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Career Technical Education (CTE) is critical to ensuring that the United States leads in global competitiveness by preparing students to succeed in further education and careers. Through our vision, *Reflect, Transform, Lead: A New Vision for Career Technical Education*, the National Association of State Directors of Career Technical Education (NASDCTE) aims to build collaborative connections between education, economic development and workforce development, and to support those providing CTE in secondary and postsecondary institutions.¹

Career academies, a research-supported delivery method of CTE, are receiving increased attention for effectively linking education and the economy. Sparked by President Obama’s FY13 budget proposal, career academies have been in the spotlight as a favored model to prepare more students for postsecondary education and careers. This brief will serve as a primer on career academies by offering a short history, an overview of relevant research documenting effectiveness, and highlights of successful national, state, and local-level efforts to link CTE and career academies.

What Are Career Academies?

A career academy is a school within a school, providing a college preparatory curriculum in the context of a career-oriented theme. According to the Career Academy Support Network, career academies may offer a variety of subjects but they can be distinguished by three key elements:²

- 1. Small learning communities:** Career academies group students into smaller learning communities in which students often have the same teachers and classmates for at least two consecutive years. Teachers meet regularly to discuss curriculum content, instruction and lesson planning.
- 2. College preparatory curriculum in the context of a career-oriented theme:** Courses integrate technical skills with academics to fulfill the requirements for high school graduation and college entrance requirements. Teachers have shared lesson planning time, and college and career counseling is integrated into the curriculum to offer students advice on their options and choices for employment and further education.
- 3. Strong partnerships:** Career academies partner with employers and offer work-based learning opportunities to provide students with hands-on, relevant experiences. Relationships with employers are key to the success of career academies. These partnerships ensure that a career academy’s curriculum is closely linked with technological developments in the private sector and that a range of work-based learning opportunities are available for students.

Career Academy National Standards of Practice

1. Defined Mission and Goals
2. Academy Structure
3. Host District and High School
4. Faculty and Staff
5. Professional Development
6. Governance and Leadership
7. Curriculum and Instruction
8. Employer, Higher Education and Community Involvement
9. Student Assessment
10. Cycle of Improvement

Career Academies: A Growing Trend

In 1969, the first career academy was created at Philadelphia's Thomas Jefferson High School which, at the time, had the highest dropout rate in the city.³ The Philadelphia Urban Coalition was created after inner city riots broke out with the intention of bringing together the community through education, business, labor and government. Charles Bowser, the deputy mayor, partnered with Lee Everett, the CEO of the Philadelphia Electric Company, to use the career academy model to focus on dropout prevention and vocational preparation.

In the 1990s, the federal government began to invest in initiatives that connected education and the workplace, like the School-to-Work program, smaller learning communities and high school reform, and expanded federal support to increase the number of career academies across the country. Today, there are approximately 7,000 career academies serving 1 million students in a range of specializations.⁴ Not all career academies look alike, but there is some agreement about the core elements of a career academy.

National Standards of Practice for Career Academies

By 2004, federal support achieved an expansion of the number of career academies, but there was little consistency in what these academies looked like. As a result of the varying definitions of career academies, a group of organizations, listed in Appendix 1, formed the Career Academy National Standards of Practice. These ten standards provide a clear direction for career academies to focus on preparing students for college and careers, raising student aspiration and increasing student achievement.⁵

The National Standards of Practice are in the process of being updated and will be released sometime this year. The goal of the revision is to reflect changes in education policy and practice.

Career Academies Work: Research Supporting Career Academies

One reason the number of career academies has grown so much is because of their strong research and evaluation base. In 2008, MDRC released a study called *Career Academies: Long Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood*. They used a random assignment research design in a group of nine high schools across the United States to determine the effect of attending a career academy. Findings indicated that career academies result in:⁶

- An average increase in earnings of 11 percent. The effect was concentrated among young men; in fact, an increase of 17 percent was seen in this demographic.
- An increase in the percentage of individuals living independently with children and a spouse or partner after leaving secondary education.
- An improvement in attendance, increased academic course taking, and an increased likelihood of graduating on time.
- An increase in the level of interpersonal support students experienced during high school from career academy staff.
- An increase in student participation in career awareness and work-based learning.

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Other research mirrors the positive findings of the MDRC report. Among other benefits, attendance at an academy has been shown to:

- Increase academic success.⁷
- Increase participation in extracurricular activities.⁸
- Increase the number of course credits earned.⁹
- Decrease the need for remedial coursework.¹⁰
- Reduce the likelihood of being arrested.¹¹

Research indicates that students attending career academies experience a range of positive outcomes, and investments in career academies have been shown to yield a positive return on investment at the state level as well. Several states, with the help of their CTE State Directors, have embraced career academies as an effective delivery method for CTE. Strong examples of success are visible at both state and local levels.

State Example: Florida’s Career Academies

In 2007, the Florida legislature passed the Career and Professional Education Act.¹² The Act’s objectives include:

- To improve middle and high school academic performance by providing rigorous and relevant curriculum opportunities.
- To provide rigorous and relevant career-themed courses that articulate postsecondary level coursework and lead to industry certification,
- To support local and regional economic development.
- To provide state residents with access to high-wage and high-demand careers.

An important provision included in the Act was to mandate that each school district have a career academy. This led to an exponential increase in Florida students enrolled in career academies from 20,000 students in 2008 to more than 200,000 students in 2012. Additional funding was provided through the Florida Education Finance Program for districts with students earning national industry certifications in high-demand, high-wage and high-skill industries.¹³

State Example: California’s Partnership Academies

California has also been a leader in supporting and promoting career academies. California Partnership Academies (CPA) are career academies that deliver curricula based on one of the 15 industry fields established for CTE by the California Department of Education (CDE). As required by the CDE, at least half of the students enrolled in each CPA must fall under half of the following categories:¹⁴

1. Have a poor attendance record.
2. Be significantly behind in credits.
3. Have demonstrated low motivation for the regular school program.
4. Are significantly economically disadvantaged.
5. Have low state test scores.
6. Have a low GPA.

The driving force behind CPAs has been state legislation, which created and set the funding framework for the program. The first piece of legislation was enacted in 1984, followed by a subsequent law in 1990. The laws stipulated that CPAs would receive state funding, and every dollar committed by the state had to be matched by both the school district and local employers.

As of April 2013, there are 60,000 CPA students attending California's 481 career academies. Research supports the positive impact of CPAs on student achievement. CPA students beat the state average score on the High School Exit Exam in both English/Language Arts and Mathematics, and they graduated seniors on time at a rate of 95 percent, which is 10 percent higher than the statewide average.¹⁵ For every student graduating rather than dropping out, the positive return on investment to the state through additional tax payments and reduced health, crime and welfare expenditures is around \$81,000. Therefore CPAs have measurable fiscal and educational benefits for the students involved, and they yield a strong return on investment for the state.

Local Example: Aspirations in Medical Sciences Academy, Long Beach, California

The most common specialization of career academies in California is health science and medical technology, and the California Department of Education highlights the Aspirations in Medical Sciences Academy (AIMS) at Jordan High School as a model of excellence.

At AIMS, students enter the academy in eighth or ninth grade. From the very beginning of the program, medical science concepts and principles are woven into every course each student takes. In the 10th grade, courses tailored more explicitly around the medical field are introduced. These courses include 'An Introduction to Medical Occupations and Hospital Health Occupations.'

Students spend the summer before or after 11th grade doing 50 hours of work-based learning. In 12th grade, students spend a greater amount of time in the workplace – 100 hours – and 80 hours in the classroom. Every student has a mentor assigned to them and some students also have an e-mentor who provides guidance in a virtual setting.

Leadership at AIMS is perceived as one of the most important reasons behind its success. At both a school and district level, the support and continuity of those involved are key to delivering a high-quality education for AIMS' students.

Conclusion

Since their creation 40 years ago, career academies have become a proven method of CTE delivery that prepares students for high-skill careers in areas of high demand. Research shows that career academies improve many different outcomes for students. And career academy programs at national, state and local levels are leading the way in CTE as models of excellence. Career academies serve as an example of the impact that CTE has on students, communities and the nation. *In Reflect, Transform, Lead: A New Vision for Career Technical Education*, CTE State Directors support high-quality, dynamic CTE programs that actively partner with employers and lead students to further education and careers. As shown through the many stellar examples in this paper, individual career academies and state models for career academies are quickly becoming a proven model of success.

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Appendix 1: Organizations that Developed the Career Academy National Standards of Practice

Career Academy Support Network (CASN)

National Academy Foundation (NAF)

National Career Academy Coalition (NCAC)

National Center for Education & the Economy (NCEE) America's Choice

Southern Regional Education Board (SREB) High Schools that Work

Talent Development High Schools/Center for Research on Education of Students Place at Risk (CRESPAR)