

**“CHALLENGING UNDER-SERVED CHILDREN TO ACHIEVE
ACADEMIC EXCELLENCE”**

An Evaluation of the Higher Achievement Program in Washington, DC

**Research Progress Report
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I. Introduction

Substantial research documents that quality educational experience impacts children's test scores, graduation rates, and subsequent earnings, particularly for disadvantaged and minority children (Summers and Wolfe, 1977; Card and Krueger, 1992; Krueger, 1999; Ashenfelter and Krueger, 1994; Angrist and Krueger, 1991). However, too many children living in poor neighborhood attend under-funded, low-quality public schools. While improving these schools is a desirable goal, the complexity of urban school reform and the slow nature of such change have compelled many policymakers and parents to consider educational interventions outside of the school system, such as out-of-school time (OST) academic enrichment programs.

While intuitively, academically oriented OST programs should improve academic performance because they provide students with more instruction and time to practice newly acquired skills, evidence in support of this hypothesis is thin. Many of the evaluated OST programs for disadvantaged students do not have academic impacts (see below). The most common reason advanced to explain the lack of results is that the implementational and instructional quality of these OST programs may be too poor to produce academic change. But some worry the issue is more fundamental. It may be that the more social after-school environment inhibits learning or that given the voluntary nature of supplemental programs, students will not attend these academic programs frequently enough or long enough to impact academic achievement even if intensive, long-term programs were available.

Starting in the spring of 2006, Jean Grossman and Carla Herrera of Public/Private Ventures and Leigh L. Linden of Columbia University began a multi-year study to address this issue by investigating the impact of a "Cadillac" version of academic enrichment OST program. In particular, we identified a mature OST program, the Higher Achievement Program of Washington, D.C., that has a rigorous academic curriculum, is well-design and managed, and is intensive in nature. If such a program cannot achieve academic impacts, then the skeptics are likely to be right—significant academic advancement cannot be achieved outside of the professionalized, mandatory school

environment. If it can, then next the field can consider whether less intensive programs could also have academic impacts.

The assessment comprises a randomized evaluation in which a fixed number of slots available each year in Higher Achievements centers are randomly allocated amongst a much larger pool of eligible applicants. Successful applicants can then be directly compared to those not chosen to determine the causal effects of being offered a position in the Higher Achievement Program. Research subjects are recruited in multiple cohorts, and provide a baseline assessment as well as one- and two-year follow-up assessments. Students are evaluated using a short version of the Tenth Edition of the Stanford Achievement Test and a student survey containing psychometric scales designed to assess the effects of the program on students' perceptions of themselves, their peers, and the options available to them in the future. Parents also complete brief surveys that include questions about their background, transportation to the program and other variables that may be linked with program participation.

This research update provides a status report on the study after the second year of data collection, presenting a baseline comparison of students enrolled in the study during the first two recruitment periods: the summers of 2006 and 2007. Overall, 552 students were recruited during this period. Of these, 322 were offered positions in the program, leaving 230 students as comparison students. The students in these groups are similar in most baseline measures covered in the student survey, parent survey, and standardized test. This suggests that the study is proceeding as expected, and if this trend continues, we will have comparable treatment and control groups to form the basis for the evaluation of the Higher Achievement Program.

The report is organized as follows. Section Two provides a brief description of the Higher Achievement Program. Section Three provides a summary of the basic research design and description of the data that will be collected during the study. Section Four provides an overview of the methods used to compare the baseline data. Finally, Section Five shows the results of the baseline survey from the first cohort.

II. The Higher Achievement Program

Higher Achievement is an established small-scale program that strives to develop positive academic behaviors, habits, and attitudes in academically motivated but underserved middle school children (grades 5 through 8) in the District of Columbia. Its objective is to improve participants' grades, standardized test scores, and school attendance in order to increase their educational opportunities, specifically through acceptance and scholarships to private, parochial and public magnet high school programs. The program began in its current form in 1999.¹

Higher Achievement recruits economically disadvantaged inner-city middle school students into programs run at five centers located in Northeast and Southeast Washington, D.C. Participating students, "scholars," typically begin the program either during the summer between 4th and 5th grades or between 5th and 6th grades. The majority of these students who enroll in Higher Achievement come from disadvantaged backgrounds. Eighty-one percent of households are lead by a single woman and 80 percent of parents have not attended anything more than high school. Academically, a majority of students have "B" or "C" averages. The only requirement is that students must be "motivated", meaning that they and their parents complete the application, show up at a follow-up interview, and express a desire for the child to participate.

Scholars receive supplemental educational experiences through academically focused multi-year programming during the after-school and summer hours, in addition to high school placement services. Achievement Centers operate year-round as out-of-school time academic magnet programs drawing children from many neighborhood schools. The program offers up to approximately 700 hours a year of academic instruction, enrichment activities, and mentoring.

Three core beliefs guide the structure and content of the Higher Achievement Program: (1) talent is everywhere, in every community; (2) intellectual capacities are built through effort; and (3) opportunities matter. Firmly committed to the conviction that students in impoverished communities are as talented as their more affluent peers,

¹ An earlier version of the program was in operation from 1975 through 1998 and provided one-third of the services provided by the current program exclusively to gifted and advanced students.

the program's developers believe that the intertwined dearth of opportunities and lack of effort lead to systematic underachievement. If the school environment provides insufficient academic opportunities, students lose interest. Pervasive academic disinterest can dissuade even academically inclined students from taking advantage of the few opportunities that do exist. Higher Achievement addresses these issues by both dramatically increasing the educational and enrichment opportunities available to scholars, and creating a learning community in which intellectual curiosity, academic commitment, and scholastic achievement are valued.

Higher Achievement's guiding theory of change and specific programmatic components reflect the staffs' understanding that many students from the impoverished neighborhoods of D.C. lack educational opportunities at home, school, and in their neighborhood. By offering up to four years of intensive academic intervention for motivated children during early adolescence, a time when many disengage from school and learning, Higher Achievement believes it can reverse scholar's declining test scores and change the life outcomes for vulnerable children.

III. Research Design

A. Randomization Assignment

Higher Achievement deliberately tries to recruit motivated students – students who are necessarily different than students who never apply. Random assignment among qualified applicants ensures that the only systematic difference between the treatment and control groups is the treatment group's access to Higher Achievement. All other characteristics, including their ability and motivation, will be statistically comparable. Thus, at any point in time the experience of the control group represents what the treatment students would have experienced had they not had the option to enroll in the program. The impact of the program over and above what the students could get without Higher Achievement can be determined by examining the difference in the average outcomes of the two groups. The difference in the average experiences of the two groups is not necessarily the entire impact of Higher Achievement because control group

students can and most likely will receive supplemental academic services outside of the program. However, we hypothesize that the quality and intensity of these services will be higher for treatment group members.

We are building our research sample over a three-year period, and conducting baseline, 12-month and 24-month follow-up surveys. Higher Achievement estimates that between its five centers, they will have sufficient space to enroll, on average, 135 students at the start of each summer session. The program has agreed however to recruit twice the number of eligible students to allow for the random selection of children into the program. The first cohort completed the baseline test in May of 2006 and completed the 12 month follow-up survey in May of 2007 when the second cohort completed the baseline survey. This process will continue until 2011 to enroll at least a total of 810 students in the study.

During the application process, students and parents will be informed about the study, including an explanation of the evaluation's purpose, the lottery-like selection process and the information we will collect from all applicants, whether or not they "win" the lottery. Once a student formally applies to the program and is deemed eligible by Higher Achievement staff, the student and his or her parent/guardian will sign an informed consent form and complete a baseline survey, and the student's reading and math ability will be assessed using a standardized test. To ensure that students are evenly distributed across program centers, grades, and gender, we will conduct a stratified randomization of all applicants. Parents of students who are not selected (i.e., placed in the control group) will be given a representative list of other after-school programs, to increase the likelihood of future participation in surveys.²

² This action highlights the fact that, like all experimental studies, this evaluation is a comparison of Higher Achievement to other alternatives that exist. The list is designed to be a list of programs to which students would have otherwise applied. Our goal is not to compel parents to participate in these other programs, but rather to offer reassurance that Higher Achievement does care about their children.

B. Outcome Measures

We chose the outcome measures employed in the current study with an eye toward both the theory driving Higher Achievement's philosophy and also the desire to maintain comparability with other research into the potential effects of such programs. We collect these data in both the baseline and follow-up surveys to measure differences in the levels and growth rates in these outcomes for the treatment and control groups. The primary measures are the following:

1. Service Contrast Measures. The primary limitation of our research design is our inability to control the experience of the students not offered a place in the Higher Achievement Program. Higher Achievement offers participants a variety of inputs, from direct academic instruction to mentoring and field trips, with the belief that these opportunities are not available to students elsewhere in the community. We need to know two things to investigate if participants do indeed receive inputs they would not have otherwise received: the specific program activities offered and the adolescents' attendance at these activities.

2. Academic Achievement. First to ensure a consistent measure of students' academic gains, we will evaluate all students using a single standardized achievement test administered by the survey team – a short version of the 10th Edition of the Stanford Achievement Test.

3. Behavior and Attitudes. Using previously tested psychometric scales and questions designed specifically for this study, we will evaluate the effect of the program on students' study habits (Pittman, 2004; Redd, Cochran, Hair, and Moore, 2002), attitudes about themselves, academic achievement, and risk-taking behavior (Schulenberg, Maggs, and Hurrelmann, 1997).

IV. Analytic Methodology

The assessment of the resulting data will take place in three steps. First, we will use the data collected at baseline to determine whether the randomization, in fact, created comparable treatment and control groups. Second, we will analyze attrition patterns to ensure that these groups are still comparable at the one- and two-year follow-up surveys. Finally, using the follow-up surveys we will directly compare the outcomes of the treatment and control groups, the comparability of the groups allowing us to causally attribute any differences to the program.

The basic equation we plan to use for the first two comparisons is a simple difference estimator of the form:

$$y_{ij} = \beta_0 + \beta_1 Treat_i + \varepsilon_i \quad (1)$$

The variable y_{ij} is the measure under consideration for student i and outcome j . The variable $Treat_i$ is an indicator variable equal to one if the student is assigned to the treatment group or zero if the student is assigned to the control group.

For outcome estimates, we will use a similar model that controls for students' characteristics and baseline survey responses and test scores:

$$y_{ij} = \beta_0 + \beta_1 Treat_i + \delta X_i + \varepsilon_i \quad (2)$$

The vector of variables, X_i , is a set of controls that will include variables such as race, age, grade, gender, family income, school system, language spoken at home, and other student and family characteristics, all measured before randomization. This vector will also include, in estimates of outcome differences, the baseline value of the variable. The estimate of β_1 is an estimate of the treatment effect.

In estimating these equations, we will also take into account the fact that the assignment ratios (percentage of recruited students assigned to the treatment group) are likely to fluctuate from year to year due to variations in the effectiveness of recruitment efforts and the differences between the number of anticipated slots and the number that actually become available. While we hope to recruit twice as many students as there are

slots available in the program, the actual number will certainly vary slightly from year to year and it is possible that we may even recruit more than twice as many students in some centers. To correct for this statistically, we will create indicator variables for the cohort in which each student was recruited.

V. Results

This research update contains an analysis of the data available to date, namely a baseline comparison of students recruited in cohorts one and two. The purpose of the analysis is two fold. First, these statistics provide a glimpse of the types of students enrolled in the study. Second, by comparing the treatment and control groups, we check to make sure that the randomization process works to create comparable treatment and control groups that will become the basis for inferring the ultimate effects of the Higher Achievement Program.

Table 1 provides the distribution of students recruited for these cohorts and their ultimate assignment to either receive a position in the program (Treatment Group) or to be denied a position (Control Group). Roughly the same number of students were recruited during each recruitment period – 277 in the first cohort and 275 in the second. However, Higher Achievement had more slots available for potential students in the first cohort, and as a result, two-thirds of the students in cohort one were assigned to receive the treatment while only half of students were assigned to receive the treatment in cohort two. In total, 322 students were offered admission, leaving 230 students to comprise the control group.

To assure Higher Achievement a balanced mix of students resembling the overall population of recruited students, we stratified the random assignment by the location of the child’s local Higher Achievement Center, grade, gender, and score on the math exam. Siblings were treated separately so that we could randomize at the family level to ensure that families would not be burdened with having to send children to separate programs. The probability of treatment was the same as for individual students. The resulting number of children in each category is provided in Table 1. While the proportion of

students in the treatment and control groups varies slightly, the proportion is reasonably consistent throughout the location, grade and gender categories.

Tables 2 through 6 contain baseline comparisons of these students using Equation 1 from the previous section. These data were obtained from the standardized tests, the child surveys, and the parent surveys. These tables present comparisons along the most critical dimensions. While this is only two-thirds of our anticipated sample, the treatment and control groups are already very similar. Minor differences exist both in students' standardized math scores and in the distribution of families' distance to the local centers, but none are large enough to threaten the validity of the study. These small differences may decline with the addition of the final cohort. We will also control for any such differences when estimating the ultimate effects of the program with Equation 2.

Table 2 contains the results from the Reading and Problem Solving Sections of the Tenth Edition of the Stanford Achievement Test. The first two columns of data provide the results for the Reading Section and the second two contain the results for the Mathematical Problem Solving Section. Each row contains a particular measure of the students' performance. Within each measure, the first columns for each test section contain the average scores for the control students followed by the difference between the treatment and control students.

The scores of students in both groups are similar. In reading, students attempted about 29 of the 30 possible questions in each group and correctly answered about 19 of them. In percentage terms, the difference in correct responses between the two groups was less than one percent of all of the questions on the exam. Normalizing the scores relative to the control group (the last row), this difference is only 0.02 standard deviations.

The differences for math are only slightly larger. Here, students in both the treatment and control groups answered an average of about 18 of the 30 questions correctly. On average, the control group correctly answered only one half of a question more than the treatment group. Given the distribution of scores, this translates into a statistically insignificant difference of 0.09 standard deviations relative to the distribution of control scores.

Students' self-reported academic performance is displayed in Table 3. The layout of the table is similar to that of Table 2. Rows 1 through 4 present grade point averages (using estimated grades from the students), and rows 5 and higher indicate the percentage of students selecting each category. Students report a grade point average in the B-plus range of a 4-point scale. Consistent with these estimates, about half of the students in both groups report earning A's and B's, and about 24 percent report earning some C's. Again, both groups are very similar. The largest difference is the fraction of students reporting that they earn B's and C's, but even this difference is relatively small compared to the general distribution of scores.

The psychometric scales used to assess the students are presented in Table 4. Each group of scales is designed to measure different aspects of the children's lives that could be affected by the program. The scales in Panel A measure students' own assessment of their abilities in different spheres. Those in Panel B assess students' perceptions of themselves. Panel C scales measure students' perceptions of their abilities to improve the future, and Panel D scales measure the influences of external factors like peers, parents, and various sources of stress (such as moving, etc.). Finally, Panel E scales measure student participation in out-of-school activities and negative behaviors. While two of the average differences in the various measures show up as statistically significant (i.e., for adult support and confidence/assertiveness), all of the differences are again practically very small.

Table 5 presents the results on the accessibility of the various Higher Achievement centers. The first question measures the simple distance to the center while the remaining questions document the parents' plans for getting the child to and from the center during the summer and academic year sessions. Interestingly, the distances seem similar on average even though there are some differences in the distribution of the distances between the two groups. Reflecting the overall similarity, however, the remaining questions document that the parents' plans for getting the students to and from the centers are very similar – with the vast majority relying on a parent or guardian.

Finally, Table 6 presents the results of our questions regarding parents' expectations of their children's eventual academic achievement and the Higher Achievement Program. The majority of parents chose the program to help their children

do better in school and to get into a better high school. The final two questions ask parents about their child's academic achievement. The first question asks about parents' current aspirations for their children, and parents in both groups have similarly high aspirations. Almost all of them want their children to attend, at least, college, and the majority would like their children to pursue a post-graduate degree. The only statistically significant difference is that 10 percent more parents of children in the treatment group (relative to those of children in the control group) reported that they wanted to enroll their child in Higher Achievement because the child asked to attend the program. Finally, the last question asks parents about their children's future performance if they did not attend Higher Achievement. Again, the responses are similar with a slight difference in the percentage of children who are predicted to attend some college (8 percentage points.)

VI. Conclusion

The team was successful in oversubscribing the first and second cohorts of students. In total, 552 students have been recruited into the study; 322 of these students were randomly assigned to receive an offer to join the program. A comparison of these students using the baseline survey completed prior to random assignment demonstrates that both groups of students are on average quite similar. Along all measures including academic achievement, students' beliefs about themselves, their academic achievement, and their peers, their parents' expectations, and the accessibility of the centers, the students in the treatment group are, on average, quite similar to those in the control group. In general, these results demonstrate that the randomization process worked and that once the third cohort is included, these data can be used to assess the effects of the Higher Achievement Program.

VII. Bibliography

- Angrist, J. D. and A. B. Krueger (1991). "Does Compulsory School Attendance Affect Schooling and Earnings?" Quarterly Journal of Economics 106(4): 979-1014.
- Ashenfelter, O. and A. B. Krueger (1994). "Estimates of the Economic Return to Schooling from a New Sample of Twins." American Economic Review 84(December): 1157-73.
- Card, D. and A. Krueger (1992). "Does school quality matter: returns to education and the characteristics of public schools in the United States." Journal of Political Economy: 1-40.
- Charles Stewart Mott Foundation (2003). After school summit: Summary report. 2004.
- Cooper, H. (2001) "Homework for All—in Moderation." *Educational Leadership*, (58): 34-38.
- Cooper, H., B. Nye, K. Charlton, J. Lindsay, and S. Greathouse. (1998) "Relationship Among Attitudes About Homework, Amount of Homework Assigned and Completed, and Student Achievement." *Journal of Educational Psychology*, (90): 70-83.
- Dynarski, M., C. Pistorino, M. Moore, T. Silva, J. Mullens, J. Deke, P. Gleason, W. Mansfield, S. James- Burdumy, S. Heaviside, L. Rosenberg, and D. Levy. (2002) *When Schools Stay Open Late: The National Evaluation of the 21st-Century Community Learning Centers Program*. Washington, D.C.: U.S. Department of Education, Office of the Under Secretary.
- Entwisle, B. (1975) *Evaluating Baltimore City's School Age Day Care Program: Results of a Pilot Study*. Providence, RI: Brown University.
- Grossman, J.B., M. Price, V. Fellerath, L. Jucovy, L. Kotloff, R. Raley, and K. Walker. (2002) *Multiple Choices After School: Findings From the Extended-Services Schools Initiative*. Philadelphia: Public/Private Ventures and MDRC.
- Halpern, R., J. Spielberger, and S. Robb. (2000) *Evaluation of the MOST (Making the Most of Out-of-School Time) Initiative: Final Report*. Chicago: Chapin Hall.
- Hamilton, L. S., and S. P. Klein. (1998) *Achievement Test Score Gains Among Participants in the Foundations School-Age Enrichment Programs*. Santa Monica, Calif.: RAND Corporation.
- Hansen, E., and K. Greene. (2000) *A Recipe for Math: What's Cooking in the Classroom?* Web site. <http://www.secondaryenglish.com/recipeformath.html>
- Holm, S. (1979). "'A Simple Sequentially Rejective Multiple Test Procedure'." Journal of Statistics(6): 65-70.

- Huang, D., B. Gribbons, K. S. Kim, C. Lee, and E. L. Baker. (2000) *A Decade of Results: The Impact of the LA's BEST After-School Enrichment Program on Subsequent Student Achievement and Performance*. Los Angeles, CA: UCLA Center for the Study of Evaluation (CSE), Graduate School of Education and Information Studies.
- Jackson, A. W. and G. A. Davis (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York, Teachers College Press.
- Kane, T. J. (2004). *The impact of after-school programs: Interpreting the results of four recent evaluations*. New York, William T. Grant Foundation.
- Kling, J. and J. Liebman (2004). "Experimental Analysis of Neighborhood Effects on Youth." KSG Working Paper RWP04-034.
- Kralovec, E., and J. Buell. (2000) *The End of Homework: How Homework Disrupts Families, Overburdens Children, and Limited Learning*. Boston: Beacon Press.
- Krueger, A. B. (1999). "Experimental Estimates of Education Production Functions." The Quarterly Journal of Economics Letters 114(2): 497-532.
- Lamare, J. (1997) *Sacramento START: An Evaluation Report*. Sacramento, CA: Sacramento CA Neighborhood Planning and Development Service Department.
- Mayesky, M. E. (1980) "A Study of Academic Effectiveness in a Public School Day Care Program." *Phi Delta Kappan*: 284-285.
- Nimon, M. (1992) *Children's Reading: A Research Report*. ERIC Reports. Paper presented at the Conference of the International Association of School Librarianship, Belfast, Northern Ireland, July 20-24.
- Peterson, J. L., and N. Zill. (1980) "Parents Estimates of Time Use by U.S. Children of Grammar School Age." Unpublished Paper.
- Pittman, K. J., Irby, M., Yohalem, N., and Ahlstrom-Wilson, A., (2004). Blurring the lines for learning: The role of out-of-school programs as compliments to formal learning (electronic source). New Directions for youth development. 2004: 19-41.
- Posner, J. K., and D. L. Vandell. (1994) "Low-Income Children's After-School Care: Are There Beneficial Effects of After-School Program?" *Child Development*, (65): 440-456.
- Posner, J. K., and D. L. Vandell. (1999) "After-School Activities and the Development of Low-Income Urban Children: A Longitudinal Study." *Developmental Psychology*, 35(3): 868-879.
- Redd, Z., S. Cochran, et al. (2002). *Academic Achievement Programs and Youth Development: A Synthesis*, Child Trends, Inc , Washington, DC: 103.

- Reisner, E. R., C. A. Russell, M. E. Welsh, J. Birmingham, and R. N. White. (2002) *Supporting Quality and Scale in After-School Services to Urban Youth: Evaluation of Program Implementation and Student Engagement in the TASC After-School Program's Third Year*. Washington, DC: Policy Study Associates.
- Sabatelli, R. M., S. A. Anderson, et al. (2001). Assessing outcomes in youth programs: A practical handbook. 2004.
- Sheley, J. (1984) "Evaluation of the Centralized, Structured, After-School Tutorial." *Journal of Education Research*, (77): 213-217.
- Smith, T.E. (1990) "Time and Academic Achievement." *Journal of Youth and Adolescence* (19): 539-558.
- Summers, A. A. and B. L. Wolfe (1977). "Do Schools Make a Difference?" *American Economic Review*(67): 639-652.
- Urban School Initiative. (1999) *Urban School Initiative School Age Care Project: 1998-1999 School Evaluation Report*. Columbus, OH: Ohio Departments of Human Services and Education.
- U.S. Department of Education, (2003). When schools stay open late: The national evaluation of the 21st-Century Learning Centers program, first year findings. Washington, DC. Author.
- Vandell, D. L., and M. A. Corasaniti. (1990) "Variation in Early Child Care: Do They Predict Subsequent Social, Emotional and Cognitive Differences?" *Early Childhood Research Quarterly*, (5): 555-572.
- Walker, K. E., and A. J. A. Arbreton, with the Stanford University School of Education Research Team. (Forthcoming) *Final Report for the San Francisco Beacons Initiative*. Philadelphia: Public/Private Ventures.

Table 1: Distribution of Students from First Two Cohorts

		Research Group		Total
		Treatment	Control	Students
Alexandria				
Grade 5	Female	14	17	31
	Male	13	8	21
Grade 6	Female	9	10	19
	Male	9	9	18
Ward One				
Grade 5	Female	24	14	38
	Male	16	8	24
Grade 6	Female	13	9	22
	Male	12	7	19
Ward Four				
Grade 5	Female	15	11	26
	Male	8	8	16
Grade 6	Female	14	12	26
	Male	15	12	27
Ward Six				
Grade 5	Female	32	20	52
	Male	21	14	35
Grade 6	Female	25	13	38
	Male	14	13	27
Ward Seven				
Grade 5	Female	20	17	37
	Male	18	10	28
Grade 6	Female	23	14	37
	Male	7	4	11
Total Students		322	230	552

Table 2: Stanford Achievement Test Scores, Edition 10

Variable	Reading		Problem Solving	
	Control Average	Treatment - Control	Control Average	Treatment - Control
Attempted answers	29.62 (1.56)	-0.31 (0.24)	29.82 (0.61)	-0.19* (0.11)
Right answers	18.72 (5.38)	-0.11 (0.47)	17.82 (5.63)	-0.53 (0.49)
Percentage of right answers	0.62 (0.18)	0 (0.02)	0.59 (0.19)	-0.02 (0.02)
Scaled score	641.02 (36.14)	-1.29 (3.15)	52.19 (27.88)	-2.2 (2.40)
Percentile ranking	53.52 (25.54)	-0.35 (2.22)	632.86 (39.61)	-4.4 (3.35)
Normal Curve Equivalent*	0.11 (0.84)	-0.02 (0.07)	0.08 (0.92)	-0.09 (0.08)
Control Referenced	0 (1.00)	-0.02 (0.09)	0 (1.00)	-0.09 (0.09)

Standard errors are reported in parentheses. *Significant at 10%, **Significant at 5%, ***Significant at 1% Levels
 Estimated difference between treatment and control students corrects for differing cohort assignment ratios.

†The Normal Curve Equivalent was rescaled to have mean equal to 0 and standard deviation equal to 1.

Table 3: Self-Reported Academic Performance

Question	Control Average	Treatment - Control
1. Math grade[†]	3.2	-0.08
2. Reading or Language, Arts grade[†]	3.25	-0.03
3. Social Studies grade[†]	3.09	-0.09
4. Sciences grade[†]	3.26	-0.06
5. Overall, which of the following best describes the grades you got on your last report card? Mostly...		
D's, E's and F's	0.01	0
D's	0.01	-0.01
C's and D's	0.02	0.01
C's	0.03	0
B's and C's	0.16	0.05
B's	0.06	-0.01
A's and B's	0.56	-0.03
A's	0.13	-0.02
Average assigning values to letters[‡]	3.24	-0.06

Standard errors are reported in parentheses. *Significant at 10%, **Significant at 5%, ***Significant at 1% Levels

Estimated difference between treatment and control students corrects for differing cohort assignment ratios.

†: The scale in which this variable is measured is: 4-A, 3-B, 2-C, 1-D or E, 0-F.

‡: The scale in which this variable is measured is: 4-A, 3.5-As and Bs, 3-Bs, 2.5-Bs and Cs, and so on.

Table 4: Psychometric Scales

	Control Average	Treatment - Control
A. Self Assessment of Ability		
Industry and Persistence	3.46 (0.44)	-0.03 (0.04)
Ability to be Creative	3.22 (0.54)	-0.07 (0.05)
Scholastic Efficacy	3.35 (0.43)	0.02 (0.04)
B. Self Perception		
Enjoyment of Learning	3.37 (0.59)	0.07 (0.05)
Confidence and Assertiveness	3.63 (0.36)	0.07** (0.03)
Curiosity	3.38 (0.47)	0.03 (0.04)
C. Ability to Improve Future		
Ability to Manipulate Future	3.35 (0.52)	-0.06 (0.04)
Ability to Change Future Through Effort	2.95 (0.48)	-0.02 (0.04)
Value of School for Future	3.16 (0.72)	-0.02 (0.06)
D. External Influences		
Influence of friends	3.14 (0.52)	-0.05 (0.05)
Adult Support	3.76 (1.26)	0.27** (0.11)
Life Stress	4.54 (2.36)	0.11 (0.20)
E. Self-Described Activities		
Out of school activities	15.91 (5.04)	0.49 (0.46)
Misconduct	16.1 (6.10)	-0.88 (0.56)

Standard errors are reported in parentheses. *Significant at 10%, **Significant at 5%, ***Significant at 1% Levels
 Estimated difference between treatment and control students corrects for differing cohort assignment ratios.

Table 5: Accessibility of Higher Achievement Center

Question	Control Average	Treatment - Control
1. How far is the Higher Achievement program from your home?		
Within a few blocks	0.15	0.09**
1 to 2.0 miles	0.29	-0.06
2.1 to 4.9 miles	0.33	0.03
More than 5 miles	0.23	-0.06*
2. Does your family own a car?	0.82	-0.02
3. How will this child get to the Higher Achievement program over the summer?†		
The child's parent or guardian	0.71	-0.01
A grandparent or relative	0.11	0
A friend or neighbor	0.01	0.02
Public transportation	0.13	0
He/she will walk	0.04	0.04
Other	0.11	0.01
4. How will this child get home from the Higher Achievement program over the summer?†		
The child's parent or guardian	0.71	-0.01
A grandparent or relative	0.1	0.02
A friend or neighbor	0.02	0.02
Public transportation	0.12	-0.01
He/she will walk home	0.05	0.03
Other	0.13	0
5. How will this child get to Higher Achievement during the school year?†		
The child's parent or guardian	0.57	0.05
A grandparent or relative	0.1	0
A friend or neighbor	0.03	0.01
Public transportation	0.12	0.04
He/she will walk	0.08	0.02
Other	0.19	-0.03
6. How will this child get home from Higher Achievement during the school year?†		
The child's parent or guardian	0.72	0.01
A grandparent or relative	0.08	0.01
A friend or neighbor	0.01	0.03**
Public transportation	0.08	0.03
He/she will walk home	0.03	0.03
Other	0.16	-0.03

Standard errors are reported in parentheses. *Significant at 10%, **Significant at 5%, ***Significant at 1% Levels

Estimated difference between treatment and control students corrects for differing cohort assignment ratios.

†Respondents chose all that applied. Totals do not add to 100%.

Table 6: Parental Expectations of Child (Percent Responding Affirmatively)

Question	Control Average	Treatment - Control
1. Why did you decide to enroll this child in the Higher Achievement Program?[†]		
I need childcare in the after-school hours	0.04	0.03
I need childcare in the summer	0.07	0
To help my child do better in school	0.73	0
To help my child get along better with other children	0.12	0.04
To help my child get into a good high school	0.61	0.03
To get homework help for my child	0.29	-0.01
Someone at my child's school told me it would be a good idea	0.26	0.05
My child asked to go the program	0.26	0.10**
Other reasons	0.45	0.05
2. How far would you like to see this child go in school?		
Some High School	0	0
Finish High School	0	0.01
Attend some college	0.01	0
Finish a 4-year college	0.16	-0.04
Get a post-graduate degree (Masters, PhD, Law degree, etc.)	0.83	0.03
3. How far in school do you think this child is likely to go without the Higher Achievement program?		
Some High School	0.01	0.02
Finish High School	0.08	0.02
Attend some college	0.09	0.03
Finish a 4-year college	0.33	0.02
Get a post-graduate degree (Masters, PhD, Law degree, etc.)	0.49	-0.08*

Standard errors are reported in parentheses. *Significant at 10%, **Significant at 5%, ***Significant at 1% Levels

Estimated difference between treatment and control students corrects for differing cohort assignment ratios.

[†]Respondents chose all that applied. Totals do not add to 100%.