

# Career Academies: An Evidence-Based Approach to Preparing Youth for Adult Success

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*One of the best-studied and most successful models for helping youth transition into work and family life is Career Academies. Over the last 40 years, Career Academies have become a widely used high school reform that aims to keep students engaged in school and prepares them for successful transitions to postsecondary education and employment. Career Academies are organized as small learning communities within high schools that combine academic and technical curricula around a career theme. They also work with local employers to provide career-based learning opportunities. Since 1993, MDRC has been conducting a rigorous evaluation of the Career Academy approach in a diverse group of nine high schools across the United States. Career Academies have been shown to improve labor market outcomes, especially for young men. Eight years after scheduled graduation, young men in Career Academies had earned an average total of nearly \$30,000 more than their peers. In addition, young men in Career Academies were more likely to be married, to be custodial parents, and to be living independently with their children.*

Over the last century, U.S. policymakers have worked with educators to build public education that will produce graduates with work-relevant skills who are ready to compete in a global economy. Vocational education policies and programs have been enacted to benefit high school and postsecondary students, such as the Vocational Education Act, the Carl D. Perkins Career and Technical Educational Improvement Act, and the School-to-Work Opportunities Act.<sup>1</sup> Despite these efforts, the U.S. seems to be losing ground internationally. When compared to other industrialized nations, high school graduation rates have fallen from 1st place in the 1970s to 13th place in the last decade. Moreover, those students who graduate are less prepared for postsecondary education and labor opportunities than ever before.<sup>2</sup>

## Why Consider Career Academies?

The time seems right for Career Academies for three reasons:

- 1) The labor market for high school-age youth has continued a dangerous decline since the 1990s. By 2008, only about one third of young people ages 16 through 19 held jobs, compared with 45% in 2000.<sup>3</sup> The labor

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prospects of young men of color, particularly African-Americans, have declined even more steeply.<sup>4</sup>

- 2) Increasing attention is paid in high schools to high-stakes academic testing and college preparation. This has lessened the focus on other high school goals, including youth development and preparation for postsecondary employment.
- 3) The Career Academy model predates many popular reforms and offers a comprehensive approach that incorporates the best of other initiatives (e.g., school-to-work initiatives, small learning communities, and efforts to combine academic rigor and real-world relevance). The business community has a reinvigorated interest in supporting high school improvement and in helping young people gain access to high-quality learning opportunities in the workplace.

Career Academies offer a systematic approach to addressing the challenges young people face as they prepare for postsecondary education and the world of work.

*The Career Academy approach has taken root in a rapidly increasing number of high schools, with an estimated 7,000 academies across the country in 2010.*

### What are Career Academies?

Career Academies were first developed almost 40 years ago with the aim of restructuring large high schools into small learning communities. The goal was to create better pathways to further education and workplace opportunities. Since then, the Career Academy approach has taken root in a rapidly increasing number of high schools, with an estimated 7,000 academies in schools across the country in 2010.<sup>5</sup> Career Academies operate as schools within schools and typically serve between 150 and 200 students from grades 9 or 10 through grade 12. On average, about 30 to 60 students are enrolled per grade. Career Academies are defined by three core components:

- 1) **They are organized as small learning communities to create a more supportive, personalized learning environment.** Groups of students take the same courses together over several years, ideally with the same teacher the entire time.<sup>6</sup>
- 2) **They combine academic and career/technical curricula around a career theme to enrich teaching and learning.** Career Academies nationwide offer a range of occupational themes, including business and finance, health sciences, high-technology areas, pre-engineering, public service, travel and tourism, and video technology. An important facet of Career Academies is voluntary recruitment – students enroll in the career themes that interest them.
- 3) **They establish partnerships with local employers to increase students' awareness of career options in a given field.** These private sector partners may inform curriculum and standards, teach and interact with students, provide career awareness and development activities, and

offer opportunities for internships and jobs.<sup>7</sup> In addition, they may help to provide funding for these programs.

## Why is the Career Academies Evaluation Reliable?

MDRC, a well-respected social policy research organization, has been conducting an evaluation of the Career Academy approach since 1993. This study is rigorous for several reasons.

**Large, Diverse Sample.** The study included 1,764 students from nine high schools across the United States. Each school was located in or near a large urban school district. Locations included Baltimore, MD; Miami-Dade, FL; Pittsburgh, PA; Socorro, TX; San Jose, Santa Ana, and Watsonville, CA; and Washington, DC. Compared to school districts nationally, these schools had substantially higher dropout rates, unemployment rates, percentages of low-income families, and percentages of ethnic minority students. The participating Career Academies served a cross-section of the student populations and tended to reflect the diverse ethnic, gender, and socioeconomic characteristics of their host high schools. More than 50% of the sample was Hispanic and another 30% was African-American.

Students came to the programs with varying levels of school engagement; some were doing well in school, and others appeared at risk of dropping out or ending their education after high school. The goal for the “motivated” students was to prepare them for college while providing career-related learning experiences. The goal for the “at-risk” students was to reengage them, providing them with more applied learning experiences and encouraging them to develop higher aspirations for education and employment. For analysis purposes, the study divided the students into groups at high, medium, and low risk of dropping out of school based on several indicators (e.g., eighth-grade attendance rates and grades, falling behind on progress toward graduation, being retained in a prior grade, or having transferred schools two or more times).<sup>8</sup>

**Random Assignment Research Design.** The Career Academies Evaluation is one of the few studies of a school reform initiative that uses a rigorous random assignment design. Because so many eligible and appropriate students applied for the program, approximately 55% of applicants were randomly selected to enroll in a Career Academy. Academy students were compared to a nontreatment group, consisting of the remaining 45% of students who received the high schools’ regular education programs. The outcomes for the non-Academy group are the best indicators of how students in the Academy group would have fared if they had not had access to the program.

**Long-term (Longitudinal) Research Design.** The Career Academies Evaluation used data from high school transcripts and surveys administered during high school and at three points during the eight years following students’ scheduled graduation from high school. The latest findings are based on data collected from 1,428 youth who completed a follow-up survey eight years after graduating from high school. We can have a high degree of confidence that the findings are reliable

*We can have a high degree of confidence that the findings are reliable given the length of the study and the high response rates.*

because of the extensive length of time that the students were followed, and the high response rates (about 81% of the original sample).

## Have Career Academies Been Successful?

### Short-Term Indications of Success

Data collected during high school showed that Academy students were more likely than non-Academy students to:

- report high levels of interpersonal support from teachers and peers;
- build a high school transcript that combined academic and career/technical courses;
- be employed during high school, and be employed in jobs that were connected to school and that incorporated “high” levels of work-based learning; and
- be exposed to a range of career awareness and development activities.

For students who entered the program at high risk of dropping out, the Academies increased the likelihood of staying in school through the end of the 12th grade year, improved attendance, and increased the number of credits earned toward graduation. For students at medium or low risk of dropping out, the Academies increased career and technical coursetaking and participation in career development activities without reducing academic coursetaking.

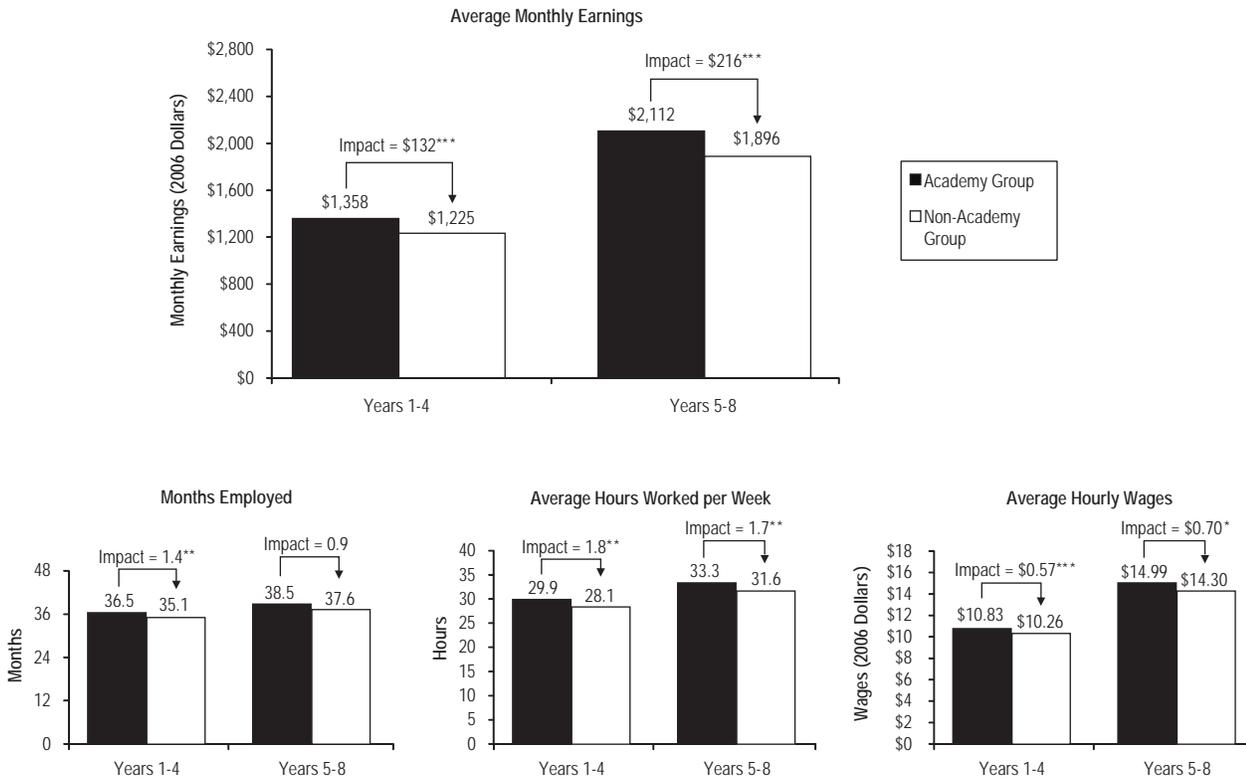
One important finding was related to the structure of employer partnerships within a Career Academy. Each program’s partnership with local business or industry varied: some were highly structured and others were more loosely arranged. Some Career Academies employed a non-teaching staff person as a liaison between the employers and the students; some added that responsibility to the load of their teachers. Students in Career Academies with highly structured employer partnerships or support for non-teaching staff who served as liaisons reported higher levels of participation in career awareness and work-based learning activities than those in Career Academies that had less-structured partnerships or coordinators with teaching responsibilities.

*Career Academies produced positive and sustained impacts on average monthly earnings eight years after the program ended.*

### Long-Term Labor Market Outcomes

- 1) Remarkably, the Career Academies produced positive and sustained impacts on average monthly earnings exhibited eight years after the program ended (see Figure 1).

Figure 1. Impacts on average monthly earnings and components of earnings for the full sample.



Adapted from *Career Academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood* (p. 13). Adapted with permission. Source: MDRC calculations from the *Career Academies Evaluation Four-Year Post-High School Follow-Up Survey* (N = 1,458) and the *Eight-Year Post-High School Follow-Up Survey* (N = 1,428). Notes: Earnings and wages are reported in 2006 dollars. Measures reflect averages over the first and second 48-month periods following scheduled high school graduation. Statistical significance levels are indicated as: \*\*\* = 1 percent; \*\* = 5 percent; and \* = 10 percent.

For each participant, Career Academies produced an average increase in earnings of \$132 per month during the first four years of the follow-up period and \$216 per month in the final four years. This amounts to an additional \$2,088 in earnings per year and a total net increase of \$16,704 (in 2006 dollars) for each participant in the Academy group across the eight-year follow up. These differences are statistically significant, meaning it is very unlikely that the differences arose by chance. As shown in Figure 1, the increases in monthly earnings were driven by increased number of months employed, hours worked per week, and hourly wages in the Academy group. Interestingly, Academy members were more likely to be working in a job that was directly related to the subjects and themes they studied during high school. What's more, Academy group members indicated that their current choice of occupational field was influenced by their high school experiences.

*For each participant, Career Academies produced an average increase in earnings of \$132 per month during the first four years of follow up and \$216 per month in the final four years.*

*Over eight years, young men in Career Academies earned an average of nearly \$30,000 in additional real earnings in 2006 dollars.*

- 2) The Academy impacts on labor market outcomes were concentrated among young men in the study sample. Impacts for young women were not significant.

During the eight years after scheduled graduation, the Career Academy produced an average increase of \$311 in real monthly earnings per participant for young men (compared to \$86 for young women). This amounts to an increase of \$3,722 in annual earnings. Over eight years, this totals nearly \$30,000 in additional real earnings (in 2006 dollars) for males in the Academy group. The Academy programs also produced sizable increases in number of months employed, hours worked per week, and hourly wages for young men. To put this effect into perspective, research has estimated that two years of community college increases annual earnings for young men by 11-12%, compared to having only a high school diploma.<sup>9</sup> Career Academies produced a 16% increase in earnings over the non-Academy groups. This difference does not mean that Career Academies can or should serve as a substitute for postsecondary education for young men, but it does highlight the size of the labor market impact of Career Academies. Although the labor market outcomes for young women in the program were generally positive, they were not statistically significant.

- 3) Impacts on labor market outcomes varied among the three risk subgroups, but were not statistically significant.

The most consistently positive impacts accrued to the high-risk subgroup. However, these students were also the most likely to leave the program before the end of their 12th grade year, meaning there was less time for the program to impact them.

## Long-Term Education Outcomes

- 1) Importantly, Career Academies had no impact (positive or negative) on high school completion rates. However, the rates for both the Academy and non-Academy groups were higher than national averages.

Specifically, students in both the Academy and non-Academy group were substantially more likely to graduate from high school on time (about 75%) than similar students from similar districts across the country (about 65%). Yet we cannot conclude that Career Academies produced these results, because both the Academy and non-Academy groups had similar graduation rates. This may mean that Career Academies attract better-prepared or more highly motivated students.

- 2) Overall, the Career Academies had no impact (positive or negative) on postsecondary education enrollment and attainment rates.

By the end of the follow-up period, about 50% of the Academy group had earned a postsecondary credential. The non-Academy group had similar educational outcomes. This means that the substantial impacts on labor market outcomes for young men did not come at the expense of reducing their access to and completion of postsecondary education credentials.

- 3) Impacts on educational attainment for young men and young women did not vary. The program also did not differ in its overall impact on educational attainment for the high-, medium-, or low-risk subgroups.

## Long-Term Family Formation Outcomes

The study also examined several indicators of a successful transition into adulthood. Career Academies had striking impacts on family formation.

- 1) Career Academies produced an increase in the percentage of young people living independently with their children and a spouse or partner. While these impacts were similar for both young men and young women, young men also experienced positive impacts on marriage and being custodial parents.

At the eight-year follow up, one-third of the Academy group was living independently with their children and a spouse or partner, compared with 27% of the non-Academy group. This represents a 23% increase in two-parent households over and above the rates for the non-Academy group. Of the Academy group, 38% were married and living with their spouse and 51% were custodial parents eight years after scheduled graduation. This amounts to a statistically significant increase in marriage rates of 4 percentage points and custodial parent rates of 7 percentage points, relative to the non-Academy group. The impacts on marriage and being a custodial parent were somewhat larger for young men than for young women. For young women, the Career Academies significantly decreased the percentage still living with a parent or guardian at the eight-year follow up by 9 percentage points.

### What are the Limitations of the Career Academy Approach?

Career Academies had some impressive impacts on youth adult success, but there were some notable limitations. First, nearly one-third of the students who initially enrolled in the Academies left the programs before the end of high school. In fact, between students who left the program or who did not fully participate, over half the students who were initially selected to enroll in a Career Academy did not participate intensively in career awareness and development activities or were not involved in work-based learning activities. Students in the high-risk category left the program in the greatest percentages. (The evaluation results included all students who enrolled in the program, regardless of whether they remained in the program or fully participated.)

Additionally, the curricula and instructional strategies used in these Academies were generally similar to those offered in the rest of the high school and did not typically include integration of academic content and knowledge with career-related applications. Such integration would have taken greater investment in professional development for staff, and staff time to create new curricula. The Academies had no impact on standardized test scores.

Finally, it's important to acknowledge that the findings listed in this chapter are most likely to apply to Career Academies that are able to carefully implement the three core components of the model with integrity.

*Young men who were in Career Academies were more likely to be married and to be custodial parents eight years after high school.*

## What is the Future of Career Academies?

**The Career Academies Project: Linking Education and Careers.** This project, funded by the Institute of Education Sciences of the Department of Education, grows directly out of the MDRC evaluation. It attempts to strengthen the work-based learning component of Academies along with enhancing college and career exploration activities. The goal is to institute a cohesive program consisting of curricula, resources, guides, and professional development to be embedded in Academies. This will ensure that all students understand the connections between what they learn in school and their future, make informed decisions about college and career, and acquire the skills to succeed in both. The program is now fully developed and is being piloted in 18 Career Academies in five cities. Data are being collected to measure both best practices and the program's ability to influence key student outcomes. A final report, guides, and curricula will be available within the year.

**Funding for Career Academies.** Since the end of the School-to-Work Opportunities Act, Career Academies have struggled with providing work-based learning and career exploration experiences to their students, particularly the capstone internship experience. Federal funding has been proposed that would allocate \$1 billion to Career Academies over the course of three years. Grants of \$4 million would be available to states to distribute competitively to localities. The Department of Education proposes a definition of "Career Academy" that matches the core components outlined in this chapter (see page 16). Funding at this level could increase the number of Career Academies by 3,000 and serve an additional 500,000 students.<sup>10</sup>

## What are the Implications for Policymakers?

According to two national organizations that support Career Academies (the National Academy Foundation and the Career Academy Support Network), only three high schools in Wisconsin currently operate recognized academies (see chapter by L. Allen Phelps in this report). According to the Wisconsin Department of Public Instruction, several other high schools in the state may be implementing Academies or similar approaches, but these efforts are not tracked. Given the findings of the MDRC evaluation, here are some directions for policymakers as they consider the role of Career Academies in the youth employment crisis in this country:

*Only three high schools in Wisconsin currently operate recognized Career Academies.*

- 1) This evaluation demonstrates clearly that career-related experiences during high school can improve students' postsecondary labor market prospects and ease their transition into family life. These results can only be reliably achieved if the three components of the Career Academy model are implemented with integrity.
- 2) Despite initial fears, school-to-career education can be accomplished without compromising academic goals, or distracting students from postsecondary education.

- 3) Career Academies can successfully serve students who are at high risk of dropping out of high school, while improving prospects for all students. In fact, the high-risk subgroup experienced the most consistent and positive impacts on labor market outcomes. All of this occurred without a systematic decline in access to postsecondary education opportunities for the low-, medium- or high-risk students.
- 4) Career Academies are committed to serving a diverse group of students, but they can make greater efforts to recruit and retain a larger proportion of high-risk students. Additional funding may be required for these outreach efforts.
- 5) Because more than 80% of the young people in the Career Academies Evaluation were Hispanic or African-American, these findings may have implications for determining effective strategies to help improve the employment prospects of young men of color, who disproportionately struggle in the labor market.
- 6) Within Career Academies, the structure of employer partnerships has a significant impact on student experiences. Academies with more highly structured partnerships, or with non-teaching staff dedicated to coordinating the partnerships, consistently offered students more opportunities to experience career awareness and development activities.
- 7) Several school districts and school reform initiatives around the country are now attempting to convert entire high schools into clusters of Career Academies. Instead of giving students the option of enrolling in traditional general or vocational programs, these wall-to-wall Academies offer students a choice among different Academies that combine academic and career-related curricula. This approach maximizes enrollment by the high-risk students (because it's mandatory) while maintaining participation of a broad mix of students. These models have not yet been evaluated.

Career Academies are one of the few youth-focused interventions that have been found to improve the labor market prospects of young men. In fact, the MDRC evaluation demonstrates that Career Academies can improve labor market preparation and successful school-to-work transitions without compromising academic goals and preparation for college. Investments in Career Academies during high school can produce substantial and sustained improvements in youth labor market prospects and ease transitions into marriage and parenthood.

*Career Academies are one of the few youth-focused interventions that improve labor market prospects for young men.*

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This chapter was adapted from the following publications:

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Kemple, J. J., Pogliinco, S. M., & Snipes, J. C. (1999). *Career Academies: Building career awareness and work-based learning activities through employer partnerships*. New York: MDRC.

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## Endnotes

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<sup>5</sup> Stern, D., Dayton, C., & Raby, M. (2010). *Career Academies: A proven strategy to prepare high school students for college and careers*. Berkeley, CA: Career Academy Support Network. Retrieved from [http://casn.berkeley.edu/resource\\_files/Proven\\_Strategy\\_2-25-1010-07-07-03-29-28.pdf](http://casn.berkeley.edu/resource_files/Proven_Strategy_2-25-1010-07-07-03-29-28.pdf)

<sup>6,7</sup> Smith, T. J. (2008). *Striking the balance: Career Academies combine academic rigor and workplace relevance*. Washington, DC: National High School Center. Retrieved from [http://www.betterhighschools.org/docs/MDRC\\_CareerAcademiesSnapshot\\_08-01-08.pdf](http://www.betterhighschools.org/docs/MDRC_CareerAcademiesSnapshot_08-01-08.pdf)

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- <sup>9</sup> Marcotte, D. E., Bailey, T., Borkoski, C. & Kienzl, G. S. (2005). The returns of a community college education: Evidence from the National Education Longitudinal Survey. *Educational Evaluation and Policy Analysis*, 27(2), 157-175.
- <sup>10</sup> Duncan, A. (2012, July). *Remarks by U.S. Secretary of Education Arne Duncan at the National Academy Foundation NEXT Conference*. Washington, DC: U.S. Department of Education. Retrieved from <http://www.ed.gov/news/speeches/remarks-us-secretary-education-arne-duncan-national-academy-foundation-next-conference>

## Glossary

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### Career Academies

A widely used high school reform aiming to keep students engaged in school and prepare them for successful transitions to postsecondary education and employment. They utilize small learning communities, combine academic and technical curricula around a career theme, and establish partnerships with local employers to provide work-based learning opportunities.<sup>1</sup>

### Longitudinal Research Design

A research study that is conducted over a long period of time and measures the same variables at multiple points in time.

### Postsecondary Education

Education that occurs after the completion of high school, generally leading to a degree, credential, or certification in an academic, career-oriented, or professional field.

### Random Assignment Research Design

A research study that is conducted by splitting participants into two groups: a treatment group and a nontreatment group. The participants are split in such a way that each one has an equal chance of being assigned to the treatment (or the nontreatment) group. The study then measures the differences between the two groups after the treatment or program has been administered. This design gives the best assurance that differences between the two groups are due to the treatment or program, and not due to other factors.<sup>2</sup>

### Randomized

A method of dividing research participants such that each participant has an equal chance of being assigned to the treatment group or the nontreatment group.

### Small Learning Communities

“Large high schools have begun a push for smaller learning communities within the large campus. A smaller learning community might be divided by interests or simply a division made based on arbitrary factors. The goal of the smaller learning community is to offer more attention to students and give them a more targeted track for their future learning.”<sup>3</sup>

### Vocational Education

Education designed to train people in job-specific skills.

## Glossary Endnotes

<sup>1,2</sup> Kemple, J. J., & Willner, C. J. (2008). *Career Academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood*. New York: MDRC.

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