

THE IMPACT OF AN INTENSIVE YEAR-ROUND MIDDLE SCHOOL PROGRAM ON COLLEGE ATTENDANCE



Ivonne Garcia
Jean Baldwin Grossman
Carla Herrera
Leigh L. Linden

June 2020

The Impact of an Intensive Year-Round Middle School Program on College Attendance

IVONNE GARCIA
JEAN BALDWIN GROSSMAN
CARLA HERRERA
LEIGH L. LINDEN



JUNE 2020

FUNDERS

Funding for this report came from the U.S. Department of Education under its Investing in Innovation (i3) initiative, under i3 grant number U411B140013, and the Spencer Foundation. The i3 grant called for an investigation into how participation in Higher Achievement affected subsequent college matriculation. The Spencer Foundation also contributed funds to address this question.

The research team would also like to thank the foundations that funded the study through its first 10 years. They include The Atlantic Philanthropies, Bank of America, the Smith Richardson Foundation, the Spencer Foundation, The Wallace Foundation, and the William T. Grant Foundation. The researchers are particularly indebted to Robert Granger while he was at the William T. Grant Foundation for his support and guidance during the earliest phases of this project; and to the Spencer Foundation for its willingness to use the remaining funds in its original grant to investigate the long-term impacts of Higher Achievement.

Dissemination of MDRC publications is supported by the following organizations and individuals that help finance MDRC's public policy outreach and expanding efforts to communicate the results and implications of our work to policymakers, practitioners, and others: The Annie E. Casey Foundation, Arnold Ventures, Charles and Lynn Schusterman Family Foundation, The Edna McConnell Clark Foundation, Ford Foundation, The George Gund Foundation, Daniel and Corinne Goldman, The Harry and Jeanette Weinberg Foundation, Inc., The JPB Foundation, The Joyce Foundation, The Kresge Foundation, and Sandler Foundation.

In addition, earnings from the MDRC Endowment help sustain our dissemination efforts. Contributors to the MDRC Endowment include Alcoa Foundation, The Ambrose Monell Foundation, Anheuser-Busch Foundation, Bristol-Myers Squibb Foundation, Charles Stewart Mott Foundation, Ford Foundation, The George Gund Foundation, The Grable Foundation, The Lizabeth and Frank Newman Charitable Foundation, The New York Times Company Foundation, Jan Nicholson, Paul H. O'Neill Charitable Foundation, John S. Reed, Sandler Foundation, and The Stupski Family Fund, as well as other individual contributors.

The findings and conclusions in this report do not necessarily represent the official positions or policies of the funders.

For information about MDRC and copies of our publications, see our website: www.mdrc.org.

Copyright © 2020 by MDRC®. All rights reserved.

OVERVIEW

Too many talented students who go to under-resourced schools do not achieve their full potential. Though they may perform very well relative to their classmates, these students do not receive the same kinds of academically challenging opportunities throughout their educational journey as do their counterparts in better-resourced public and private schools. Rather than matriculating to competitive high schools and from there to selective colleges they are qualified to attend, these students often go to less academically competitive high schools and on to colleges where graduation rates are low. Some even forgo college altogether.

To address this problem, Higher Achievement offers an intensive, academically oriented program for middle school students in under-resourced schools. Starting in the summer before fifth or sixth grade, Higher Achievement offers its participants, called “scholars,” 650 extra hours of academic enrichment and instruction after school and during the summers through the eighth grade. The program includes English and math instruction as well as field trips to competitive high schools and colleges, achievement test preparation, and assistance in applying for financial aid. This short report presents the results of a randomized controlled trial of Higher Achievement that started in 2005, comparing the outcomes of students who were offered the opportunity to participate in Higher Achievement (the program group) and students who were not (the control group). It presents the impacts of the program one, two, and four years after enrollment, as well as its long-term impacts on college attendance.

The study found that Higher Achievement was successful at changing the educational trajectory of students through middle school and improved the academic quality of many students’ high school experiences, but did not affect the colleges to which they matriculated. By Year 2, there were positive impacts on students’ math and reading test scores. In Year 4, the impacts on math test scores remained statistically significant. Higher Achievement had a small impact on the types of high schools its scholars ultimately attended. Program group students were more likely than control group students to matriculate to private or parochial schools and less likely to go to nonacademically competitive charter or magnet schools. By 2019, there was no difference in college going. More than 70 percent of both program and control group students had ever attended college. There were no differences in the academic quality of the colleges Higher Achievement’s scholars ultimately attended, as measured by being a two- or four-year college; a college having a lower acceptance rate; or a college whose freshmen on average had higher SAT math or reading scores. Higher Achievement’s college impacts did not differ by whether a student’s parent had attended college or by student characteristics.

The study shows that Higher Achievement is a very effective middle school program, improving students’ middle school trajectories. However, the impacts did not persist after the program through high school and college.

CONTENTS

OVERVIEW	iii
LIST OF EXHIBITS	vii
ACKNOWLEDGMENTS	ix
INTRODUCTION	1
HIGHER ACHIEVEMENT DURING THE STUDY: BACKGROUND AND SERVICES	2
DESIGN OF THE EVALUATION	3
EARLY FINDINGS	4
THE LONG-TERM FOLLOW-UP STUDY: IMPACTS ON THE TYPES OF COLLEGES ATTENDED	8
QUESTIONS AND FINDINGS	12
CONCLUSION	15
REFERENCES	17

LIST OF EXHIBITS

TABLE

1	Baseline Comparison of Student Characteristics by Research Group	5
2	How the Sample Scholars Progress Through the Program	6

FIGURE

1	Logic Model of the Higher Achievement Program	10
2	Rates of Ever Attending College, Overall and by Type	13
3	Academic Selectivity of the Best College Attended, as Measured by the Average Math and Reading SAT Scores of Incoming Freshmen and by the Acceptance Rate	14

BOX

1	Key Findings from Earlier Reports on Higher Achievement: Scholars' Outcomes	9
---	---	---

ACKNOWLEDGMENTS

This report and the study upon which it is based are the result of the efforts of many people. The research team's first debt of gratitude is to the youth, parents, mentors, teachers, and program staff who joined the study, took the time to complete tests and surveys, and allowed the research team to gather administrative information on them over time. Their cooperation has been invaluable in expanding our knowledge of effective out-of-school-time programs.

Staff at Higher Achievement were supportive partners throughout the study, which began in 2005. Higher Achievement center directors and numerous staff members cooperated with data-collection efforts and patiently responded to our many requests over the course of the evaluation. The efforts of Edsson Contreras and Gail Williams around youth recruitment were particularly instrumental to the study's success. Special recognition goes to the leadership of Higher Achievement. Maureen Holla helped design and secure initial funding for the project; Lynsey Jeffries and Richard Tagle provided steadfast support throughout the early years of data collection; and Lynsey Jeffries' quest to know Higher Achievement's impacts on college attendance kept this study alive despite budgetary challenges.

Staff members at partner organizations were also very much appreciated. The dedicated staff at Survey Research Management worked tirelessly to collect parent and youth surveys that yielded strong response rates at every wave of data collection. Linda Kuhn, Tony Lavender, and Rob Schroder were central in orchestrating these efforts. Cristofer Price at Abt Associates provided welcomed review of the college study design and its analyses.

Many colleagues of the authors assisted with both the early years of the study and the college follow-up study. At Public/Private Ventures, Jennifer McMaken codirected the project during the first several years of its implementation. Laura Colket, Siobhan Cooney, Jennifer Pevar, Brittany Rhoades, and Salem Valentino conducted site visits, analyzed the resulting data, and assisted with survey development and analysis. Ama Baafrá Abeberese, Evan Borkum, Mariesa Herrmann, and Annelies Raue at Columbia University, and Audrey Straus, Jiwon Park, and Akash R. Thakkar at the University of Texas at Austin provided exceptional assistance in conducting the impact analyses.

At MDRC, Linda Ouyang coordinated data acquisition and provided general management support for the research team. Kate Gualtieri, Lauren Scarola, Mary Bambino, and Sonia Drohojowska provided fiscal oversight. Marie-Andree Somers and Ali Tufel carefully reviewed earlier drafts of this report and made comments that improved the final product. Jill Kirschenbaum edited the report and Ann Kottner prepared it for publication.

The Authors

INTRODUCTION

Too many talented students who go to under-resourced schools do not achieve their full potential. Though they may perform very well relative to their classmates, these students do not receive the same types of academically challenging opportunities throughout their educational journey as do their counterparts in private and better-resourced public schools. The high schools they subsequently attend also have fewer trained college counseling staff, so these students and their families generally receive less assistance with the college application process. As a result, academically motivated students from disadvantaged backgrounds frequently “undermatch” when they apply to college: Rather than matriculating to competitive, selective colleges that they are qualified to attend, they frequently attend much less competitive or nonselective schools where graduation rates are low. Some even forgo college altogether.¹

It is unlikely that any one program can address all of the inequities underlying this problem. But starting in 1975, Higher Achievement began targeting the particularly crucial time between the end of elementary school and the end of middle school, when many students leave the path that would ultimately have led them to college.² Higher Achievement’s goal is to enable students to attend college-preparatory public and private high schools — schools that will help them get into selective, academically stronger colleges.

Starting in the summer before fifth or sixth grade, Higher Achievement offers its participants, called “scholars,” hundreds of hours of academic enrichment and instruction after school and during the summers through the eighth grade. Scholars attend the program’s Achievement Centers, located in select low-income middle schools. Unlike many academic after-school and summer programs in under-resourced schools, Higher Achievement is not a remedial program targeting struggling students. Rather, the program challenges motivated scholars to meet the high academic standards expected of college-bound students. It uses a diverse community of adults — trained volunteers called “mentors,” part-time staff called “achievement coaches,” center aides, and summer teachers — to deliver homework help, enrichment activities, and academic instruction after school and during the summer.

An evaluation of DC Metro, the original Higher Achievement program in Washington, DC, and Alexandria, Virginia, began in 2005.³ This report describes the program as it operated then; summarizes its impacts one, two, and four years after enrollment; and presents its long-term impacts on college attendance.

1 Bowen, Chingos, and McPherson (2009); Byndloss and Reid (2013); Hoxby and Turner (2013); Roderick, Nagaoka, and Coca (2009).

2 Gutman and Midgley (2000); Seidman et al. (1994).

3 Herrera, Linden, Arbreton, and Grossman (2011b).

HIGHER ACHIEVEMENT DURING THE STUDY: BACKGROUND AND SERVICES

A decade and a half ago, most after-school programs offered nonacademic enrichment three hours a day, five days a week, and middle school students typically participated one or two days a week.⁴ Academic instruction was often remedial in nature. Rigorous evaluations of these after-school programs rarely found positive academic impacts, and summer school programs, if they worked at all, served and benefited only those students who were behind in school, rather than those trying to excel.⁵ Given this landscape, Higher Achievement, founded in 1975, stood out as an unconventionally intensive and academically rigorous program in the communities it served.

While Higher Achievement continues to expand and reshape its programming, this report presents the program as it was when the study began in 2005. Then and now, Higher Achievement targeted academically motivated students and their parents, who completed an application and met with Higher Achievement staff. Family members were interviewed separately to ensure that the student was excited about participating in such a time-intensive, academically rigorous program and that the family member understood the multiyear commitment of getting their child to and from the program's activities.

At the time of the study, Higher Achievement offered its scholars up to 650 hours annually of academic enrichment through its Summer and Afterschool Academies. The six-week Summer Academy operated from 8 a.m. to 4 p.m., five days a week. Scholars took math, science, social studies, and literature classes in the morning, and two recreational or enrichment electives such as soccer or drama after lunch. The morning classes, typically about 13 students per grade level and taught by paid teachers, focused on academic concepts the children would be exposed to during the coming school year. Scholars also took weekly field trips, participated in academic competitions, and participated in a three-day university trip, during which they got the chance to experience college life — attending classes, sleeping in dorms, going to lectures, and eating in dining halls.

During the school year, the Afterschool Academy was offered three days a week from 3:30 p.m. to 8 p.m. for 25 weeks. Each four-and-a-half-hour session included homework help, dinner, an arts or recreation elective, a 25-minute community gathering (attended by all staff, volunteer mentors, and participating students), and 75 minutes of small-group academic instruction led by mentors using a structured curriculum. These mentors worked with their groups for one day a week and committed to stay with the program through at least one school year. Each scholar thus had three mentors — one who delivered the math curriculum, one for the literature curriculum, and one who led a seminar that included such topics as creative writing, conflict resolution, and technology. The curricula that guided these mentoring groups followed skill standards set by the Washington, DC, and Alexandria public school systems. Scholars also had the opportunity to take part in monthly field trips, career-shadowing days, and community service projects.

4 Dynarski et al. (2003); Grossman et al. (2002).

5 Dynarski et al. (2003).

As students approached high school, Higher Achievement increased its focus on preparing them to apply to college-preparatory high schools. At the end of the seventh grade, staff members held a family night that included a group discussion with parents about high school applications. During the Summer Academy, rising eighth-graders spent two days visiting quality high schools and engaging in guided discussions about these schools. To place scholars into competitive, academically engaging high schools, the Afterschool Academy offered eighth-graders a third program component, the High School Placement Program, delivered one day a week. It comprised a 10-week test preparation class; application and financial aid workshops; school visits; and individualized support for families as they navigated the high school admissions process.⁶ Higher Achievement staff also helped students select schools and hone their interviewing skills. Staff met individually with each eighth-grader's parent to review the student's grades, answer questions, and make recommendations for high school. The manager of school placement from the DC Metro office also made biweekly visits to each center to answer individual scholars' questions and help with the application process. In other words, participants and their families learned how to choose a set of schools to apply to, complete the application process, and apply for financial aid — skills that would assist them not only with applying to high school but also later on with the college application process. The High School Placement Program is the program component that is most closely linked to potential college-going effects.

DESIGN OF THE EVALUATION

The impacts of Higher Achievement's DC Metro program were evaluated using a random assignment research design. In the spring of 2006, 2007, and 2008, rising fifth- and sixth-graders whose families still wanted to participate after meeting individually with Higher Achievement staff were invited to take part in a randomized controlled trial to assess the program's impacts. If the students and their parents agreed to participate, students completed standardized tests in reading and math and completed a survey;⁷ their parents were also surveyed. Then a lottery was used to determine which students would be offered the opportunity to participate in Higher Achievement (the program group) and which would not (the control group). This random assignment design ensured that at the start of the study the two groups were, on average, identical, including the students' and their families' academic motivation, and that any differences that emerged between

-
- 6 If students wished to attend a high school other than their neighborhood school — be it a private school, a public charter school, a public magnet school, or a parochial school — they had to apply individually to the ones they wanted. Many schools require students to take a standardized high school entrance exam and be interviewed. Charter and magnet schools are public and thus are free for students who are admitted. Private and parochial schools charge tuition. To offset some or all of the tuition, parents have to submit requests for financial aid as well as documentation of the family's income, to the relevant schools.
- 7 To assess both reading and math skills in less than three hours (to limit the burden on families), the evaluators could not administer the full battery of reading (vocabulary and reading comprehension) and math (math procedures and problem-solving) questions. Instead, they had sample members take only the reading comprehension and math problem-solving Stanford Achievement Test 10 subtests. These subtests, respectively, required vocabulary knowledge and math procedures knowledge and thus were relatively comprehensive.

the groups over time (the impacts) could be attributed to the Higher Achievement program.⁸ Table 1 shows the characteristics of the two groups when they applied. Table 2 shows how the program students progressed through Higher Achievement over time.

After the initial assessment (the baseline), the research team retested all study students in reading comprehension and math problem-solving, and resurveyed both groups of youth and their parents several times:

- In the spring — one, two, and four years after random assignment (Years 1, 2, and 4)
- In the fall of 2010 — when the team conducted a survey focused primarily on the students' learning and experiences during the previous summer

At each point, the surveys measured social-emotional attitudes related to learning, such as the students' perceptions of their own academic abilities, persistence, creativity, and curiosity, as well as their participation in a range of enrichment activities. In the Year 4 survey, the research team also asked parents and youth about the steps they had taken in the high school application process, such as preparing for and taking entrance exams, visiting high schools, doing mock interviews, and completing financial aid forms. Parents were asked what schools their child had applied to, been accepted into, and ultimately planned to or did attend.

EARLY FINDINGS

Three reports have been written about this study so far.⁹ These reports show that Higher Achievement is a successful middle school program. First, unlike many programs targeting middle school students, Higher Achievement retains a large percentage of its enrollees. A survey of 198 after-school programs in six cities found that, on average, they retained only 22 percent of their middle-school-age participants for a year or more.¹⁰ Higher Achievement retained 70

8 The study used an “intent to treat” impact design — the most rigorous and conservative approach available to researchers. At each wave of data collection, the research team contacted all of the youth in the sample that could be contacted, both control and program students, including all program youth regardless of whether they had actually attended the program. Using regression analysis, the outcomes of the originally assigned program group were compared with those of the originally assigned control group. The difference was deemed to be a statistically significant impact if that difference was large enough to not have occurred by chance with a probability of 0.1 or less ($p \leq 0.1$). Technically, the study addressed the question of whether having access to the program affected youth outcomes, not whether program *participation*, per se, affected outcomes. In this way, the impacts reported here likely understate Higher Achievement's effects on those youth who fully participated in the program.

9 [Herrera, Linden, Arbreton, and Grossman \(2011b\)](#) summarizes findings from Years 1 and 2; [Herrera, Linden, Arbreton, and Grossman \(2011a\)](#) describes the program's effect on learning during the summer of 2011; [Herrera, Grossman, and Linden \(2013\)](#) summarizes the program's academic and high-school-choice impacts four years after enrollment.

10 Deschenes et al. (2010).

TABLE 1 Baseline Comparison of Student Characteristics by Research Group

STUDENT CHARACTERISTICS	CONTROL AVERAGE	ESTIMATED PROGRAM-CONTROL DIFFERENCE
Demographic characteristics		
Female	0.59	< 0.01
Grade	5.42	< 0.01
Age	9.83	0.05
African-American	0.76	-0.02
Latino	0.76	< 0.01
Free or reduced-price Lunch	0.66	-0.05
Normalized test scores		
Reading	0.10	< 0.01
Problem-solving	0.10	< 0.01
Household characteristics		
Total household income		
Below \$25,000	0.32	-0.03
\$26,000-\$50,000	0.38	-0.03
\$51,000-\$75,000	0.16	-0.03
Over \$75,000	0.14	-0.04
Parent education		
College degree	0.33	-0.01
Some college	0.31	< 0.01
Living with both parents	0.41	-0.04
Non-English language spoken at home	0.17	< 0.01
Number of observations		951

SOURCE: Calculations based on information collected from either the Higher Achievement application or the baseline survey.

NOTE: This table provides a comparison of the baseline characteristics of the 521 students assigned to the program group and the 430 assigned to the control group. Column one contains the average characteristics of the control group. Column two provides the estimated difference between the program and control group after controlling the baseline variables used in the impact regressions. These covariates include child-level variables: baseline scores for reading comprehension and problem-solving; self-perceptions of academic abilities; industry and persistence; creativity, enjoyment of learning, curiosity, and ability to change the future through effort; peer academic support and general adult support; indicator variables for grade at baseline, age, receipt of free or reduced-price lunch, race, household language; and a dummy variable for the year the child applied to Higher Achievement and whether the student applied with a sibling. In addition, there are family-level controls including fixed effects for the center to which the family applied, parent's education, household income, household composition, and an indicator for whether English is the primary language spoken at home. None of these estimated differences is statistically significant at a 0.10 level.

TABLE 2 How the Sample Scholars Progress Through the Program

COHORT	2006-2007		2007-2008		2008-2009		2009-2010		2010-2011		2011-2012	
	SUMMER	FALL- SPRING	SUMMER	FALL- SPRING	SUMMER	FALL- SPRING	SUMMER	FALL- SPRING	SUMMER	FALL- SPRING	SUMMER	FALL- SPRING
1 Rising 5th-graders	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rising 6th-graders	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2 Rising 5th-graders			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rising 6th-graders			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3 Rising 5th-graders			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rising 6th-graders			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

percent of its scholars for two years after they were admitted to the program.¹¹ However, four years after being admitted, only 47 percent of their scholars were still attending.¹² Thus, only about half of the scholars received the full High School Placement component of the program that was delivered only in the eighth grade — the last year of the program.

Second, Higher Achievement had sustained impacts on students' math outcomes. While Higher Achievement had no measurable impacts in Year 1, by Year 2 there were positive impacts on the math problem-solving and reading comprehension test scores. By Year 4, the control group tested at the same level as the program group in reading comprehension, but the impact on the program group's math problem-solving test score did not shrink and remained statistically significant.

Third, Higher Achievement had an impact on the types of high schools its scholars ultimately attended. Because the schools varied widely in rigor and focus — particularly the magnets and charters — Higher Achievement identified the stronger, more competitive schools and tailored its recommendations to each scholar's interests and strengths. Competitive magnet schools were defined as those with an explicit academic focus, selective admissions, and with strong offerings of Advanced Placement and Honors classes. Competitive charter schools were defined as those that DC Public Schools had classified as Tier 1 (the academically best schools) in their three-tier classification system, based on such measures as standardized test scores and graduation rates. The research team used the same classification system as did Higher Achievement to designate a public high school as either competitive or not competitive. Unfortunately, private schools were not classified by any system. At a national level, private schools tend to have smaller class sizes and more rigorous academic programs than public schools; seniors enrolled in them are more likely to go to college, even after accounting for differing aspirations, abilities, and socioeconomic status.¹³ Therefore, all private schools were grouped together into their own category.¹⁴

Analysis of high school matriculation rates found that program students were more likely than control group students to matriculate to private schools (15 percent versus 9 percent, respectively) and less likely to go to noncompetitive charters or magnets (6 percent versus 13 percent). There was no impact on attending competitive charters or magnet schools (about 40 percent for both groups), and no impact on attending a neighborhood public school (about 35 percent for both

11 These rates reflect the participation of the 81 percent of students who completed the tests and surveys in Year 2. It does not reflect the few students in the study who declined to participate in the follow-up surveys. Since those students who declined were probably more likely to drop out than those who agreed to participate, these rates may slightly overestimate the program's overall participation rate.

12 If students enrolled in Higher Achievement as sixth-graders, four years after random assignment they would be in ninth grade and no longer in the program. Thus, the 47 percent participation rate is based only on those youth who were still eligible to participate in the program four years later, namely those who started the program as rising fifth-graders.

13 Choy (1997); Falsey and Heyns (1984).

14 Higher Achievement staff, who knew the area high schools well, designated 50 of the 58 private/parochial schools as either elite (including 14 nationally recognized schools such as Georgetown Prep or Sidwell), or academically competitive (36). Because the vast bulk of the scholars who applied to a private school applied to one of the 36 academically competitive schools, all private schools were pooled into a single category. Linden, Herrera, and Grossman (2013).

groups). These impacts mimic the impacts on the types of schools to which scholars *applied*. Program students applied more often to private schools and less often to noncompetitive charters and magnets. In sum, Higher Achievement seemed to get scholars to choose private schools over noncompetitive charters and magnets in their high school applications. Box 1 summarizes the key findings from these early studies of the program.

THE LONG-TERM FOLLOW-UP STUDY: IMPACTS ON THE TYPES OF COLLEGES ATTENDED

How might Higher Achievement, a program serving youth in middle school, affect the types of colleges the participants attend? Higher Achievement applicants (the research sample) are a motivated group of students: All are quite likely to go to college, with or without the additional support. However, the program may very well affect the *quality* of the colleges these students attend. Figure 1 shows how Higher Achievement could help students go to academically stronger colleges that are better matched to their abilities.

First, its academic instruction aims to strengthen scholars' middle school academic performance, which is especially important for doing well on high school entrance exams and for being admitted to more competitive high schools. In addition, if their high school grade trajectory stays strong, students can be candidates for academically stronger colleges.¹⁵

Second, scholars participate in activities to learn about the array of local college-preparatory high schools and academically strong colleges by visiting and talking to people in these institutions. These activities should result in scholars being more interested in applying, and thus, being admitted to high schools that are more competitive with respect to college admission.

Third, eighth-grade scholars practice for and take standardized tests — the Secondary School Admissions Test (SSAT) and/or the High School Placement Test (HSPT) — that are very similar in structure to the SAT and ACT. This practice should not only help their performance on the high school entrance exams but also give them the skills they'll need in the future to study for the SAT or ACT. In addition, the scholars' parents are guided through the financial aid application process and learn that a school's stated tuition is not necessarily what they have to pay. At the same time, they get experience applying for financial aid — a skill that can be applied to the college financial aid process further down the road. In other words, while not a direct goal of Higher Achievement, the program hopes that the experiences it provides families in respect to the *high school* application process will make choosing and applying to academically competitive *colleges* less daunting.

All of Higher Achievement's program activities are aimed at increasing the likelihood that scholars will end up going to academically strong college-preparatory high schools. From there, scholars should not only have access to better college guidance services, but also become better

¹⁵ Nagaoka, Roderick, and Coca (2009).

BOX 1
Key Findings from Earlier Reports on Higher Achievement:
Scholars' Outcomes

SCHOLARS' MIDDLE SCHOOL STANDARDIZED TEST SCORES COMPARED WITH CONTROL GROUP

Year 2

Math problem-solving average: 0.10 SD higher
Reading comprehension average: 0.08 SD higher

Year 4

Math problem-solving average: 0.11 SD higher
Reading comprehension average: 0.04 SD higher and statistically significant

SCHOLARS' HIGH SCHOOL APPLICATION BEHAVIOR COMPARED WITH CONTROL GROUP

More likely to gather data about their preferred high schools and to practice for the SSAT and HSPT, by 17 percentage points*

More likely to take the SSAT and HSPT, by 7 percentage points

More likely to apply for financial aid and scholarships to cover high school tuition, by 17 percentage points

More likely to receive financial aid and scholarships to cover high school tuition, by 6 percentage points

HIGH SCHOOL MATRICULATION AMONG SCHOLARS COMPARED WITH CONTROL GROUP

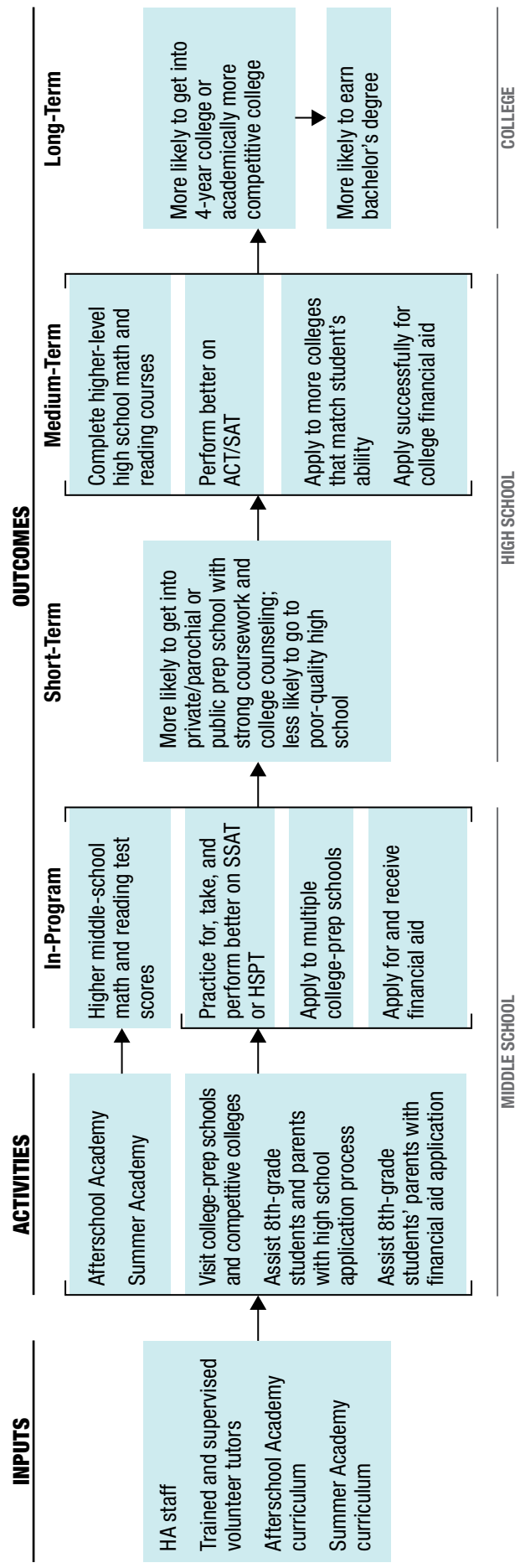
More likely to attend private schools, by 6 percentage points

Less likely to go to noncompetitive charters or magnets, by 7 percentage points

NOTE: Because the units of test scores differ across districts, it is standard to “normalize” the test scores — that is, to put test scores in terms of a common unit, namely standard deviation (SD) units — and to center each student’s test score measure around the mean [score] of the assessment. The SD of test scores is the average number of points between a student’s score and the mean score on the assessment. Thus, the normalized score for a student who tested at the average score of the assessment would be 0.0. The impact on the Year 2 reading of 0.10 in this box means that the program group students, on average, scored higher than the control group students by one-tenth of a standard deviation on their standardized assessment.

*Scholars gathered data about high schools by, for example, making visits and talking to staff or students at those schools. The SSAT and HSPT are standardized high school entrance exams.

FIGURE 1 Logic Model of the Higher Achievement Program



prepared academically to do college coursework. In fact, an analysis of the National Education Longitudinal Study (NELS) shows that students who graduate from private or parochial high schools are 46 percent and 36 percent, respectively, more likely to earn a bachelor's degree, even after controlling for socioeconomic status and test scores.¹⁶

To test if Higher Achievement's particularly intensive middle school intervention was sufficient to change the types of colleges its scholars attended, the research team obtained students' college enrollment records from the National Student Clearinghouse (NSC) in the summer of 2019 to access information about college attendance through the spring of that year. By then, all students in the sample should have had at least three years after high school to enroll in college.¹⁷

The NSC maintains enrollment records for almost all students enrolled in colleges in the United States. By matching the study sample to the NSC records, the research team obtained the college enrollment information for the students in the study.¹⁸ The records included when the students were enrolled in a college, the name of that college, and whether it was a two- or four-year institution.¹⁹ Over time, students could attend more than one college. If an NSC record was not found for a student, the study categorized the individual as not having yet attended college. This is the standard assumption used in all NSC-based studies. A recent methodological study found that NSC records capture 99 percent of public and nonprofit private college enrollment, but the data will somewhat understate the college attendance of the sample.²⁰

For the purposes of this short report, the team defines whether a college is higher quality in two ways. First, four-year colleges are deemed higher quality than two-year colleges because students are much more likely to earn a degree at four-year colleges and the degrees they earn are more highly valued in the labor market.²¹ Second, a college is defined as higher quality if it is academically more competitive, as measured by higher average SAT scores of its incoming

16 Bozick and DeLuca (2005).

17 Because the study enrolled fifth- and sixth-graders in waves over three years (2006, 2007, and 2008), sample members had had different amounts of time to have attended college. The students with the longest time were the sixth-graders who entered in 2006. They should have graduated high school in spring 2013 and have had six years from high school graduation to matriculate to college by 2019. The students with the shortest period to have enrolled in college were the fifth-graders who enrolled in the last year of study intake, 2008. They should have graduated high school in 2016 and have had three years to matriculate prior to 2019. Many students from low-income schools do not go to college immediately after high school but work to earn money for college; National Student Clearinghouse Research Center (2019). Thus, it was important to wait until 2019 to allow the youngest members of the study sample time to enroll.

18 To match the research sample to their data, the team provided the NSC with students' names and birthdays.

19 For some schools, the NSC can provide more information, such as major, degree type, and so on. However, few schools report this information. The research team lacked this information for too many subjects in the sample to be able to use what it did have for the analysis.

20 Dynarski, Hemelt, and Hyman (2015). This study concludes that the NSC "misses a shrinking but nontrivial portion of undergraduate enrollment" (p. 25), capturing 99 percent of enrollment in public and private institutions but only 48 percent of for-profit college enrollment.

21 Shapiro et al. (2019); PayScale (2009) .

first-year students or by lower acceptance rates.²² The student body in competitive colleges is academically more able and thus classes are more rigorous. Employers value these colleges more because they teach students how to master new and difficult skills, tasks that are useful in the business world and in life.²³

QUESTIONS AND FINDINGS

The long-term follow-up portion of the study examined the following research questions:

- Were students with access to Higher Achievement (program group) more likely to go to four-year colleges than control students?
- Were program students more likely to go to more selective, academically stronger four-year colleges than control students?

The students who applied to Higher Achievement during the study were academically motivated students from families that valued education enough to commit to sending their child to three or four years of Higher Achievement’s Summer and Afterschool Academies. Because of that, the research team expected almost all of the sample students (both program and control) to attend college. To be sure, college enrollment is no longer the challenge that it once was; 86 percent of high school graduates start at either two- or four-year colleges within eight years.²⁴ However, academically motivated students from disadvantaged backgrounds frequently “under-place.” That is, rather than attending selective, academically competitive schools for which they are qualified, they go to much lower-ranked colleges because of a lack of information about more competitive schools and how to get into them.²⁵ Thus, this study examined the more interesting questions related to the quality of colleges that program students attended.

This study’s basic conclusion is that Higher Achievement did not impact the type of college scholars attended. Figure 2 shows the percentage of program and control group students who ever attended two-year versus four-year colleges, as well as the percentage of those who attended any type of college, for context. First, note that the college-going rate was quite high and similar for both groups, as expected, at approximately 70 percent. However, the hypothesized difference in college type did not appear. By 2019, approximately 60 percent of both program and control students had ever attended a four-year college and 23 percent had ever attended a two-year college. (Some students switched between the two over the study period and so are in both counts.) None of these rates differs statistically between program and control students. These

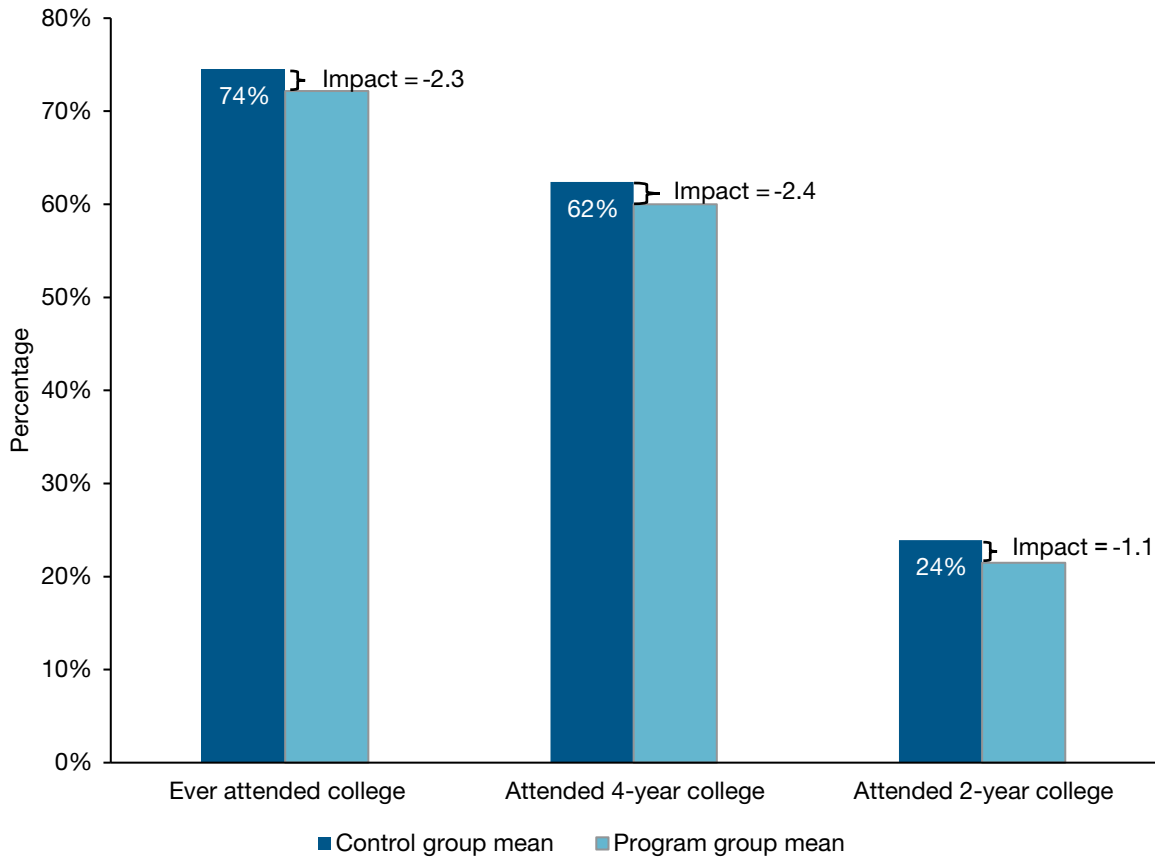
22 To categorize colleges as more or less academically strong, the average SAT scores of incoming first-year students and acceptance rates were taken from the colleges’ websites and merged into the dataset.

23 Mulhere (2019).

24 Rosenbaum, Ahearn, Becker, and Rosenbaum (2015).

25 Bowen, Chingos, and McPherson (2009); Hoxby and Turner (2013); Roderick, Nagaoka, and Coca (2009).

FIGURE 2 Rates of Ever Attending College, Overall and by Type



SOURCE: MDRC calculations based on the regression described in the Table 1 note.

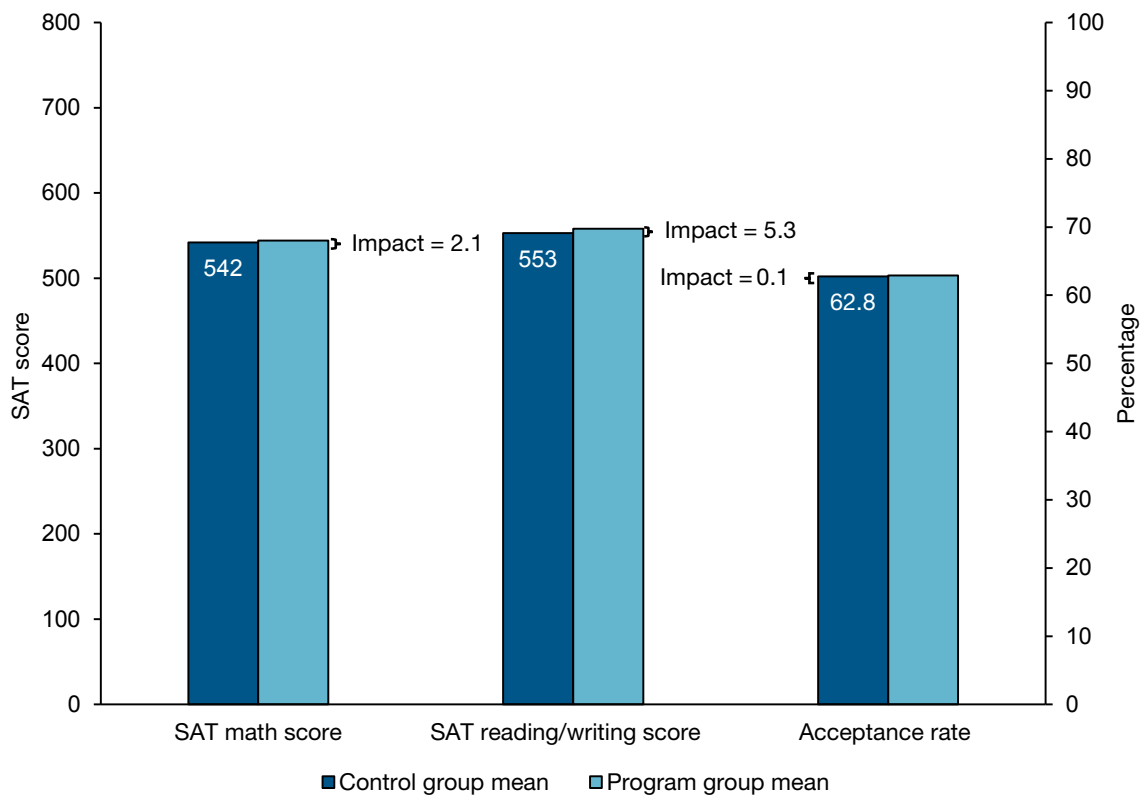
NOTE: None of the impacts are statistically significant at a .10 level.

small numerical differences in the averages are likely to have occurred by chance.²⁶ While not shown, the percentages of program and control students who first attended a four-year college were also about the same: Fifty-seven percent of the program students and 56 percent of the control students attended a four-year college as their first college. As before, the difference in these rates is not statistically significant.

26 The impact estimates come from regressions on the outcomes of 521 program students and 430 control students. The following baseline covariates were included in each regression: baseline scores for reading and math; self-perceptions of academic abilities — industry and persistence; creativity, enjoyment of learning, curiosity, and ability to change the future through effort; a measure of peer academic support; a measure of general adult support; dummy variables for grade at baseline; age; an indicator variable for receipt of free or reduced-price lunch; dummy variables for race; a dummy variable for the year the child applied to Higher Achievement; and a dummy variable for whether the student applied with a sibling. In addition, there are family-level controls including fixed effects for the center to which the family applied, parent's education, household income, household composition, and an indicator for whether English was the primary language spoken at home.

Next, the research team examined the academic competitiveness of the schools that college-going program group students attended, to see if they went to more rigorous schools than those attended by college-going control students. Figure 3 shows the quality of the best college attended in three ways: the average math SAT score of the freshman class, the average reading/writing SAT score of the freshman class, and the acceptance rate. Again, there were no statistically significant differences between the program and control students. Among the college-goers, study participants (both program and control students) attended colleges where the average math SAT score of incoming freshmen was 542 (out of 800), while the average reading and writing score of incoming freshmen was 553 (out of 800). The overall acceptance rate at these colleges was 63 percent.

FIGURE 3 Academic Selectivity of the Best College Attended, as Measured by the Average Math and Reading SAT Scores of Incoming Freshmen and by the Acceptance Rate



SOURCE: MDRC calculations based on the regression described in the Table 1 note.

NOTE: None of the impacts is statistically significant at the 0.10 level.

Digging deeper, the research team investigated whether Higher Achievement was more effective for scholars whose parents had not attended college or whose family income at baseline was in the lower half of the applicant pool, given that the decisions of these families might be most

influenced by the knowledge of how to apply for financial aid that is taught in the eighth grade. The team also examined whether the program was more or less effective for various marginalized groups — female students, non-English-speakers, and Black and Latino youth — relative to students of other races and ethnicities. No statistically significant differences were found.²⁷

CONCLUSION

The results of the long-term follow-up study found that the earlier impacts were not large enough to change the type of colleges scholars attended. In both the program and the control group, attendance at four-year colleges was quite high, approximately 60 percent. The selectivity of the colleges that the two groups attended was also very similar: They accepted 63 percent of applicants and had student bodies with very similar math and reading SATs.

The results of the college follow-up study are disappointing, but perhaps not surprising; the vast majority of the students in both groups were attending similar types of high schools. Just a small percentage of the Higher Achievement scholars were attending schools that would be expected to have better college placement services than those offered in the control group's high schools. Thus, the likelihood that program group students would choose a college that undermatched their academic ability (in terms of academic competitiveness or selectivity) was about the same as it was in the control group. While many selective and academically competitive colleges actively try to increase their diversity, they generally do so by recruiting at only a handful of elite city schools.²⁸ For these reasons, programs like Higher Achievement may want to connect students with interventions like College Match that explicitly help students better match to colleges, or with organizations that work directly with colleges to help broaden the sources from which they recruit.²⁹

Although Higher Achievement did not affect the quality of the colleges its scholars attended, it may have provided them with social and emotional skills that could affect more subtle aspects of their college experience and life success: for example, the courses they take, the grades they receive in those courses, how engaged they are in the learning process, how comfortable they are in the college environment, the extent to which they get involved in additional academic and extracurricular experiences, and the types of jobs they obtain later. Career Academies, for example, serve a similar set of motivated students.³⁰ Delivered in high schools, Career Academies offer participants small, themed learning environments and expose them to their chosen careers for four years. An evaluation of that intervention found that students in the program group graduated at exactly the same rate as students in the control group, and they also attended college — and the same types of colleges (two-year, four-year, and certificate programs) — at the same rate. In

27 As all of the earlier studies found, Higher Achievement appears to affect or not affect students of all types similarly.

28 Vedantam (2013). Not presented here, but supplemental analysis found Higher Achievement did not have an impact on the percentage of students who matriculated to Washington, DC's elite high schools.

29 Byndloss et al. (2015).

30 Kemple and Willner (2008).

the longer term, however, program students were more likely to be employed in higher-paying jobs and thus had higher earnings. Only additional follow-up of Higher Achievement's scholars will reveal if it, too, has such benefits.

Of course, no program can or should be expected to be all things to all young people during their critical developmental years. While Higher Achievement did not change the college trajectory of its scholars, this evaluation found that the program was very engaging to middle school students and improved their academic performance. It also helped some of its scholars get into better high schools. In the years since the beginning of this evaluation, Higher Achievement has strengthened its programming, and a recent study finds it has even larger impacts on course grades two years after enrollment than it had on test scores in the original study.³¹ Given that recent literature shows that course grades are more strongly related to future earnings than test scores, this is good news for current participants.³² Still, it is extremely rare for short-term youth programs by themselves — even multiyear, intensive programs like Higher Achievement — to have long-term impacts. Rather, programs serving young people in under-resourced neighborhoods need to help them and their families build a mosaic of strong in- and out-of-school experiences with caring adults that shift with each child's interests and developmental needs. Selected activities or programs should be challenging, yet engaging, stretching the young person in developmentally appropriate ways. It is this type of rich, developmentally responsive environment that, over time, supports young people to achieve their full potential.

31 Garcia et al. (2020). The original evaluation collected data on test scores only, not on course grades.

32 Heckman and Kautz (2012).

REFERENCES

- Bowen, William G., Matthew M. Chingos, and Michael S. McPherson. 2009. *Crossing the Finish Line: Completing College at America's Public Universities*. Princeton, NJ.: Princeton University Press.
- Bozick, Robert, and Stefanie DeLuca. 2005. "Better Late than Never? Delayed Enrollment in the High School to College Transition." *Social Forces* 84, 1: 531-554.
- Byndloss, D. Crystal, Rebecca Coven, Yana Kusayeva, Christine Johnston, and Jay Sherwin. 2015. *In Search of a Match: A Guide for Helping Students Make Informed College Choices*. New York: MDRC.
- Byndloss, D. Crystal, and Chera Reid. 2013. "Promoting College Match for Low-Income Students: Lessons for Practitioners." Policy Brief (updated december 2016). New York: MDRC.
- Choy, Susan P. 1997. *Public and Private Schools: How Do They Differ?* NCES 97-983. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
- Deschenes, Sarah N., Amy Arbreton, Priscilla M. Little, Carla Herrera, Jean Baldwin Grossman, and Heather B. Weiss. 2010. *Engaging Older Youth: Program and City-Level Strategies to Support Sustained Participation in Out-of-School Time*. Cambridge, MA: Harvard Family Research Project.
- Dynarski, Mark, Mary Moore, John Mullens, Philip Gleason, Susanne James-Burdumy, Linda Rosenberg, Carol Pistorino, Tim Silva, John Deke, Wendy Mansfield, Sheila Heaviside, and Daniel Levy. 2003. *When Schools Stay Open Late: The National Evaluation of the 21st-Century Community Learning Centers Program. First Year Findings*. Princeton, NJ: Mathematica Policy Research.
- Dynarski, Susan M., Steven W. Hemelt, and Joshua M. Hyman. 2015. "The Missing Manual: Using National Student Clearinghouse Data to Track Postsecondary Outcomes." *Educational Evaluation and Policy Analysis* 37, 1 suppl: 53S-79S.
- Falsey, Barbara, and Barbara Heyns. 1984. "The College Channel: Private and Public Schools Reconsidered." *Sociology of Education* 57, 2: 111-122.
- Garcia, Ivonne, Jean Baldwin Grossman, Carla Herrera, Marissa Strassberger, Michelle Dixon, and Leigh Linden. 2020. *Aiming Higher: Assessing Higher Achievement's Out-of-School Expansion Efforts*. New York: MDRC.

- Grossman, Jean Baldwin, Marilyn L. Price, Veronica Fellerath, Linda Z. Jucovy, Lauren J. Kotloff, Rebecca Raley, and Karen E. Walker. 2002. *Multiple Choices after School: Findings from the Extended-Service Schools Initiative*. Philadelphia: Public/Private Ventures.
- Gutman, Leslie Morrison, and Carol Midgley. 2000. "The Role of Protective Factors in Supporting the Academic Achievement of Poor African American Students During the Middle School Transition." *Journal of Youth and Adolescence* 29, 2: 223-249.
- Heckman, James J., and Tim Kautz. 2012. "Hard Evidence on Soft Skills." *Labour Economics* 19, 4: 451-464.
- Herrera, Carla, Jean Baldwin Grossman, and Leigh L. Linden. 2013. *Staying on Track: Testing Higher Achievement's Long-Term Impact on Academic Outcomes and High School Choice*. New York: MDRC.
- Herrera, Carla, Leigh L. Linden, Amy J.A. Arbreton, and Jean Baldwin Grossman. 2011a. *Summer Snapshot: Exploring the Impact of Higher Achievement's Year-Round Out-of-School-Time Program on Summer Learning*. Philadelphia: Public/Private Ventures.
- Herrera, Carla, Leigh L. Linden, Amy J.A. Arbreton, and Jean Baldwin Grossman. 2011b. *Testing the Impact of Higher Achievement's Year-Round Out-of-School-Time Program on Academic Outcomes*. Philadelphia: Public/Private Ventures.
- Hoxby, Caroline, and Sarah Turner. 2013. "Expanding College Opportunities for High-Achieving, Low Income Students." SIEPR Discussion Paper 12-014. Stanford, CA: Stanford Institute for Economic Policy Research.
- Kemple, James J., and Cynthia J. Willner. 2008. *Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood*. New York: MDRC.
- Linden, Leigh L., Carla Herrera, and Jean Baldwin Grossman. 2013. *Achieving Academic Success Outside of School? An RCT of High Quality Supplemental Programming*. Philadelphia: Public/Private Ventures.
- Mulhere, Kaitlyn. 2019. "The Best Colleges for Your Money 2019: How MONEY Ranked the 2019 Best Colleges." Website: <https://money.com/how-money-ranks-best-colleges-2019/>.
- Nagaoka, Jenny, Melissa Roderick, and Vanessa Coca. 2009. *Barriers to College Attainment: Lessons from Chicago*. Washington, DC: Center for American Progress.
- National Student Clearinghouse Research Center. 2019. *High School Benchmarks 2019: National College Progression Rates*. Herndon, VA: National Student Clearinghouse.

- PayScale. 2009. "4-Year vs. 2-Year College Degrees: How Does the Pay Compare?" Website: <https://www.payscale.com/career-news/2009/10/4-year-vs-2-year-college-degrees-how-does-the-pay-compare>.
- Roderick, Melissa, Jenny Nagaoka, and Vanessa Coca. 2009. "College Readiness for All: The Challenge for Urban High Schools." *The Future of Children* 19, 1: 185-210.
- Rosenbaum, James, Caitlin Ahearn, Kelly Becker, and Janet Rosenbaum. 2015. *The New Forgotten Half and Research Directions to Support Them*. New York: William T. Grant Foundation.
- Seidman, Edward, LaRue Allen, J. Lawrence Aber, Christina Mitchell, and Joanna Feinman. 1994. "The Impact of School Transitions in Early Adolescence on the Self-System and Perceived Social Context of Poor Urban Youth." *Child Development* 65, 2: 507-522.
- Shapiro, D., M. Ryu, F. Huie, Q. Liu, and Y. Zheng. 2019. *Completing College: 2019 National Report*. Signature Report 18. Herndon, VA: National Student Clearinghouse. Website: https://nscresearchcenter.org/wp-content/uploads/Completions_Report_2019.pdf.
- Vedantam, Shankar. 2013. "Elite Colleges Struggle to Recruit Smart, Low-Income Kids." Morning Edition, National Public Radio. Website: <https://www.npr.org/2013/01/09/168889785/elite-colleges-struggle-to-recruit-smart-low-income-kids>.

ABOUT MDRC

MDRC IS A NONPROFIT, NONPARTISAN SOCIAL AND EDUCATION POLICY RESEARCH ORGANIZATION DEDICATED TO learning what works to improve the well-being of low-income people. Through its research and the active communication of its findings, MDRC seeks to enhance the effectiveness of social and education policies and programs.

Founded in 1974 and located in New York; Oakland, California; Washington, DC; and Los Angeles, MDRC is best known for mounting rigorous, large-scale, real-world tests of new and existing policies and programs. Its projects are a mix of demonstrations (field tests of promising new program approaches) and evaluations of ongoing government and community initiatives. MDRC's staff members bring an unusual combination of research and organizational experience to their work, providing expertise on the latest in qualitative and quantitative methods and on program design, development, implementation, and management. MDRC seeks to learn not just whether a program is effective but also how and why the program's effects occur. In addition, it tries to place each project's findings in the broader context of related research — in order to build knowledge about what works across the social and education policy fields. MDRC's findings, lessons, and best practices are shared with a broad audience in the policy and practitioner community as well as with the general public and the media.

Over the years, MDRC has brought its unique approach to an ever-growing range of policy areas and target populations. Once known primarily for evaluations of state welfare-to-work programs, today MDRC is also studying public school reforms, employment programs for ex-prisoners, and programs to help low-income students succeed in college. MDRC's projects are organized into five areas:

- Promoting Family Well-Being and Children's Development
- Improving Public Education
- Raising Academic Achievement and Persistence in College
- Supporting Low-Wage Workers and Communities
- Overcoming Barriers to Employment

Working in almost every state, all of the nation's largest cities, and Canada and the United Kingdom, MDRC conducts its projects in partnership with national, state, and local governments, public school systems, community organizations, and numerous private philanthropies.