



Top Tier Evidence Initiative:
Evidence Summary for Career Academies

HIGHLIGHTS:

- **Intervention:** Small learning communities in low-income high schools, combining academic and technical/ career curricula, and offering workplace opportunities through partnership with local employers.
- **Evaluation Methods:** A large, multi-site randomized controlled trial.
- **Key Findings:** 11% increase in average annual earnings (\$2,460 per year), sustained over the eight years after scheduled high school graduation. The effect was concentrated among men (who experienced a 17% earnings increase), and was not statistically significant for women.
- **Other:** Strong evidence of effectiveness applies to the Career Academy model evaluated in this trial (as opposed to other types of Career Academies).

I. The Top Tier initiative’s Expert Panel has identified this intervention as *Top Tier*.

The Panel finds that this intervention meets the Congressional Top Tier evidence standard, defined as: *Interventions shown in well-designed and implemented randomized controlled trials, preferably conducted in typical community settings, to produce sizable, sustained benefits to participants and/or society.*

II. Description of the Intervention:

The Career Academies in the study summarized below operate within large high schools in low-income, urban areas, and have three distinguishing characteristics:

- They are organized as small learning communities (150 to 200 students) to create a more supportive, personalized learning environment;
- They combine academic and career and technical curricula around a career theme; and
- They establish partnerships with local employers to provide career awareness and work-based learning opportunities for students.

Each Academy typically focuses on a specific field (e.g., health care). Students are recruited to attend, and then must submit an application. Approved applicants enter a Career Academy in 9th or 10th grade, and are taught by a single team of teachers through grade 12.

The per-student cost of Career Academies varies widely depending on the specific features of the school. One estimate is that, in California, a high school operating a three-year Career Academy (grades 10-12) incurs an additional cost of approximately \$760 per Career Academy student, per year in 2014 dollars.

[Click here to go to the Career Academy Support Network.](#)

III. Evidence of Effectiveness

This summary of the evidence is based on a systematic search of the literature, and correspondence with leading researchers, to identify all well-designed and implemented randomized controlled trials of Career Academies. Our search identified one such study – a large, multi-site trial – summarized below. Importantly, this trial evaluated Academies that had successfully implemented the core features of the Career Academies model described above. Thus its findings apply only to such Academies and cannot be presumed to apply to Academies that depart from the model (e.g., by implementing the program school-wide rather than as a within-school program to which students apply).

Overview of the study design: Large, multi-site randomized controlled trial of Career Academies in nine urban U.S. school districts, with follow-up 11-12 years after random assignment.

The trial evaluated nine Career Academies in high schools located in or near large urban school districts across the United States. These Academies had each implemented and sustained the core features of the Academy model for at least two years. They represented a variety of the career themes that Academies typically offer (e.g., technical, service-oriented, or business-related).

The study randomly assigned 1,764 8th and 9th grade students who had applied to one of these Academies and met the eligibility requirements to (i) a group that was invited to participate in the Academy (“Career Academy group”); or (ii) a control group that remained in the regular high school curriculum. 58% of those assigned to the Career Academy group enrolled in the Academy and remained in the program through the end of their 12th grade year.

86% of the students in the study sample were Hispanic or African-American, 38% were from single-parent households, and 24% were from families receiving welfare or food stamps.

Effects of Career Academies at the 11-12 year follow-up – i.e., 8 years after students' scheduled high school graduation:

These are the effects on the main outcomes that the study measured at the 11-12 year follow-up, compared to the control group (including any such outcomes for which no or adverse effects were found). All effects shown are statistically significant at the 0.05 level unless stated otherwise. The earnings amounts are in 2014 dollars.

Effects supported by strong evidence:

- 11% increase in average annual earnings – i.e., \$2,460 per year – over the previous eight years (\$24,560 in annual earnings for the Career Academy group versus \$22,100 for the control group).
- Importantly, this effect was sustained over the full eight years, and showed no sign of diminishing.
- The effect was concentrated among men, who experienced a 17% increase in annual earnings over the follow-up period. There was no statistically significant effect on women’s earnings.

Effects that may be valid, but await confirmation in additional studies:

- 23% increase in the likelihood of living independently with a child and partner (33% of the Career Academy group lived independently with a child and partner versus 27% of the control group).
- 35% decrease in the likelihood of being a non-custodial parent (5% for the Career Academy group versus 8% for the control group).

Although these effects may be valid, we suggest corroboration in additional studies is needed to rule out the possibility that they occurred by chance. This is because (i) these are effects on secondary outcomes (rather than the primary outcomes, such as earnings, that the intervention was designed to affect), and (ii) the study measured the effects on many such outcomes, and found a few (above) to be statistically significant whereas a number of others were not (as described below). Corroboration is therefore needed to ensure that these were not false discoveries.

Outcomes for which weak or no effects were found:

- Small (4%) increase in the number of months employed during the first four years after scheduled graduation, but this effect had diminished to insignificance during the second four years.
- No effect on completion of high school or equivalency (GED) degree, possibly because nearly all (95%) of the students in the Career Academy and control groups completed high school or a GED (i.e., there was a “ceiling” effect).
- No effects on attainment of a postsecondary credential, standardized test scores, welfare or food stamp receipt, drug use, criminal activity, or health insurance coverage.

Discussion of study quality:

- This was a large, multi-site study that evaluated ongoing, well-implemented Career Academies in their typical setting (large urban school districts), thus providing evidence that such Academies are effective under real-world conditions.
- The study had a long-term follow-up (11-12 years after random assignment) and low attrition: Outcome data were obtained for 81% of the original sample, and follow-up rates were similar for the Career Academy and control groups.
- Career Academy and control group members in the follow-up sample were largely equivalent in their observable pre-program characteristics (e.g., demographics, performance in school, and attitudes toward school).
- The study measured outcomes for all students assigned to the Career Academy group, regardless of whether or how long they actually participated in the program (i.e., the study used an “intention-to-treat” analysis).
- A study limitation is that outcomes were measured through self-reports, obtained through researcher-administered surveys, and for the most part were not corroborated by official records (e.g., state unemployment insurance data on earnings and employment).

IV. Summary of the Intervention's Benefits and Costs:

If taxpayers fund implementation of this program, what benefits to society can they expect to result, and what would be their net cost? The following table provides a summary. This is intended to be a general overview of social benefits in relation to taxpayer cost, rather than a comprehensive benefit-cost analysis. It assigns monetary value to particular benefits and costs only when doing so requires minimal assumptions. All monetary amounts shown are in 2014 dollars.

<u>Benefits to Society</u>
<ul style="list-style-type: none">▪ A \$2,460 (11%) increase in annual earnings per student during the eight years following his or her scheduled high school graduation.▪ The total earnings gain was \$19,700 per student over the eight years.
<u>Net Cost to Taxpayers</u>
<ul style="list-style-type: none">▪ The program cost approximately \$2,300 per student for a three-year Career Academy, or \$3,000 per student for a four-year Career Academy.▪ This cost was at least partly offset by the increased tax revenue resulting from the gain in earnings of Career Academy students.

V. References:

Kemple, James J. and Cynthia J. Willner, *Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood*, MDRC, June 2008. Here are links to the [main study report](#) and [technical resources](#).

Kemple, James J. and Judith Scott-Clayton, *Career Academies: Impacts on Labor Market Outcomes and Educational Attainment*, MDRC, March 2004. Here is a [link to the study](#).

Kemple, James J. and Jason C. Snipes, *Career Academies: Impacts on Students' Engagement and Performance in High School*, MDRC, March 2000. Here is a [link to the study](#).

Note: Panel members Ron Haskins and Steve Raudenbush did not participate in the Advisory Panel's review of this intervention.