

The Evidence-Based Education Request Desk at REL-SE

REQUEST #85

What do we know about the impact and implementation of Career Academies?

RESPONSE

Career Academies have been around for over 30 years. Their original design stressed facilitating the school-to-work transition. In the early 1990's the focus began to shift to preparing participating students for both college and the world of work. In its current form, Career Academies is an intervention that generally includes the following components:

1. School-within-a-school, that provides focused interpersonal support for students;
2. Combination of academic and career-oriented curricula, using a career theme to integrate the two; and
3. Partnerships with local employers to provide students with career development and work-based learning opportunities.

Educators and policymakers considering this approach should read and discuss the research and evaluation for what it can offer about the kinds of impacts that might be possible. It is also important to learn what impacts were desired but not realized. Finally, it is important to understand as much as possible about the implementation challenges that have been experienced by others and the conditions under which this innovation might fail. Information on this intervention is provided in two parts below: Information we found on impacts and information we found on implementation. We encourage discussions about both of these aspects of use.

Impact

One critical question people want to know is: If we implement this, what might be the types of outcomes we could expect given past research and evaluation?

The Career Academies intervention is unique in that it has been subject to one of the few longitudinal experimental studies in education. (That is, it involved random assignment of students such that they either participated in a Career Academy or did not.) In addition, we found one high quality quasi-experimental study completed after 1990. (Quasi-experimental studies are those where students are not randomly assigned but a similar group is found for comparison purposes.)

Here is a summary of the studies that examined impact by comparing two groups of students (those who experienced Career Academies and those who did not):

- MDRC (Kemple & Snipes, 2000; Kemple, 2001; Kemple, 2004) conducted a 10-year longitudinal experimental study of Career Academies that compared the results of randomly assigned participating students to a randomly assigned control group of non-participating students. This study found the following long-term impacts:
 - Career Academies produced positive labor market outcomes for young men; there was no difference for young women.
 - Career Academies had no impact on overall educational attainment.
 - Among students most at risk of dropping out, Career Academies significantly improved high school outcomes. The Academies reduced dropout rates, improved attendance, and increased academic course-taking.
- One quasi-experimental study (Maxwell & Rubin, 2002) found positive outcomes for Career Academies, including increased graduation rates and increased attendance at post-secondary institutions.

Table 1. Outcome Results

Study	Outcome Measure	Methodology¹	Percentage Increase over Comparison Group	Overall Findings
MDRC Study (Kemple, 2004)	Average monthly earnings	Experimental—student surveys	+10.3%	Labor market outcomes are very positive for men; no difference for women
	Earned high school diploma	Experimental—student surveys	+0.8%	Slightly positive impact on on-time graduation rates but differences between participants and non-participants disappear by one year later.
	Enrolled in post-secondary education	Experimental—student surveys	-1.1%	No difference.

¹ Each research methodology has its benefits and drawbacks. Descriptive studies are good for describing what is happening or how frequently things are happening. Case studies are helpful for understanding how things work in a particular setting but they are not good for determining how effective a model is. Correlational studies can look at relationships between different factors but cannot determine causality. Experimental designs do the best job of determining the effectiveness of interventions but cannot explain why things happen; in addition, they only work in some situations. Quasi-experimental studies can make some claims of causality but they have to be very carefully designed.

Study	Outcome Measure	Methodology ¹	Percentage Increase over Comparison Group	Overall Findings
Maxwell & Rubin (2002)	High school graduation	Quasi-experimental—post-high school graduation student survey ²	+8.7%	The “average” career academy student has an 8.7 percentage point increase in the probability of graduating from high school
	College attendance	Quasi-experimental—post-high school graduation student survey	+11.6% (two-year) +17.9% (four-year)	The “average” career academy student has an increased probability of attending a two- or four-year post-secondary institution

What Works Clearinghouse (WWC) is a federally sponsored project that sorts through rigorous studies on interventions, makes judgments about the studies’ strength, and summarizes the findings. WWC has done an intervention report on the effectiveness of Career Academies specifically as a dropout prevention program. The intervention report includes results from one study (MDRC, summarized above). The report (available at www.whatworks.ed.gov) includes the following summary:

The WWC reviewed seven studies on *Career Academies*. One of these studies met WWC evidence standards, and the remaining six studies did not meet WWC evidence screens. Based on this one study, the WWC found potentially positive effects on staying in school, potentially positive effects on progressing in school, and no discernible effects on completing school. The evidence presented in this report is limited and may change as new research emerges (p. 3).

Summary: The research on the impact of Career Academies suggests that if implemented well, you might expect some positive impacts on students at-risk for dropping out and some other longer term impacts on certain groups of students, particularly labor market outcomes for males. It is possible that there may be some increases in your four-year graduation rate. It is likely, however, that Career Academies by themselves will not increase student achievement.

² A potential limitation of this study is the extremely low survey response rates: 20% for academy students and 11% for comparison students.

Implementation

As important as it is to examine research on impact, it is just as important for a team to consider what can be learned from studies on implementation of the approach.

The MDRC evaluations also looked at issues associated with implementation. They focused particularly on the degree of interpersonal supports offered to students. In comparing the degree to which a Career Academy offered more interpersonal supports than the larger school in which it was embedded, the study concluded that poor implementation of this component was worse than no implementation at all:

In sites where the Academies produced particularly dramatic enhancements in the interpersonal support that students received from teachers and peers, the Career Academies reduced dropout rates and improved school engagement for both high-risk and medium-risk subgroups (about 75 percent of the students served). **Academies that did not enhance these supports actually increased dropout rates and reduced school engagement for some students.** (Kemple & Snipes, 2000, p. ES-2—emphasis added).

The above finding raises a critical issue for potential implementing sites. If there is not a commitment to implementing this interpersonal support component well, some students actually may be worse off in a Career Academy setting.

Discussion

Given the impact and implementation results described above, some questions to consider when implementing Career Academies may include:

- What are you expecting to accomplish with Career Academies? Ensure that the goals you have for Career Academies are realistic given the research. For example, if well implemented, you should be able to expect decreased dropout rates. You should likely not expect any changes in student test scores.
- Are you committed to putting the interpersonal supports in place that appear to be necessary for getting positive results?
- What do others who have implemented Career Academies well say about the time and staff attitudes and skills necessary to implement well?
- Are there any students who might be worse off in a Career Academy setting? What could be done to prevent this from happening?
- What is a realistic time frame for considering whether the approach should be tried and how will stakeholders be involved in the discussion?
- How could you begin with a pilot to examine student impact before extensive school-wide effort is involved?

ANNOTATED BIBLIOGRAPHY

MDRC Career Academies Evaluation

The reports below describe the results from the longitudinal Career Academies Evaluation. The evaluation used an experimental design that took advantage of the fact that more students applied to be part of the Academies than there were spots. As a result, one group of students was randomly assigned to participate; the remaining students were the control group. A total of 1,764 students in nine schools entering the Academies over three years participated in the study. 959 students were in the experimental Academy group and 805 students were in the control non-Academy group.

Kemple, J. J. (2004). *Career academies: Impacts on labor market outcomes and educational attainment.* New York, NY: MDRC. This report presents findings from surveys sent to students four years after students' anticipated graduation dates. Eighty-two to eighty-three percent of students in both groups responded to the surveys. The study came to the following conclusions regarding program impacts:

- “The Career Academies produced positive and sustained impacts on a range of labor market outcomes among the young men in the study sample.” (p. ES-3)
- “The Career Academies produced substantial increases in employment and earnings for students who entered the programs at high or medium risk of dropping out of high school.” (p. ES-5)
- “Overall, the Career Academies had no impacts (positive or negative) on educational attainment, although high school completion rates and postsecondary enrollment and attainment rates were higher than national averages.” (p. ES-5)
- “The Career Academies modestly reduced enrollments in post-secondary education among those who entered the programs at highest risk of dropping out of high school. This does not appear to have diminished the Academies' impact on employment and earnings for this subgroup.” (p. ES- 7)

Kemple, J. J. (2001). *Career academies: Impacts on students' initial transitions to post-secondary education and employment.* New York, NY: MDRC. This report presents findings from a survey administered to the students 14 months after their scheduled graduation. This report presents the following conclusions relative to program impacts:

- “On average, the Career Academies had little impact on high school graduation rates and initial post-secondary outcomes. The relatively high outcome levels achieved by Academy students were matched by those for their non-Academy counterparts.” (p. ES-3)
- “Among students at high risk of dropping out, the Career Academies' impacts were less pronounced during the year after high school than they were during high school.” (p. ES-3)
- “In general, the findings for students who entered the program at medium or low risk of dropping out of high school were consistent with those for the full sample:

Academy and non-Academy students did well relative to national samples, but the two groups' education and labor market outcomes were comparable.” (p. ES-6)

Kemple, J. J., & Snipes, J. C. (2000). *Career academies: Impacts on students' engagement and performance in high school.* New York, NY: MDRC. This report represents the conclusion of the first phase of the evaluation, which looked at students' results while in school. The study used the following data sources: students' transcripts, student surveys, standardized test scores in mathematics and reading, and qualitative data documenting the implementation of the program. The report presents the following conclusions:

- “The Career Academies in this study increased both the level of interpersonal support students experienced during high school and their participation in career awareness and work-based learning activities.
- The Career Academies substantially improved high school outcomes among students at high risk of dropping out. For this group, the Academies reduced dropout rates, improved attendance, increased academic course-taking, and increased the likelihood of earning enough credits to graduate on time.
- Among students least likely to drop out of high school, the Career Academies increased the likelihood of graduating on time. The Academies also increased vocational course-taking for these students without reducing their likelihood of completing a basic core academic curriculum.
- In sites where the Academies produced particularly dramatic enhancements in the interpersonal support that students received from teachers and peers, the Career Academies reduced dropout rates and improved school engagement for both high-risk and medium-risk subgroups (about 75 percent of the students served). Academies that did not enhance these supports actually increased dropout rates and reduced school engagement for some students.
- The Career Academies did not improve standardized math and reading achievement test scores.
- When the findings are averaged across the diverse groups of students in the full study sample, it appears that the Career Academies produced only slight reductions in dropout rates and modest increases in other measures of school engagement. These aggregated findings, however, mask the high degree of variation in effectiveness among different groups of students and across the different program contexts.” (pp. ES 2-3)

All MDRC reports are available online at: http://www.mdrc.org/project_publications_29_1.html

Maxwell, N. L., & Rubin, V. (2002). *High school career academies and postsecondary outcomes.* *Economics of Education Review.* 21(2), 137-52. This article examines student outcomes associated with career academies. It uses both a detailed data set that contains post-secondary information for general, academic, vocational and career academy students from a single district and a national (across-district) database of urban, public school students in the National Education Longitudinal Study to compare the outcomes from career academy programs with those from more traditional programs. It concludes that:

- Students from career academies have a greater probability of graduating from high school.
- Students from career academy programs are more likely to believe that their high school provided them with more education and workplace skills as compared with students from the general program.
- Students from career academies attend two and four-year colleges at the same level as students describing themselves as having had an academic track program. Because career academies often draw students from backgrounds that typically define them as “at-risk” of school failure, these gains are realized for individuals who are often considered less likely to achieve post-secondary success.
- Career academies, however, may not be equally effective for all students, and they may be expensive to implement. “Females, African–Americans and (native) English speakers from the career academies are more likely to have increased educational probabilities over comparable students who define themselves as from general and vocational programs. The career academy program may have less positive outcomes for males, Latinos and non-native English speakers (usually Asian)” (p. 147).