> [http://www.connectedcalifornia.org/linked\\_learning/evidence](http://www.connectedcalifornia.org/linked_learning/evidence)

<sup>12</sup> <http://nces.ed.gov/pubs2010/2010021.pdf>

<sup>13</sup> [http://cte.ed.gov/docs/NACTE\\_FinalReport2014.pdf](http://cte.ed.gov/docs/NACTE_FinalReport2014.pdf)