AIMING HIGHER

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Executive Summary

Ivonne Garcia
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Marissa Strassberger
Michelle Dixon
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BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY

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IVONNE GARCIA
(MDRC)

JEAN BALDWIN GROSSMAN
(MDRC and Princeton University)

CARLA HERRERA
(Independent Consultant)

MARISSA STRASSBERGER
(MDRC)

MICHELLE DIXON
(MDRC)

LEIGH LINDEN
(The University of Texas at Austin, BREAD, NBER, J-PAL, IZA)

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OVERVIEW

Many talented students in under-resourced schools do not reach their full potential. Research shows that by sixth grade, children born into poverty have likely spent 6,000 fewer hours learning than their middle-class counterparts. Higher Achievement, an intensive summer and after-school program, aims to close that learning gap. It offers participants more than 500 hours of academic enrichment activities a year to help them meet the high academic standards expected of college-bound students. Known as "scholars," Higher Achievement students enter the program during the summer before either fifth or sixth grade and commit to attending through eighth grade. The summer program consists of six weeks of morning classes in English Language Arts (ELA), math, science, and, in some cases, social studies, followed by enrichment activities in the afternoon, including chess, cooking, art, and soccer. During the school year, in addition to the program's regular study hall and enrichment activities, a cadre of mostly young professionals volunteer one day a week, delivering 75-minute ELA or math lessons to small groups of scholars. These volunteers receive detailed lesson plans and training so they can successfully execute the program's rigorous curricula. Part of what makes Higher Achievement affordable is its use of volunteers in this way.

An earlier experimental evaluation of Metro DC, Higher Achievement's flagship affiliate in Washington, DC, and Alexandria, Virginia, found that the program was effective in improving academic performance two years after students applied. Since then, Higher Achievement has expanded to three new cities: Baltimore, Maryland; Richmond, Virginia; and Pittsburgh, Pennsylvania. Keenly aware that many effective flagship programs fail to be effective in new locations, the federal government funded this experimental validation study to examine the impacts at these expansion sites. Eligible students were randomly assigned either to a program group that could participate in Higher Achievement, or to a control group that could not enroll in the program. Comparing the two groups' outcomes provided an estimate of the program's impacts.

The study found that the expansion sites experienced many of the implementation challenges common to school-based, out-of-school-time programs (for example, staff turnover, coordination with the host school, and lower-than-hoped-for attendance by middle school students), as well as those often seen in new programs (such as a lack of strong relationships with key partners and difficulty recruiting volunteers). Even so, Higher Achievement was found to be at least adequately implemented in all three cities. The study found that the program's detailed lesson plans, with scripted questions and student instructions, enabled the volunteers to deliver rigorous academic lessons. Training is critical, though, so volunteers know how to respond when "off-script" questions or behavior issues arise.

Higher Achievement continued to be effective in the expansion sites. In particular:

- Program group students' core grade point average (math, reading, science, and social studies) improved more than the control group's grades two years after they had applied.
- The second-year grade impacts were particularly strong for students who started Higher Achievement solidly on grade level — the students the program was originally developed to serve.
- The impact on math and reading test scores in Year 2 was positive but not statistically significant.

The ability to improve middle school grades is notable; research shows that students who have stronger grades in middle school are more likely to succeed in high school. Indeed, school grades are more strongly related to later success in the workplace and in life than test score performance. Higher Achievement's successful replication of the model in new cities suggests it could serve as a model to help students succeed nationwide.

ACKNOWLEDGMENTS

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The Authors

EXECUTIVE SUMMARY

"Talent is everywhere, but opportunity is not."

— Higher Achievement, "Our Mission"

Many talented students in under-resourced schools and neighborhoods do not reach their full potential. Higher Achievement takes on this challenge by providing rigorous yet fun learning activities during out-of-school time for students in grades five through eight.

THE HIGHER ACHIEVEMENT PROGRAM

Higher Achievement, an intensive summer and after-school program, offers its participants, called "scholars," more than 500 hours of academic enrichment annually in its Achievement Centers, hosted in select middle schools in low-income neighborhoods. Unlike many academic, out-of-school-time programs in under-resourced schools, Higher Achievement is not a remedial program designed to help struggling students. Rather, it challenges its scholars to meet the high academic standards expected of college-bound students. Students enter Higher Achievement during the summer before fifth or sixth grade and are asked to commit to attending through their eighth-grade year. The program leverages a diverse community of adults after school and in the summer:

- A full-time director and assistant director at each Achievement Center oversee all aspects of the centers and relationships with families as well as school staff in the host middle school.[1]
- Trained volunteers ("mentors") deliver 75-minute English Language Arts (ELA) classes and math lessons to groups of three or four scholars after school.
- Part-time staff ("achievement coaches" and "center aides") oversee study hall sessions and deliver enrichment activities after dinner during the school year.
- During the summer, teachers deliver ELA, math, science, and, at some centers, social studies classes.

During a study of Higher Achievement that began in 2015 — described below — the program operated an Afterschool Academy three days a week (3:30 p.m. to 7:30 p.m.) for 25 weeks during the school year, as well as a six-week, eight-hour-a-day summer program called the Summer Academy.

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1 "Assistant director" is used in this report for ease of reading. Higher Achievement calls this position "manager of instruction" or "volunteer and scholar coordinator." The title varies by city.

The program was proven effective in a rigorous evaluation of the flagship site, DC Metro (Washington, DC, and Alexandria, Virginia), conducted in the mid-2000s. Starting in 2009, Higher Achievement expanded to three new cities: Baltimore, Maryland, in 2009; Richmond, Virginia, in 2011; and Pittsburgh, Pennsylvania, in 2012.[2] Keenly aware that many effective flagship programs fail to stay effective when they expand, the U.S. Department of Education funded a validation study of Higher Achievement in 2015 to examine whether students' academic performance was positively impacted at the expansion sites and whether a promising program can be scaled up and remain effective. MDRC, in collaboration with the authors of the first study of Higher Achievement, began the validation study in 2015. This report documents that study's findings.

With funding from this study, Higher Achievement also expanded to new centers, developed additional after-school curricula, and piloted a different enrollment strategy at half of the centers — restricting enrollment to students who attended or would attend the host school, rather than drawing students from several schools.

The study found that even though the program experienced many of the implementation challenges common to out-of-school-time programs and newer programs, it had positive impacts on students two years after they applied; in particular, students' grades improved significantly. The impact on test scores, while positive, was not large enough to be statistically significant.[3] Academic impacts in the first year were positive but small, becoming statistically significant only in the second year, and only for course grades. The second-year grade impacts were particularly strong for students who started Higher Achievement with stronger academic backgrounds — the students the program was originally developed to serve.

THE EVALUATION DESIGN

This report addresses three questions: (1) How did the Higher Achievement centers operate during the study and what lessons are there for similar programs? (2) Did scholars receive more academic enrichment over the two-year study period than they would have received without Higher Achievement? (3) How did Higher Achievement impact scholars' grades and test scores over the two years since they applied?

Telephone interviews with staff members and mentors combined with surveys of center directors and mentors revealed how the program operated and its challenges. To investigate how the program changed the academic enrichment environment for its scholars and how it affected their academic performance, the research team compared the behavior of the eligible youth who were randomly selected to be offered a spot in the program (the program group) with the outcomes of the nonselected students (the control group). Using school records to compare changes in test

2 Neighborhood district Henrico, Virginia, was added to the Richmond affiliate in 2016.

3 A statistically significant outcome is one that, in all likelihood, resulted from the program rather than chance alone.

scores and grades between these two groups (who started out as equally motivated and able), the study concludes that the differences in their outcomes were caused by participation in Higher Achievement, that is, the program's impact. (See Table ES.1) In addition, a phone survey with a randomly selected subset of program and control group parents showed how their children's academic enrichment experiences differed.

TABLE ES.1 Higher Achievement Year 2 Study Impacts: Test Scores and Course Grades, Expansion Sites Sample

	SCORE/GRADE				
OUTCOME	PROGRAM GROUP	CONTROL GROUP	ESTIMATED DIFFERENCE	EFFECT SIZE	P-VALUE
Test-score outcomes					
Math	-0.05	-0.11	0.06	0.06	0.414
ELA	0.00	-0.05	0.05	0.05	0.528
Number of students	394	251			
Course-grade outcomes					
GPA	2.58	2.43	0.15	0.20***	0.006
Math	2.49	2.31	0.18	0.19**	0.014
English	2.55	2.39	0.17	0.18**	0.017
Science	2.63	2.48	0.15	0.17**	0.033
Social Studies	2.65	2.55	0.11	0.12	0.134
Number of students	414	255			

SOURCE: MDRC's calculations use student records data from Baltimore, Pittsburgh, and Richmond/Henrico public school districts from the 2014-2015 through 2017-2018 school years. Student records data were combined with baseline application data received from Higher Achievement National.

NOTES: Estimated differences are regression adjusted using ordinary least squares, controlling for baseline characteristics and random assignment block. The values in the column labeled "Program Group" are the observed means for children who were randomly assigned to attend the Higher Achievement program. The "Control Group" values in the next column are the regression-adjusted means for children who were randomly assigned to not attend the Higher Achievement program. The values in the "Effect Size" column are the estimated effect divided by the standard deviation for the sample.

Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

GPA is grade point average and is measured on a scale of 1.0 to 4.3.

Rounding may cause slight discrepancies in sums and differences.

IMPLEMENTATION FINDINGS

Overall, the study found that Higher Achievement expansion sites faced many operational challenges common to other school-based, out-of-school-time programs — for example, staff turnover, coordination with the host school, and lower-than-hoped-for attendance by middle school students — as well as to new programs, such as a lack of strong relationships with key partners and difficulty recruiting enough volunteers. Despite these challenges, the centers were able to put most of the key features of Higher Achievement in place.

Mentor Recruitment and Providing Small Group Learning Settings

All but the Richmond centers were able to recruit adequate numbers of adult volunteers in order to maintain the preferred ratio of four scholars to one mentor and allowing centers to provide small group instruction affordably. Even so, unlike at flagship affiliate DC Metro, center directors felt they could have used additional mentors to provide scholars with more individualized assistance.

Volunteers as Instructors

Detailed lesson plans with scripted questions and student instructions allowed mentors to deliver rigorous academic lessons, covering most of the intended content. Mentors also succeeded in getting scholars to practice various "habits of mind" outlined in the curriculum, such as supporting an argument with examples. However, mentors used instructional strategies such as "turn and talk" to your neighbor — intended to strengthen how a student thinks — less than was hoped for. Centers supported these volunteer efforts through preservice training, but getting mentors to attend brief, post-session training sessions and providing them with individualized feedback throughout the school year was more challenging.

Center Operations and Program Delivery

Operating a three-day-a-week program for 25 weeks during the school year proved doable for all the sites. Operating a five-day-a-week summer program in the same schools was more problematic because the host schools were not always open five days a week during the summer months.

Center Leadership

Seasoned leadership — ideally both the center director and assistant director — emerged as the crucial element to successful center operations. However, to the detriment of the program, and like many after-school programs, most centers struggled with turnover in leadership.

Student Attendance

Like other middle school enrichment programs, Higher Achievement struggled to get the students to make the full three- or five-day-a-week commitment. Middle school students want to

participate in a variety of other activities (sports, music, religion), so Higher Achievement was flexible in its attendance requirements. Despite (or perhaps because of) this flexibility, over the two years, many more program group students experienced academic enrichment activities than did control group students.[4]

Student Engagement

Many studies of out-of-school-time programs suggest that the relationships students form with program adults are strongly related to how long students stay and engage in a program. Higher Achievement provides scholars with many adults to bond with, including the center director, the assistant director, study hall supervisors, summer teachers, and ELA and math mentors. The study found that while mentors formed solid relationships with scholars that fostered positive experiences in the program, relationships with the centers' paid staff seemed particularly important in shaping children's engagement and behavior. The center staff, who interact with all the scholars at a center, are present every day, both during the school year and summer — often for multiple years. The mentors' commitments are only for one day a week during the school year, with less than half of them continuing into a second year. The consistency of the center staff's presence over a longer period appears to be an important element of scholars' experience.

IMPACT FINDINGS

- **Two years after applying to Higher Achievement, program group students at the expansion sites earned better grades than control group students in English, math, and science.**

At the end of the first year, a slight impact on grades was observed, but the effects were too small to be meaningful or significant, other than to hint at progress. By the end of the second year, however, the impacts on grades grew and became statistically significant. The impact on test scores appears to be smaller. After the first year, there were essentially no differences in the test scores of program and control students. After the second year, the differences increased, but were still not large enough to meet established standards of statistical significance. (See Table ES.1.)

- **Higher Achievement appeared to be more effective for scholars who joined the program solidly on grade level (earning As or Bs) than students with lower grades.**

The grade point average in Year 2 for the program group students earning As or Bs in math at baseline was 0.31 of a standard deviation higher than the grade point average of similarly strong

4 During the first school year, 83 percent of the sampled parents of program students reported that their child attended an academic program (most likely Higher Achievement), compared with only 13 percent of control group parents. During the summer between the first and second school years, 76 percent of program students participated in academic enrichment activities compared with none of the control students. During the second school year, 83 percent of program students participated in academic enrichment activities compared with 13 percent of the control students.

control group students. As noted, Higher Achievement is not a remedial program, but was designed to accelerate and deepen on-grade learning. Thus, it is not surprising that students who struggled more with grade-level material got less out of the program.

- **Higher Achievement also appeared to be particularly advantageous for male scholars.**

The impact on boys' math grades was greater than that on the girls' math grades in Year 1 and, most likely, in Year 2.[5] Without Higher Achievement, boys' math performance (as reflected in the control group for boys) fell much more than the girls' performance over time. With Higher Achievement, however, the fall in boys' math grades was reduced. That pattern is also seen for grade point average, but the difference in impact by gender over two years is not large enough to be statistically significant.

REFLECTIONS AND CONCLUSIONS

Research shows that by sixth grade, middle class children have likely spent 6,000 more hours learning than children born into poverty.[6] The results of this disparity affect all members of society through its impact on the economy. Leveling the educational playing field is thus a goal of many members of society — citizens and policymakers alike. This study shows that Higher Achievement can be part of the solution.

The ability to improve middle school grades is noteworthy because the literature shows that students who have stronger academic achievement in middle school are more likely to succeed in high school.[7] Indeed, a growing body of literature is showing that school performance measures such as grades are more strongly related to later success in the workplace and in life than test score performance.[8] Researchers believe this is because grades capture not only academic knowledge but also the development of characteristics that are highly valued by employers, such as perseverance, self-control, attentiveness, and other key social-emotional competencies. Employers are demanding and rewarding through higher wages these noncognitive skills more

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5 The estimated impact for Year 2 has a p-value of 0.11, which is only slightly larger than the 0.10 threshold for statistical significance.

6 ExpandED Schools, "The 6,000-Hour Learning Gap" (2013), website: www.expandedschools.org/policy-documents/6000-hour-learning-gap#sthash.c2cNWc7o.nrWffwfQ.dpbs.

7 Jean Baldwin Grossman and Siobhan M. Cooney, *Paving the Way for Success in High School and Beyond: The Importance of Preparing Middle School Students for the Transition to Ninth Grade* (Philadelphia: Public/Private Ventures, 2009); Olga Reyes, Karen L. Gillock, Kimberly Kobus, and Bernadette Sanchez, "A Longitudinal Examination of the Transition into Senior High School for Adolescents from Urban, Low-Income Status, and Predominantly Minority Backgrounds," *American Journal of Community Psychology* 28, 4 (2000): 519-544. Although not measured in the study, Higher Achievement's program model tries to strengthen scholars' sense of scholastic competence by intentionally giving them not only challenging material but also the individual attention needed to master it.

8 Tim Kautz, James J. Heckman, Ron Diris, Bas Ter Weel, and Lex Borghans, *Fostering and Measuring Skills: Improving Cognitive and Non-Cognitive Skills to Promote Lifetime Success* (Cambridge, MA: National Bureau of Economic Research, 2014), website: www.nber.org.

than they did 20 years ago.[9] Afterschool and summer programs that provide young people with challenging activities focused on building one or more personal or social skills such as persistence or character, which underlie many of Higher Achievement's activities, are effective in promoting social-emotional development.[10]

Higher Achievement occupies a slightly different educational space than many academically oriented programs in under-resourced neighborhoods. Most of these programs are structured to help students who are performing below grade level, with their academic problems front and center. Higher Achievement was designed to propel academically motivated students in under-resourced schools toward college. This focus helps explain why analyses found that the program was less effective at serving academically struggling students. This is simply not the group that Higher Achievement traditionally targets.

The current evaluation provided Higher Achievement with extensive feedback. Learning from the research team, talking to families in the program, and continuing its own internal evaluation efforts have spurred the organization to improve its offerings in several ways, starting in the 2020-2021 school year. First, it is expanding the Afterschool Academy from three to four days a week and it will start a week earlier in the school year. Two days a week will include mentoring sessions and the other two will focus on enrichment activities. The program is introducing a new curriculum that includes more hands-on activities and is focused on science, technology, engineering, and math (STEM) and humanities, and on building social-emotional skills. Study hall will also be expanded to include both homework help and academic skill-building activities. Higher Achievement centers are also no longer holding a Summer Academy. Instead, they will provide resources to help families enroll in other summer programs with strong track records. This will enable center staff members to meet individually with each scholar and their family to focus on high school planning, college visits, and preparing for the Afterschool Academy. Finally, applicants will have to have earned at least a C in math or ELA to be eligible to enroll, instead of not having any grade requirements. Taken together, these changes are designed to increase opportunities for students to form strong relationships with the program adults and obtain a greater "dosage" of enrichment.

The results of this evaluation should encourage Higher Achievement and funders to further expand the program. Higher Achievement was able to do what few expansion programs have been able to demonstrate: It expanded to new school districts, created experiences for the scholars that were more enriching than what they would have gotten without it, and maintained its

9 Diane Whitmore Schanzenbach, Ryan Nunn, Lauren Bauer, Megan Mumford, and Audrey Breitwieser, *Seven Facts on Noncognitive Skills from Education to the Labor Market* (Washington, DC: The Hamilton Project, Brookings Institution, 2016).

10 Elizabeth Devaney, *Supporting Social and Emotional Development through Quality Afterschool Programs* (Washington, DC: American Institutes for Research, 2015); Reed W. Larson and Rachel M. Angus, "Adolescents' Development of Skills for Agency in Youth Programs: Learning to Think Strategically," *Child Development* 82, 1 (2011): 277-294; Ida Salusky, Reed W. Larson, Aisha Griffith, Joanna Wu, Marcela Raffaelli, Niwako Sugimura, and Maria Guzman, "How Adolescents Develop Responsibility: What Can Be Learned from Youth Programs," *Journal of Research on Adolescence* 24, 3 (2014): 417-430.

effectiveness across these new sites. To maintain its quality, Higher Achievement has a culture of constant improvement — always learning from its experiences and adapting — and thus will be continuing its program development in the upcoming years. It serves as a strong model for other after-school and summer programs in its quest to improve implementation quality and effectiveness.

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.