

Issue in Brief: Vocational Education

In addition to fostering civic engagement, innovation, and critical thinking, our education system works to prepare students for college and careers, readying young people for success over the long-term. However, in 2014, 10 percent of youth in Massachusetts aged 16-24 were neither working nor in school—representing 85,000 “disconnected youth” statewide. Fortunately, according to recent projections, there are increasing job opportunities for young people in growing fields like advanced manufacturing, information technology, and health care.

This factsheet summarizes the Roadmap to Expanding Opportunity paper [Skills For Our Future: Vocational Education in Massachusetts](#), which analyzes several career, vocational, and technical education (CVTE) models, identifies opportunities for improvement, and estimates what it would cost to expand vocational offerings to more students in Massachusetts.

Overall, the best current research suggests that high-quality CVTE programs can have a range of benefits for young people, including increased earnings, greater engagement in school, higher rates of college enrollment, and enhanced career skills. However, not all CVTE programs have achieved strong academic performance, matched participants with advanced work experiences, or engaged all students. The most effective CVTE programs share many common features, including:

1. **Greater individualized attention**—where young people receive strong career advising and guidance, ensuring they stay on track with an area of study that fits their interests.
2. **State of the art facilities and equipment**—to ensure that students are developing advanced skills with currency in the job market.
3. **Partnerships with outside organizations, particularly employers**—to provide internships and apprenticeships, as well as technical assistance for schools on curriculum and current industry methods.
4. **Integration of quality academics with vocational training**—that allows students to apply mathematics, science, and literacy skills in hands-on contexts related to their future careers.

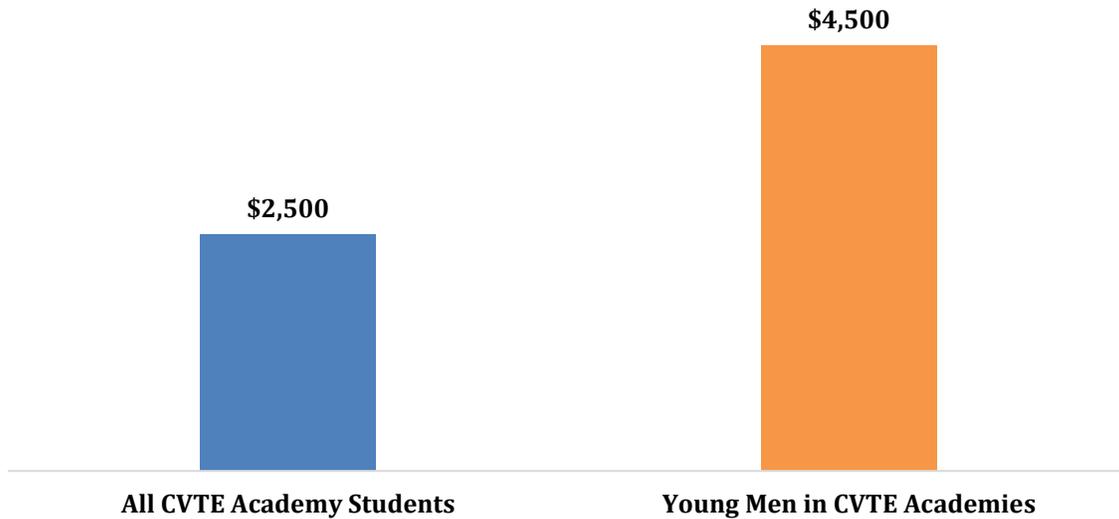
The Evidence: Well-Designed Programs Help Boost Engagement & Earnings

The research firm MDRC studied CVTE academies housed within traditional high schools in several cities in the mid- to late 1990s and found both short-term and long-term benefits for the students who participated. CVTE academies focused on young people at heightened risk of dropping out, helping them study careers in health, business, and technology while they also pursued college prep academics. Local employers participated as mentors and brought students into workplaces for site visits and internships.

Students in these CVTE academies gained additional exposure to the world of work through job shadowing, field trips, and work-based learning. This enrichment for students translated into increased attendance, more credits earned, and higher graduation rates for the students at the greatest risk of dropping out. In the 8 years after the program, participants randomly assigned to the academies had roughly \$2,500 in additional annual earnings (11 percent more) compared to a control group. The impact was particularly strong for young men, who gained 17 percent greater earnings after the program (see chart below).

Participants in Quality CVTE Academies Earned More Later On

Additional annual earnings of CVTE Academy students above a control group, inflation adjusted 2016 dollars



What Could Massachusetts Do? How Much Would It Cost?

Career, vocational, and technical education is popular in Massachusetts, with more students seeking admission than existing capacity allows. Currently there are 3,200 qualified students on CVTE high school waitlists statewide. Unmet demand for CVTE programs is especially pronounced in the state’s Gateway Cities, which have 1,700 young people waiting for access to CVTE, 53 percent of the statewide total. Waitlists also do not account for students from the 50 mostly rural communities with no local CVTE programs to apply to. Roughly 2,200 more students would be enrolled in CVTE programs if access in these communities were equal to the state average.

Massachusetts vocational schools spend roughly \$5,000 more per student than do traditional schools (roughly \$20,000 per student in CVTE compared to roughly \$15,000 in other schools). Based on these figures, we estimate that it would take at least \$27 million to address the unmet demand for CVTE programs—\$5,000 multiplied by 5,400 students on waitlists or in communities with very limited access. However, in many cases expanding CVTE would involve significant costs above and beyond this incremental \$5,000 per student amount. For example, towns moving a few students from various classrooms to vocational programs could face greater costs because the sending schools might not be able to reduce their costs proportionally. In addition to ongoing operating costs, there are significant building and equipment expenses to consider in any expansion plan. New programs in fields such as manufacturing and construction require updated facilities to be successful. It is also worth considering how to provide more career development options for the large majority of students in traditional schools.

Regardless of the specific approach, expanding access to high-quality career, vocational, and technical education can help ensure that more young people in Massachusetts gain the skills and experiences to succeed in our economy in the years to come.

For the full report, "Skills For Our Future" and other research, visit the Roadmap to Expanding Opportunity website at:

ExpandingOpportunity.org