# The Talent Development Middle School Model

## Context, Components, and Initial Impacts on Students' Performance and Attendance

**December 2004**

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# Technical Resources


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**Unit I**

# Analytic Appendix

## Introduction

This appendix outlines the analytic approach used by MDRC to estimate the Talent Development Middle School model's impact on student performance and attendance. Impact findings are from Talent Development's first five years of implementation in a large, urban school district. The full report — which discusses the findings in detail and describes the components of Talent Development and the context in which it operates — is available online at this Web site or from MDRC as a printed document.

Talent Development is a comprehensive reform model for large middle schools that serve high-poverty populations and face serious problems with student attendance, discipline, and achievement scores. The model calls for specific changes in school organization and curricula with the goals of establishing a strong, positive school climate for learning; promoting high standards for mathematics, language arts, science, and U.S. history coursework for all students; and providing professional development systems to support implementation of the recommended reforms. Each of these changes is aimed specifically at enhancing student attendance in school, improving measurable student learning, and keeping students on course toward grade-level promotion and a successful transition to high school.

The impact analysis for this report focuses on engagement and performance outcomes for seventh- and eighth-grade students. The three types of outcomes that are examined are the ones likely to be in greatest proximity to the early phases of Talent Development's implementation: daily attendance, reading and math test scores, and grade-level promotion. The analytic approach used to measure the model's impact on these outcomes can best be described as a comparative interrupted time series design.[1]

Before detailing the steps of the design, it is important to distinguish between this study's measures of program outcomes and its measures of program impacts. The term "outcomes" here refers to the status or behavior of individual students or groups of students at various points during the period under study. In this study, the outcomes are measures of student attendance, grade-level promotion, and test scores. The term "impact" here refers to Talent Development's effect on an outcome.

### Constructing a Counterfactual

In this study, the average outcome levels (or even year-to-year changes in outcomes) for students in the Talent Development schools, by themselves, provide potentially misleading in-

[1]For further discussion of using interrupted time series analysis to measure impacts of whole-school reform, see also Bloom (2003) and Snipes (2003).

dications of Talent Development's impacts. Previous research has shown that students within a school or set of schools may improve from year to year or may differ from other students for reasons not necessarily related to a special intervention like Talent Development. The ideal research situation would allow for an absolutely reliable estimate of the student performance levels that would have been observed in the absence of the intervention,that is, the *counterfactual*, and would compare this with actual student performance. Random assignment is the most reliable basis from which to construct estimates of the counterfactual. However, since random assignment was not possible for this evaluation, the comparative interrupted time series analysis attempted to construct the best counterfactual possible short of random assignment, in order to estimate the true impact of Talent Development.

To this end, it was necessary to compare the experiences of a group of students who were exposed to Talent Development against the experiences of a similar group of students who were not. The more comparable the two groups are prior to the introduction of Talent Development, the more likely it is that later differences can be attributed to the program. Moreover, using this kind of comparison makes it possible to account for factors other than Talent Development that may have caused a change or difference in student engagement and performance.

### The Logic of the Comparative Interrupted Time Series Design

The comparative interrupted times series design consists of an interrupted time series analysis and a comparison school analysis, each of which builds on the strengths of the other and addresses each other's potential limitations. Together, the two parts of the design construct a counterfactual for the evaluation. Specifically, the interrupted time series assesses the extent to which measures of engagement and performance for students in Talent Development schools differ from measures of engagement and performance for similar students in the same schools prior to Talent Development implementation. The analysis of comparison schools looks at Talent Development schools versus non-Talent Development schools (which are similar middle schools in the same district that are not implementing the reform model).

The first analysis provides an indication of whether the participating middle schools experience a deviation from their historical patterns in student outcomes coincident with the introduction of Talent Development. The projection of each middle school's recent history acts as the counterfactual. This is a particularly good counterfactual because, in the absence of the reform, many aspects of the school would be expected to stay the same: students, faculty, polices, school culture, neighborhood, and physical plant. Using a historical pattern as a counterfactual has the potential to control for both measurable and unmeasurable characteristics of a given school.

However, the deviation from the baseline alone may not necessarily reflect the impact of Talent Development. Similar deviations from historical patterns could have been caused by

districtwide policies or interventions that occurred at about the same time as Talent Development implementation. For example, while Talent Development scaled up, the district that is the focus of this study participated in an NSF Urban Systemic Initiative for mathematics.[2] Such an effort may have caused positive deviations from baseline averages in math achievement at middle schools in the district. An interrupted time series design would capture this improvement and ascribe it to Talent Development as an impact of the program. Talent Development may have caused some, all, or none of this change in math achievement. In order to sort out what part of the deviation from baseline is due to Talent Development, the analysis looks at similar middle schools in the same district.

The second analysis in the comparative interrupted time series design (the comparison between Talent Development and non-Talent Development schools) helps to account for other factors in the broader school district that may influence school functioning and student engagement and performance. For this part of the analysis, Talent Development schools are matched with sets of comparison schools that are similar on several dimensions, including racial/ethnic composition and test scores. The Talent Development and comparison schools are all nonselective, comprehensive middle schools in the same large, urban district. Measures of student achievement and engagement at the comparison schools provide a good indication of what might have been observed in Talent Development schools in the absence of the intervention.

It should be noted, however, that differences between the Talent Development and comparison schools alone do not necessarily reflect the impact of Talent Development. Some differences could be an artifact of differences in the prior trends in student engagement and performance. For example, test scores for students in Talent Development schools may actually have been lower than those of students in non-Talent Development schools, and they might have improved only marginally after Talent Development began. At the same time, test scores for students attending similar schools in the district may actually have been declining over the same period. In such an instance, Talent Development would have a positive impact by preventing test scores from dropping, rather than by improving the overall average. This could be observed only by comparing an interrupted time series for both Talent Development and non-Talent Development comparison schools.

The comparative interrupted time series design makes this comparison by estimating the deviations from the historical patterns for the Talent Development schools and subtracting from these the deviations from historical patterns for similar non-Talent Development middle schools during the same period. The differences between these deviations constitute Talent Development's impact on student outcomes. When combined with regression analysis to control

[2]To preserve the anonymity of the district and schools included in this study, this appendix refers generically to "the district" and uses the labels "School A" through "School F."

for differences due individual student background characteristics and prior school experiences, the approach isolates the unique impact that Talent Development has on student engagement and performance.

It should be noted, however, that the comparative interrupted time series approach still has limitations that are present in all quasi-experimental designs. In this case, projection of a baseline average for a given school may not be a reliable predictor of future student outcomes. Also, finding comparison schools for the Talent Development schools is limited to observable characteristics of the student body and may miss important factors that affect student outcome trajectories. In addition, multiple-regression techniques control for compositional changes in measurable student characteristics, but there may changes in unmeasurable student characteristics that correlate with student outcomes. Finally, there still may be alternative explanations or other factors unrelated to Talent Development that contribute to the observed differences in student outcomes. For example, the analysis does not account for the process by which schools enter into the Talent Development network. Some may argue that schools with more entrepreneurial leaders, who are more likely to seek out a reform model like Talent Development, may experience improved student outcomes even in the absence of the intervention. The analysis is unable to rule out this possibility. Despite the limitations of the comparative interrupted time series approach, it offers a valid estimate of the impact of Talent Development in middle schools in the district, particularly when estimates are pooled across several schools.

The primary source of data for this analysis is individual students' school records, which were obtained from the district. Table 1 provides a list of the types of data that were obtained for this evaluation and the school years and grade levels for which they are available. In general, administrative, attendance, and course-detail information is available for all middle school students in the district beginning with the 1995-1996 school year through the 2001-2002 school year.[3] Table 2 describes the types of information included in these data sets. Table 3 defines several key outcomes included in the analysis.

The rest of this appendix provides a step-by-step description of the analyses. The following section details the steps that make up the interrupted time series approach, including estimating deviations from baseline for Talent Development schools, controlling for compositional shifts, and accounting for cohort effects. The section after that describes the comparison-school approach, including selecting comparison schools and estimating their deviations from baseline. The final section describes estimating impacts and pooling estimates across schools.

[3]Student attendance records were not consistently available for one Talent Development middle school in the district, School F. Data from this school could not be included in estimates of Talent Development's impact on attendance outcomes for seventh- and eighth-grade students.

**The Talent Development Evaluation**

## Analytic Appendix
## Table 1

## Data Sources and Availability, by School Year and Grade Level

| Data Source | School Year | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1991-1992 | 1992-1993 | 1993-1994 | 1994-1995 | 1995-1996 | 1996-1997 | 1997-1998 | 1998-1999 | 1999-2000 | 2000-2001 | 2001-2002 |
| Administrative records | | | | | 9-12 | 6-12 | 6-12 | 6-12 | 6-12 | 6-12 | 6-12 |
| Attendance records | | | | | 9-12 | 6-8 | 6-12 | 6-12 | 6-12[a] | 6-12[a] | 6-12 |
| Course-detail records | | | | | 6-12 | 6-12 | 6-12 | 6-12 | 6-12 | 6-12 | 6-12 |
| Test scores | | | | | | | | | | | |
| CTBS | 1-8 | 1-8 | 1-8 | 4-8[b] | | | | | | | |
| SAT-9 | | | | | 2-4, 6-8, 11 | 2-4, 6-8, 11 | 2-4, 7-8 | 2-4, 7-8 | 2-4, 7-8, 10-11 | 3, 4, 7, 8 | 3, 4, 7, 10 |
| SSA | | | | | 5, 8, 11 | 5, 8, 11 | 5, 8, 11 | 5, 8, 11 | 5, 8, 11 | 5, 8, 11 | 5, 8, 11 |



SOURCE: Individual students' school records from a large, urban school district.

NOTES: Blank spaces indicate that no records are available for those years.

Administrative records include information on students' race; gender; birth date; and final school-enrollment status for the year, including withdrawal and dropout status and number of suspensions.

Attendance records include information on the number of days a student is present and absent for each marking period. Unless otherwise noted, this sample includes students who attended at least one day in any of the marking periods.

Course-detail records include information on credits attempted, credits earned, grades, and absences for each course in which a student was enrolled during the year. Unless otherwise noted, this sample includes students who were enrolled in at least one course during the year, according to the course-detail records.

Test scores may not be available for every student.

Comprehensive Test of Basic Skills (CTBS) records include test scores for reading, math, science, and social studies.

Stanford Achievement Test, Ninth Edition (SAT-9) records include test scores for reading, math, problem solving, procedures, and science.

State Standards Assessment (SSA) records include test scores for reading and math.

[a]Attendance records for years 1999-2000 and 2000-2001 include only students who were present for at least one day in the last marking period.

[b]Test scores for 1994-1995 are missing for a number of middle and high schools.

**The Talent Development Evaluation**

## Analytic Appendix
## Table 2

## Data Types and Descriptions

| Data Type | Description |
|---|---|
| **Administrative** | Administrative data typically include student background information, such as birth date, race, and gender, as well as information on school enrollment status, special education classification, and English Speakers of Other Languages (ESOL) training. The administrative data are also the primary source of information about the grade level in which students were enrolled during each school year. These records were used to determine whether students were promoted from year to year or retained in grade. Typically, administrative records are available for all students in a given school level regardless of whether they entered the district after the school year began or whether they dropped out or left the district before the end of the year. |
| **Attendance** | Attendance data include information about the number of days a student was present or absent during a given school year. In some years, these data were provided on a quarterly basis, and in other years they were provided as cumulative records. This information was used to construct an attendance rate and an absentee rate for each student in the files. Typically, the attendance files include only students who were present for at least one day during the final marking period of the year. This means that students who dropped out of school or who left the district before the start of the final marking period do not have an attendance record for this analysis. |
| **Course-detail records** | Course-detail records include, for each course in which a student was enrolled during a given school year, the course code number, an abbreviated name, the number of credits the student attempted, the number of credits the student earned, and the grade the student received. For each student in the file, this information was used to construct both an annual and a cumulative count of credits earned and attempted. The information was also used to calculate credits earned in particular subject areas. |
| **Test scores (nationally normed)** | The California Test of Basic Skills (CTBS) and the Stanford Achievement Test, Ninth Edition (SAT-9), are norm-referenced test scores, which provide information on individual student achievement relative to scores obtained from a random sample of students from across the country. SAT-9 scores in math and reading are available as Normal Curve Equivalents, National Percentiles, and Scale Scores. In general, these test scores were used in the analysis to control for student achievement prior to entering high school. |
| **Test scores (state)** | The State Standards Assessment (SSA) is a criterion-referenced test, which provides information on student skills and content knowledge specified by the state. SSA test scores in math and reading are available as Normal Curve Equivalents (NCEs), State Percentiles, and Scale Scores for each of these grades and the school years listed in Analytic Appendix Table 1. |

**The Talent Development Evaluation**

## Analytic Appendix
## Table 3

### Definitions of Key Outcomes

| Outcome | Definition |
|---|---|
| **Attendance rate** | The total number of days a student was marked present during the school year divided by the total number of days the student was listed as enrolled. These data were available consistently only for students who attended school for at least one day in the final marking period of the year. Thus, the analysis did not include students who dropped out or left the district prior to that point. |
| **Chronic absenteeism** | Indicates that a student had an attendance rate of 80 percent or lower for the year. |
| **Regular attendance** | Indicates that a student had an attendance rate of 90 percent or higher for the year. |
| **Average NCE** | The average Normal Curve Equivalent (NCE) score for students taking the test in a given subject area. The normalized test score, which ranges from 1 to 99 with a mean of 50, allows for comparison across tests and subjects. |
| **At or above grade level** | The percentage of students scoring at or above grade level on the test as indicated by scoring at or above the 50th percentile. |
| **In the bottom quartile** | The percentage of students scoring at or below the 25th percentile on the test. |
| **Promoted to the 9th grade** | Classification for a student who was designated in the district's administrative records as an eighth-grader in a given school year and was designated as a ninth-grader in the following school year. Students who were not in the district's administrative records in either year were not classified. |

To provide a concrete example in support of the descriptions, this appendix refers throughout to the State Standards Assessment (SSA) eighth-grade math test score outcome, measured in Normal Curve Equivalents (NCEs).[4]

[4]The Normal Curve Equivalent (NCE) is a way of measuring where a student falls along the normal curve. The normalized test scores, which range from 1 to 99 with a mean of 50, allow for comparison across tests and subjects. Unlike percentile rank scores, the NCE measurement has an equal interval between scores, which means that NCE scores can be averaged to allow for comparisons of groups of students or schools.

## The Interrupted Time Series Approach

### Estimating Deviations from Baseline for Talent Development Schools

For this evaluation, outcomes for students enrolled in a given school prior to Talent Development implementation were compared with outcomes for students enrolled in the same school during the years after implementation began. For most measures of student engagement and performance, the analysis focuses on the three years prior to implementation and for up to five years after implementation.[5] The three years prior to implementation are referred to as the *baseline period.* The year of implementation and each subsequent year are referred to as *follow-up years.* Differences in student outcomes between the baseline and follow-up periods are referred to as *deviations from the baseline.*

The key feature of the interrupted time series approach is to project what student engagement and performance would most likely be without Talent Development. This projection extends over one or more years after Talent Development began and is based on measures of student engagement and performance during a multiyear pre-Talent Development baseline period. For example, to project into the follow-up period a school's pattern of math achievement, the analysis used the average annual math test scores of eighth-grade students over the three baseline years. The equation below specifies the simplest form of a regression model that can be used to estimate an interrupted time series from a baseline derived from the three-year average at a single school.[6]

$$Y_i = A + \sum_{k=1}^{K} D_k F Y_{ki} + e_i$$

where:

$Y_i$ = SSA math test score for student *i*

[5]For two schools (School A and School B), only two years of baseline data were available for eighth-grade SSA test scores. Therefore, the baseline average for these outcomes is based on only two years of pre-Talent Development implementation data. Because these schools began implementation in the 1997-1998 school year, there are five years of follow-up data available. For the two schools that began implementation in 1998-1999 (School C and School D), there are four years of follow-up data available. For the two schools that began implementation in 1999-2000 (School E and School F), there are three years of follow-up data available.

[6]It is also possible to project a baseline trend derived from a consistent pattern of year-to-year increases or decreases in average test scores in the pre-Talent Development period. This was discounted for the current analysis because only three years of pre-Talent Development data are available, leaving only minimal confidence in an estimate of a consistent year-to-year slope in baseline patterns. For both baseline trend and baseline average interrupted time series techniques, see Bloom (2003).

$FY_{ki}$ = 1 if student *i* was a member of the cohort for follow-up Year *k*, and 0 otherwise

$e_i$ = a random error term for student *i*

$A$ = a constant term equal to the average SSA math test score of eighth-grade students during the baseline years

$D_k$ = the deviation in the average SSA math test score from the baseline average *A* in year *k* of the follow-up period (that is, the Year *k* deviation from the baseline mean)

This equation pools data from the baseline and follow-up years and estimates the baseline mean and the average deviation from this mean for each year of the follow-up period for a single school. Figure 1 shows the unadjusted interrupted time series estimates for one Talent Development school in the district, School F. The triangles plot observed means for each baseline year. The solid line represents the baseline average, while the dashed line is the projection of this average into the first three Talent Development implementation years. School F began Talent Development implementation in the 1999-2000 school year, so that three years of follow-up data are available. The circles plot observed means for each follow-up year. The difference between the dashed line and each circle represents the deviation from baseline average for each year of implementation. (Note that the years identified on the horizontal axis of this exhibit and Figures 2 through 6 are presented relative to the first year of Talent Development implementation.)

### Controlling for Changes in Student Characteristics

In some cases, a Talent Development school (or a comparison school) may experience a change in the composition of its student population. For example, neighborhoods may undergo demographic changes, or geographic boundaries or rules governing school assignment patterns may change. More important, Talent Development may cause a change in the student population, for example, by preventing students from dropping out of school or by reducing the number of school transfers (which may keep lower-performing students in school longer). In order to help account for systematic changes in the characteristics of student cohorts over time, the analysis incorporates individual student characteristics into the model. The equation below represents the enhanced regression model for a single school:

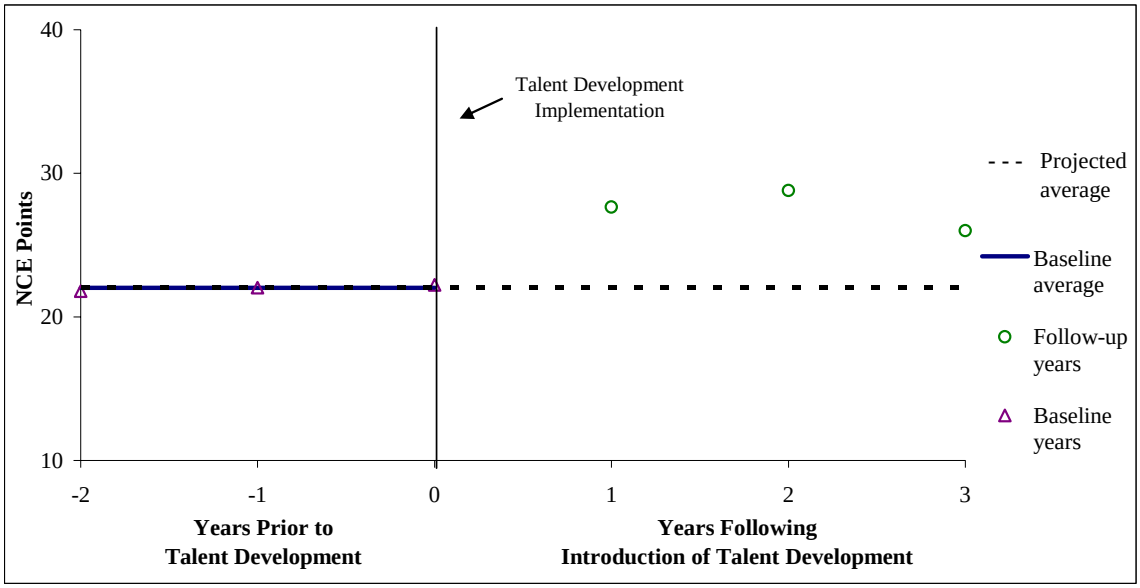
$$Y_i = A + \sum_{k=1}^{K} D_k FY_{ki} + \sum_{j=1}^{J} C_j X_{ji} + e_i$$

where the parameters specified above are the same and:

$X_{ji}$ = a vector of *J* background characteristics for student *i*

**Figure 1**

**Average Eighth-Grade SSA Math NCE Scores in Talent Development School F, Three-Year, Unadjusted, Follow-Up Results**




SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

$C_j$ = the difference in the average eighth-grade SSA math test score over time associated with a unit change in background characteristics $X$

The capacity of the analysis to control for systematic changes in the characteristics of student cohorts is increased if the $X$ covariates and the outcomes are correlated. For example, suppose that, in one school, Talent Development increases the percentage of eighth-graders who had been retained in a prior grade or who entered middle school with very low achievement levels. Such a scenario might occur if Talent Development encouraged students not to transfer or prevented such students from dropping out of school altogether. Because such students are also less likely to be regular school attenders and to score well on the SSA tests, it could appear that Talent Development is reducing average student achievement and attendance rates if the analysis does not account for this change in the composition of the eighth grade. Thus, it is important to identify characteristics that are correlated with key outcomes, such as attendance and academic achieve-

ment. This can help disentangle Talent Development's impact on student achievement from effects that are caused by changes in the composition of the eighth-grade cohorts. In this case, the following covariates were incorporated into the interrupted times series models:

| | | |
|---|---|---|
| OVERAGE | = | whether the student was overage for her or his current grade, indicating that the student been retained in a previous grade. |
| RACE | = | dummy variables indicating whether the student was black, white, or of another race |
| TEST SCORES | = | separate variables indicating the student's fourth-grade reading comprehension and math test scores (measured in NCEs) |

Figure 2 shows the adjusted interrupted time series estimates for Talent Development School F. As in Figure 1, the triangles plot observed means for each baseline year. The solid line represents the baseline average, while the dashed line is the projection of this average into the first three Talent Development implementation years. The circles plot observed means for each follow-up year. The difference between the dashed line and each circle represents the deviation from baseline average for each year of implementation.

### Accounting for Cohort Effects

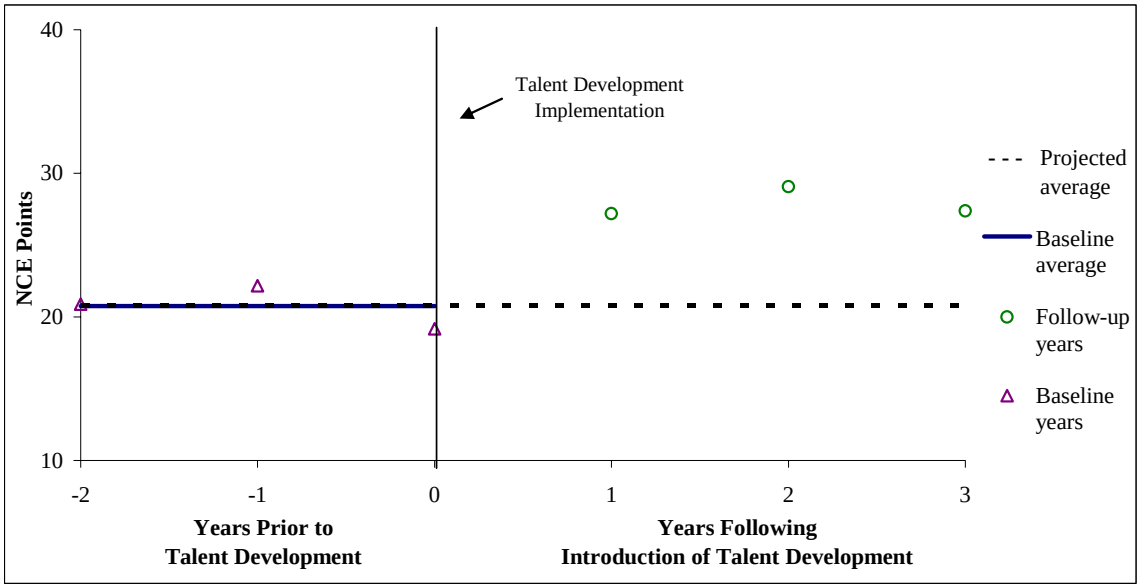
In addition to controlling for changes in student characteristics, the analysis also attempts to account for cohort effects, which are year-to-year variations in the average engagement and performance of students as a group or an entire cohort. Because cohort effects reflect variation that cannot be adequately explained or controlled for by individual random sampling error, the analysis must account for this variation when estimating the standard error of the projected baseline average as well as the standard error of the deviations from the baseline in subsequent follow-up years. If cohort effects are ignored, the standard error of the deviations from the baseline will be understated, and their statistical significance will be overstated.

For example, Figure 3 shows that average SSA eighth-grade math test scores — pooled across several schools — varied around the baseline average. The year-to-year variation is the source of estimated uncertainty or random error associated with future projections from the baseline average. Thus, it is also an additional source of random error associated with the deviations from the baseline. The more tightly the outcome averages cluster around the baseline average, the more confidence can be placed in future projections from this average and, thus, the more confidence can be placed in the estimates of the deviations from the baseline.

**The Talent Development Evaluation**

**Analytic Appendix**
**Figure 2**

**Average Eighth-Grade SSA Math NCE Scores in Talent Development School F, Three-Year, Adjusted, Follow-Up Results**




SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Cohort effects can be accounted for by adding a random error term $v_t$ for each cohort to the random error term in the equation above. Adding this error component to the interrupted time-series model above yields the following equation:

$$Y_i = A + \Sigma D_k FY_{ki} + \Sigma C_j X_{ji} + v_t + e_i$$

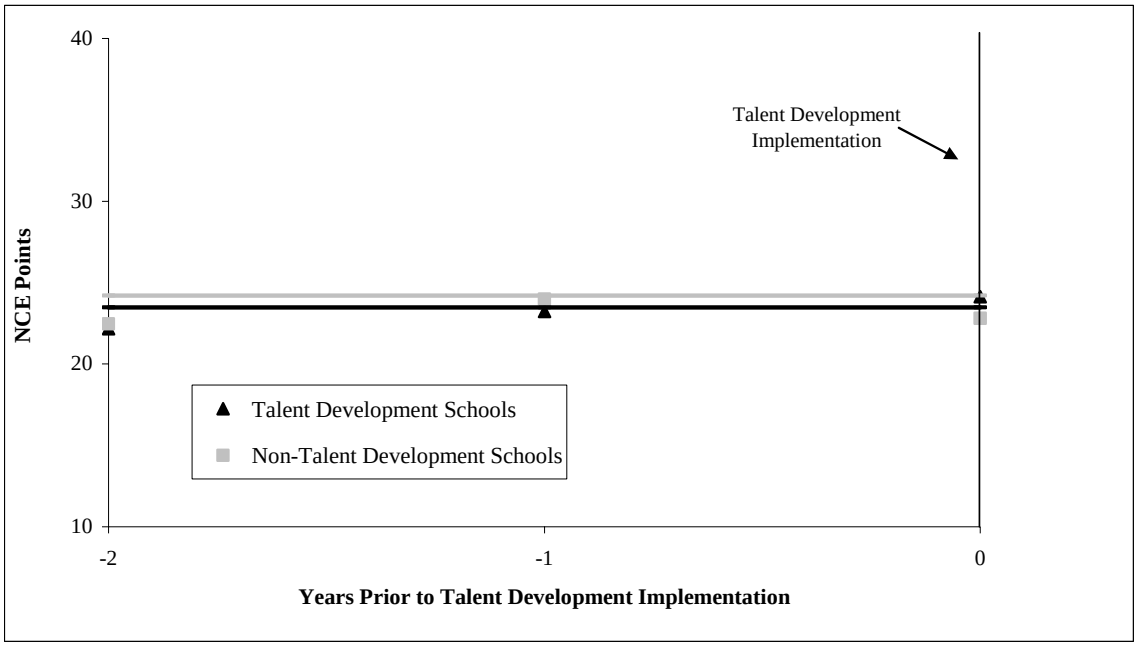
This equation cannot be estimated using ordinary least squares. This error structure represents a form of a hierarchical linear model.[7] Therefore, in order to use comparative interrupted time series techniques to estimate the effect of Talent Development on student performance, the interrupted time series model is translated into a multilevel system of equations.

[7]See Raudenbush and Bryk, 2001.

**The Talent Development Evaluation**

**Analytic Appendix**
**Figure 3**

**Average Eighth-Grade SSA Math Test Scores**
**in Early-Implementing Talent Development Schools and Their Comparison Schools,**
**for Pre-Talent Development Baseline Years**




SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Results were pooled over six Talent Development middle schools and over six clusters of non-Talent Development middle schools.

In particular, the structure of the analysis can be thought of as having three levels: students nested within annual cohorts nested within schools.

The analysis can be executed using hierarchical linear modeling software. In this case, the analysis modeled an equivalent composite equation through the use of the Proc Mixed procedure in SAS software.[8] This procedure also allows for calculation of impact estimates and corresponding standard errors by school cluster, with each cluster consisting of one Talent De-

[8]For a full description of HLM equations for comparative interrupted time series analyses, see Snipes (2003). For more information on using Proc Mixed in the SAS program, see Singer (1998).

velopment school and its set of non-Talent Development comparison schools. The average of these cluster-by-cluster impacts represents an estimate of the net impact of Talent Development on student outcomes.

## Comparison-School Analysis

### Identifying Comparison Schools

The analysis uses comparison schools to assess the extent to which the baseline and follow-up patterns of student engagement and performance in Talent Development schools differ from the patterns of students in similar schools that do not attempt to implement the Talent Development model. The comparison was accomplished by matching each Talent Development middle school with one or more schools in the district that served students with similar characteristics and exhibited a similar pattern of student outcomes during the period before Talent Development began. In this way, the non-Talent Development comparison schools can provide a good indication of the effects on student engagement and performance that may be caused by other policies and events that occur in the district over and above those brought about by Talent Development. To get as robust an estimate of these potential effects as possible, the analysis sought to identify truly comparable non-Talent Development schools and to include as many comparable non-Talent Development schools as possible.

Comparison schools were selected from among the 27 nonselective, comprehensive middle schools in the district that were not implementing Talent Development prior to the 1997-1998 school year. The criteria for identifying comparison schools are based on average student characteristics and student outcomes over the two years before Talent Development was first introduced in the district. Specifically, schools were classified by racial/ethnic composition and by math and reading test scores of eighth-grade students averaged over the 1995-1996 and 1996-1997 school years. Matching focused on eighth-grade characteristics for several reasons. First, eighth grade marks the culmination of students' middle school experiences and the start of a critical transition period for young people. Eighth-grade students' engagement and performance are critical indicators of their preparedness for the challenges of transitioning successfully to high school. Second, the Talent Development Middle School model makes an effort to provide added supports and to upgrade curricula and instruction for all middle school grades. The impact of Talent Development on the engagement and performance of eighth-grade students represents the cumulative effect of the model for middle schools. Finally, the district places heavy emphasis on the SSA, which is given in eighth-grade, as an indicator of student and school performance. Therefore, it is important to ensure that, prior to implementation, Talent Development and non-Talent Development schools are as similar as possible on the achievement levels of eighth-grade students on the SSA math and reading tests.

The process of identifying schools that were as comparable as possible to the eventual Talent Development middle schools occurred in two steps. The first step was designed to ensure a high degree of similarity in the racial/ethnic composition of the eighth-graders. Here, the 38 non-selective, comprehensive middle schools in the district were stratified into four mutually exclusive groups based on their racial and ethnic composition. These groups included schools in which:

- 90 percent or more of the eighth- grade population were black
- more than half the eighth-grade population was black, but the racial/ethnic composition of the remaining eighth-graders was moderately mixed
- about 60 percent of the eighth-grade population was of other races/ethnicities (predominantly Hispanic)
- a third or more of the eighth-grade population were white

All the Talent Development middle schools fell into the first three groups. For each Talent Development school, potential comparison schools were limited to those that fell into the same group.

The second step in identifying schools that were comparable to the Talent Development schools was examining average SSA eighth-grade test scores in math and reading. In order to consider both math and reading test scores at once, the matching process was based on the average of each student's math and reading NCE score. Schools were considered comparable if the average eighth-grade composite math and reading score fell within .25 standard deviation of the average for a given Talent Development school.[9] This process resulted in groups of 1 to 12 non-Talent Development comparison schools for each Talent Development school.[10] Some non-Talent Development schools serve as comparison schools for more than one cluster.

The more similar the two groups of schools were prior to the start of Talent Development, the more likely it is that differences that emerged later can be attributed to the implementation of Talent Development. Table 4 provides an indication of the extent to which the matching process resulted in a group of non-Talent Development schools that was comparable to the Talent Development middle schools in the study. The table compares the 11 Talent Development schools with their matched sets of non-Talent Development comparison schools,

[9]The standard deviation of average eighth-grade combined math and reading SSA scores was calculated for all 38 nonselective high schools in the district over two years prior to Talent Development implementation (1995-1996 and 1996-1997). Over this period, the average combined test score was 29 NCEs, and the standard deviation was 15.2 NCEs. Thus, a .25 standard deviation for the eighth-grade math and reading test score was equivalent to 3.8 NCEs.

[10]Non-Talent Development schools may be included as comparisons for more than one Talent Development School.

**The Talent Development Evaluation**

**Analytic Appendix**

**Table 4**

**Characteristics of Eighth-Grade Students in Talent Development Schools and Non-Talent Development Comparison Schools, Averaged Over the Pre-Talent Development Baseline Period**

| Characteristic | Talent Development Schools | Non-Talent Development Schools | Difference |
|---|---|---|---|
| Race/ethnicity (%) | | | |
| Black | 81.5 | 81.8 | -0.3 |
| White | 4.4 | 2.2 | 2.1 |
| Hispanic | 11.2 | 14.2 | -3.0 |
| Other | 2.9 | 1.7 | 1.2 |
| Overage for grade[a] (%) | 21.4 | 23.8 | -2.4 |
| SSA test scores | | | |
| Average math and reading (NCE) | 27.0 | 26.9 | 0.1 |
| Math | | | |
| Average NCE | 25.9 | 25.7 | 0.2 |
| In the bottom quartile (%) | 77.5 | 77.1 | 0.4 |
| At or above grade level (%) | 6.3 | 6.0 | 0.3 |
| Reading | | | |
| Average NCE | 28.4 | 28.5 | -0.1 |
| In the bottom quartile (%) | 71.1 | 70.4 | 0.7 |
| At or above grade level (%) | 9.0 | 9.0 | -0.1 |
| Attendance rate[b] | 84.3 | 84.8 | -0.5 |
| Attendance rate of 90% or higher[b] (%) | 47.3 | 48.6 | -1.3 |
| Attendance rate of 80% or lower[b] (%) | 28.5 | 26.6 | 1.9 |
| Promoted to 9th grade[c] (%) | 97.5 | 97.9 | -0.4 |

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 11 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Results in the non-Talent Development columns reflect averages across 11 clusters, including both early-implementing and later-implementing school clusters, of non-Talent Development schools. Each cluster consisted of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Estimates are not regression-adjusted for students' background characteristics or prior achievement.

Numbers reflect averages over the three-year period prior to the initial implementation of Talent Development for a given cluster.

[a]Typically, students who were overage for grade were retained in the current grade or a prior one. "Overage for grade" means a student turned 12 before the start of the 6th grade, 13 before the start of the 7th grade, or 14 before the start of the 8th grade.

[b]Attendance rates were calculated for each student by dividing the number of days the student was present by the total number of days the student was enrolled in a given school year.

[c]For the purposes of this analysis, 8th-grade students were considered to have been promoted to the 9th grade if they were listed as 9th-graders in the district's administrative data file one year after the current year. Students whose records were not included in the data file one year after the current year, for whatever reason, were not in the analysis sample for this outcome.

reflecting average characteristics of eighth-graders in each group over the three years prior to the implementation of Talent Development in each school cluster. The table indicates that there were only modest differences between the Talent Development and non-Talent Development comparison schools over the years leading up to Talent Development implementation. The analytic strategy described above controls for these initial differences by framing the impacts of Talent Development in terms of differences between Talent Development and non-Talent Development schools in their deviations from the baseline averages.

The information presented in Table 4 may mask some year-to-year differences between the groups of schools or a trend, upward or downward, that may occur for the non-Talent Development schools or for the Talent Development schools. The more that the baseline averages remain stable and similar from year to year, the more likely it is that changes in these averages are truly caused by Talent Development rather than indicating random spikes or troughs. Furthermore, the less the variation in baseline trends from year to year, the more likely that these trends would continue into the future if Talent Development were not implemented.

For a specific example of how the variation plays out in terms of outcomes, it is useful to refer to Figure 3. The figure shows the year-to-year variation in the SSA math achievement outcome for Talent Development schools and their non-Talent Development comparison schools in the baseline period. It indicates that the Talent Development schools exhibited similar average math achievement as their non-Talent Development counterparts in the baseline period. The figure also indicates that there was some year-to-year variation in the outcome in the Talent Development schools and in the comparison schools but no clear slope.[11]

### Estimating Deviations from Baseline for Comparison Schools

To compare deviations from baseline for Talent Development and non-Talent Development schools, it was necessary to designate a baseline and follow-up period for each group of non-Talent Development comparison schools based on the start of Talent Development implementation in their matched Talent Development school.

As with the Talent Development schools, the interrupted time series approach was applied to non-Talent Development schools, cluster by cluster. Figure 4 illustrates the adjusted interrupted time series estimates for one group of non-Talent Development comparison schools, those matched with Talent Development School F. As in Figures 1 and 2, the triangles plot ob-

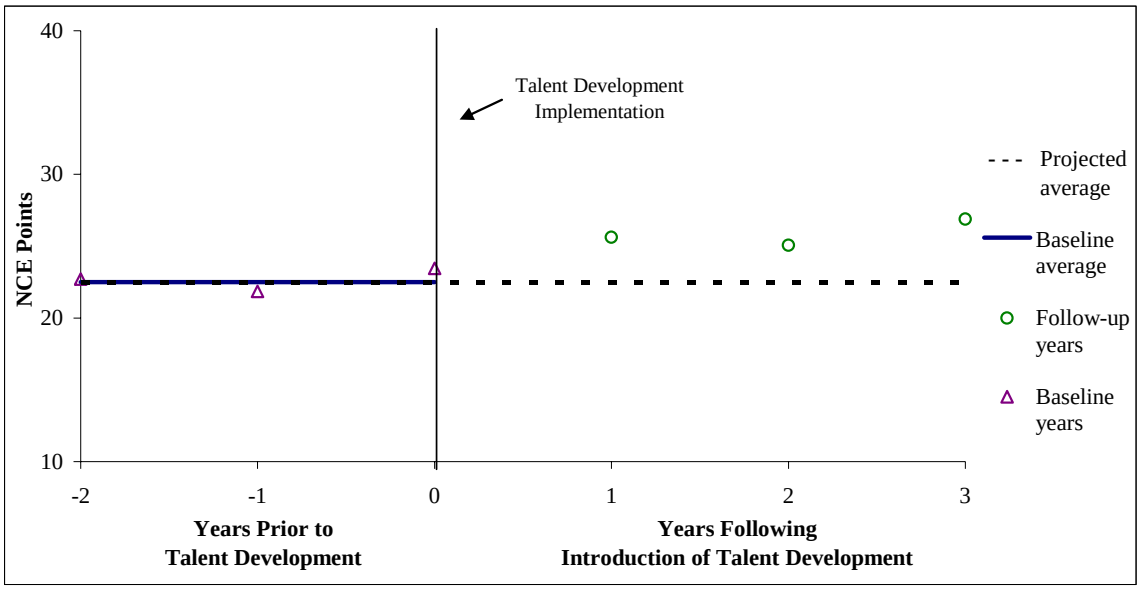
[11] As noted earlier, it is possible to project a baseline trend derived from a consistent pattern of year-to-year increases or decreases in the outcome in the baseline period. This was discounted for the current analysis because only three years of pre-Talent Development data are available, which gives minimal confidence in slope estimates.

served means for each baseline year. In this case, these are the baseline means across the comparison schools in the School F cluster. The solid line represents the baseline average, while the

**The Talent Development Evaluation**

**Analytic Appendix**
**Figure 4**

**Average Eighth-Grade SSA Math NCE Scores**
**in Non-Talent Development Comparison Schools in Cluster F,**
**Three-Year, Adjusted, Follow-Up Results**




SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

dashed line is the projection of this average into the first three Talent Development implementation years. The circles plot observed means for each follow-up year across the comparison schools in the School F cluster. The difference between the dashed line and each circle represents the deviation from baseline average for each follow-up year. As with Talent Development School F, there is improvement in math achievement in the follow-up period as compared with the baseline period for this group of comparison schools. Therefore, in this example, impacts are driven by the difference in the magnitude of improvement between the Talent Development school and the average improvement in its group of comparison schools.

## Estimating Impacts

The equations described above were used to generate estimated deviations from the baseline average for each Talent Development school and for each Talent Development school's matched group of non-Talent Development schools.[12] In this report, the analysis focuses on six middle schools in the district that began working with Talent Development in the 1997-1998, 1998-1999, and 1999-2000 school years; these are referred to throughout the report as "early-implementing schools."[13] Table 5 presents the results from an analysis of eighth-grade SSA math achievement in these six schools and the comparison schools in their school cluster. These results are presented cluster by cluster in order to illustrate the variability of results from year to year and school to school, as well as to help illustrate how impacts are pooled across schools. Impacts for individual schools may not be reliable.

The pooled estimates maximize the reliability of the impact estimates, because estimates for any one school or cluster may be anomalous. In this way, the analysis can assess the likelihood that a nonzero impact was due to chance. In general, the larger the number of schools that exhibit a nonzero impact, the higher the likelihood that the analysis can detect real changes in student engagement and performance that were produced by Talent Development.

On the first page of Table 5, the five columns of numbers at the left show average math achievement (in NCEs) for the Talent Development schools and the deviation from baseline that each average represents for each year of implementation. The five columns of numbers at the right show these results for the non-Talent Development comparison schools in each school cluster. Under the School F heading, for example, the three columns at the left of the first row show average math achievement in each of three implementation years for Talent Development School F; the three columns at the right show the same information averaged across the non-Talent Development schools in this cluster. (This information for School F and its cluster of comparison schools is also illustrated in Figures 2 and 4, respectively.)

[12]Note that, because some non-Talent Development schools served as comparison schools for more than one Talent Development School, multiple estimates were obtained for these schools. Furthermore, different baseline averages were estimated for some non-Talent Development schools that served as comparison schools for Talent Development schools that began implementation in different years.

[13]The report also includes limited analysis for the first year of implementation in another five middle schools that began implementing the model in the district in the 2001-2002 school year (referred to as "later-implementing schools").

**The Talent Development Evaluation**

**Analytic Appendix**

**Table 5**

**Year-by-Year Levels and Impacts for SSA Math NCE Scores for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th-grade average NCE | 24.8 | 28.1 | 30.7 | 34.8 | 35.0 | 27.2 | 28.4 | 29.0 | 28.8 | 29.9 |
| Deviation from baseline | 0.8 | 4.1 | 6.6 ** | 10.8 *** | 11.0 *** | 1.6 | 2.9 ** | 3.4 *** | 3.2 *** | 4.4 *** |
| School B | | | | | | | | | | |
| 8th-grade average NCE | 29.0 | 30.6 | 34.5 | 34.0 | 33.1 | 27.6 | 31.6 | 31.5 | 30.9 | 30.8 |
| Deviation from baseline | 0.3 | 2.0 | 5.9 * | 5.3 | 4.5 | -0.2 | 3.7 * | 3.6 * | 3.0 | 2.9 |
| School C | | | | | | | | | | |
| 8th-grade average NCE | 23.7 | 23.8 | 25.7 | 28.0 | | 22.8 | 26.0 | 25.1 | 27.7 | |
| Deviation from baseline | 4.2 * | 4.3 * | 6.2 ** | 8.6 *** | | 2.1 ** | 5.3 *** | 4.4 *** | 7.0 *** | |
| School D | | | | | | | | | | |
| 8th-grade average NCE | 25.8 | 25.9 | 26.8 | 30.8 | | 22.5 | 26.5 | 25.4 | 26.8 | |
| Deviation from baseline | 3.2 * | 3.3 * | 4.2 ** | 8.2 *** | | -0.2 | 3.7 ** | 2.7 ** | 4.1 *** | |
| School E | | | | | | | | | | |
| 8th-grade average NCE | 26.1 | 26.3 | 30.3 | | | 27.2 | 27.1 | 28.7 | | |
| Deviation from baseline | 0.7 | 0.9 | 4.9 * | | | 1.4 | 1.3 | 3.0 *** | | |
| School F | | | | | | | | | | |
| 8th-grade average NCE | 27.2 | 29.1 | 27.4 | | | 25.6 | 25.1 | 26.9 | | |
| Deviation from baseline | 6.4 ** | 8.3 *** | 6.6 ** | | | 3.1 *** | 2.6 *** | 4.4 *** | | |
| All early-implementing schools | | | | | | | | | | |
| 8th-grade average NCE | 26.1 | 27.3 | 29.2 | 31.9 | 34.1 | 25.5 | 27.4 | 27.8 | 28.6 | 30.4 |
| Deviation from baseline | 2.6 ** | 3.8 *** | 5.7 *** | 8.2 *** | 7.7 *** | 1.3 *** | 3.2 *** | 3.6 *** | 4.3 *** | 3.6 *** |

(continued)

**The Talent Development Evaluation**

**Analytic Appendix**

**Table 5 (continued)**

**Year-by-Year Levels and Impacts for SSA Math NCE Scores for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.9 | 1.2 | 3.2 | 7.6 ** | 6.6 ** | -0.06 | 0.09 | 0.22 | 0.53 ** | 0.46 ** |
| School B | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.6 | -1.7 | 2.3 | 2.3 | 1.6 | 0.04 | -0.12 | 0.16 | 0.16 | 0.11 |
| School C | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 2.1 | -0.9 | 1.8 | 1.6 | | 0.15 | -0.07 | 0.13 | 0.11 | |
| School D | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 3.4 | -0.4 | 1.5 | 4.1 * | | 0.24 | -0.03 | 0.11 | 0.29 * | |
| School E | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.7 | -0.4 | 1.9 | | | -0.05 | -0.02 | 0.13 | | |
| School F | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 3.3 | 5.7 ** | 2.2 | | | 0.23 | 0.40 ** | 0.16 | | |
| All early-implementing schools | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 1.3 | 0.6 | 2.2 | 3.9 *** | 4.1 * | 0.09 | 0.04 | 0.15 | 0.27 *** | 0.28 * |

(continued)

## Analytic Appendix Table 5 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

The second row under the School F heading shows the deviation from the baseline average represented by the difference in average math achievement in each follow-up year and average math achievement over the three years prior to Talent Development (the baseline average). For example, for Talent Development School F, the average deviation from baseline in Year 1 is 6.4 NCEs. This indicates that eighth-grade SSA math scores in School F increased by an average of 6.4 NCEs during the first year of Talent Development implementation. In the same row, at the right, the numbers show that math scores increased by an average of 3.1 NCEs in the non-Talent Development schools in the same cluster over the same time period. Therefore, the estimated impact of Talent Development at School F is 3.3 NCEs, or the difference between the deviation from baseline for the Talent Development school and the average deviation from baseline for its comparison schools. This first-year impact is shown on the second page of Table 5, also under the School F heading. The impact corresponds to an effect size of 0.23.[14] Again, estimated impacts for individual schools may not be reliable and are given here only to illustrate how estimates were pooled to arrive at the impact across all schools.

The bottom two rows of numbers on both pages of Table 5 show results that have been pooled across all six school clusters included in the analysis. The cross-cluster average math achievement and deviation from baseline for each follow-up year were obtained by computing a simple mean across the six early-implementing Talent Development schools and the six non-Talent Development comparison group averages. Combined standard errors were computed for each of these means accordingly.[15] For example, on average, the deviation from baseline in the follow-up period for Talent Development schools was 2.6 NCEs. The average deviation from baseline for non-Talent Development schools was 1.3 NCEs. Therefore, the impact of Talent Development on the average eighth-grade SSA math achievement is an increase of 1.3 NCEs. This impact is not statistically significant and corresponds to an effect size of 0.09.

Pooled estimates maximize the reliability of the impact estimates. However, it should be noted that follow-up data are available for all six early-implementing school clusters only for the first three years of implementation. Findings for these first three years have the greatest statistical power and show the most robust indication of Talent Development's preliminary impact on student performance and attendance. Also, indications of statistical significance,[16] which de-

[14]Effect sizes show each impact as an proportion of the comparison-group student-level standard deviation for each outcome. In this report, the standard deviations used to calculate effect sizes are based on two years of pre-Talent Development implementation data from 11 Talent Development schools and 18 non-Talent Development comparison schools.

[15]The formula for standard errors for an average of adjusted means was used. The analysis is not able to account for the fact that some comparison schools were used in more than one cluster.

[16]Statistical significance is a measure of the degree of certainty one may have that some nonzero deviation from the baseline average actually occurred. For example, if an impact estimate is statistically significant, then one may conclude with some confidence that the program really had an effect. If an impact estimate is not sta-

(continued)

pend in part on sample size, may be achieved with impacts of smaller magnitude in the first three years as compared with impacts in Years 4 and 5, which include fewer schools. Similarly, average deviations from baseline for Talent Development schools include at most 6 schools, while average deviations from baseline for non-Talent Development schools include up to 18 schools. Again, in this instance, statistical significance may be achieved with smaller deviations from baseline for non-Talent Development comparison schools as compared with deviations from baseline for Talent Development schools.

Figure 5 provides a graphic representation of the findings presented at the bottom of Table 5. The top panel of the figure shows the baseline average and the deviation from the projected baseline average for the Talent Development schools. The bottom panel presents this information for the non-Talent Development schools. The solid line in each panel represents the baseline average eighth-grade SSA math test score, and the dashed line represents the projection of that average into the postimplementation follow-up period. The triangles show the average SSA math test score in each year prior to the start of Talent Development implementation averaged across all six school clusters.

The circles in each part of the figure represent the average SSA math test score in the first three years of Talent Development implementation across six school clusters. The differences between the dashed lines and the circles represent deviations from the baseline for Talent Development (in the upper panel) and non-Talent Development schools (in the lower panel). Again, it is the difference in these two deviations that represents the impact of Talent Development. Figure 6 shows the difference in deviations more clearly. For each follow-up year, the black bar represents the deviation from baseline averaged across six Talent Development schools, and the white bar represents the deviation from baseline average across six clusters of non-Talent development comparison schools.

For this study, this process of estimating and pooling impacts across school clusters was repeated for several student outcomes, including reading achievement, attendance rates, and grade-level promotion. For some outcomes and some follow-up years, data for all six school clusters are not available. In most cases, data for four school clusters are available to estimate the impact of Talent Development in the fourth year of implementation, and data from two school clusters are available to estimate the impact in the fifth year of implementation. The number of school clusters included in pooled impact estimates for each year is noted in the text, tables, and footnotes of the main report.

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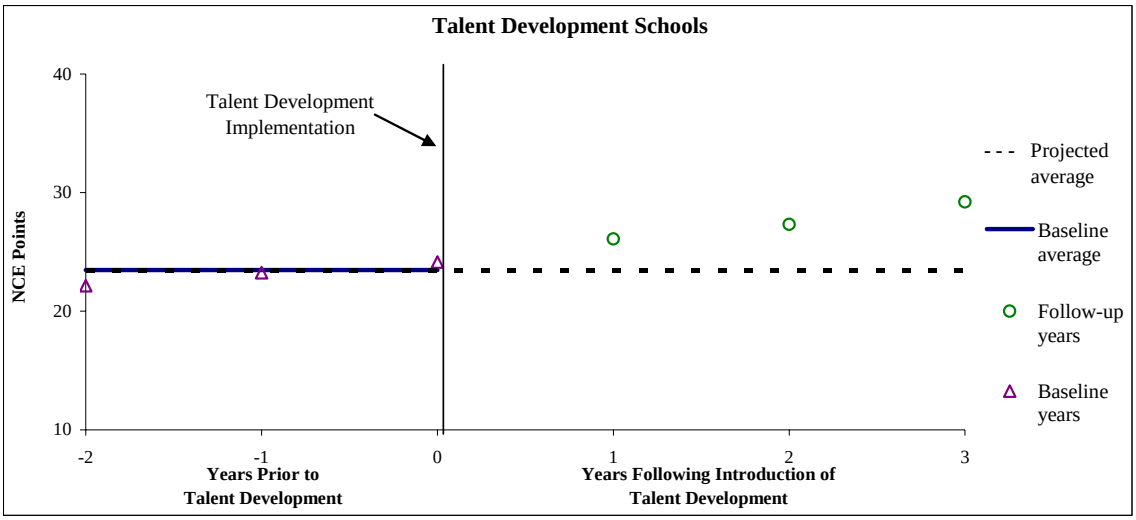
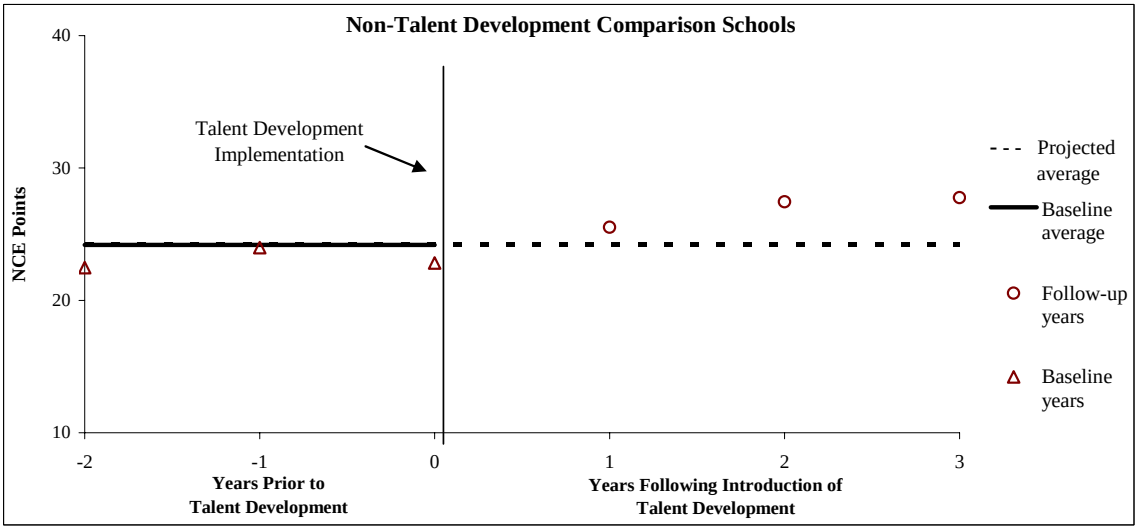
tistically significant, then the nonzero estimate is more likely to be the product of chance or random variation in the averages that were calculated across the schools and years under study. Unless otherwise noted, the deviations from baseline averages and Talent Development impacts discussed in this report are statistically significant at the 10 percent level or lower. This means that there is no more than a 10 percent probability that the difference resulted only from chance or random variation

**The Talent Development Evaluation**

## Analytic Appendix
## Figure 5

### Average Eighth-Grade SSA Math NCE Scores in Early-Implementing Talent Development Schools and Their Comparison Schools, Three-Year Follow-Up Results




SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

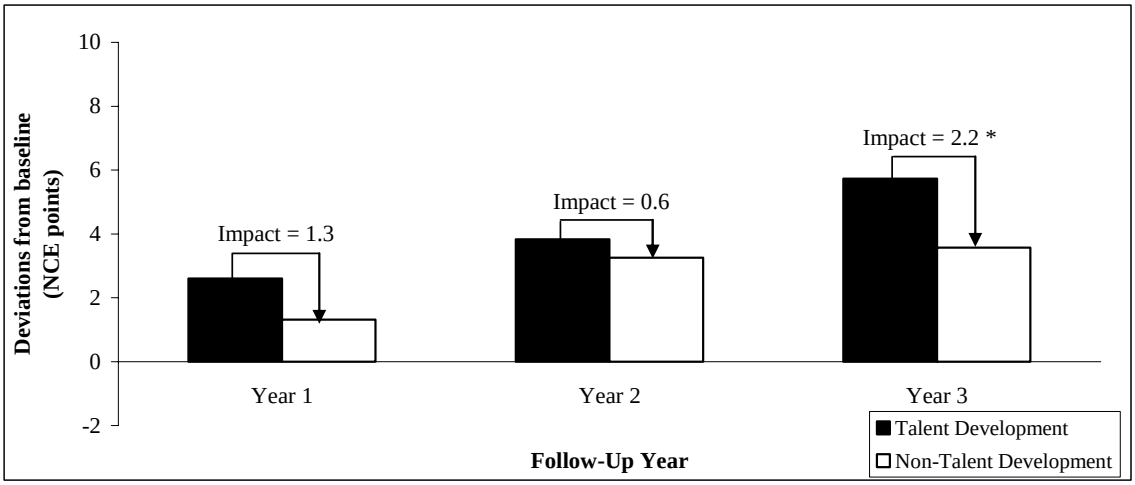
Results were pooled over six Talent Development middle schools and over six groups of non-Talent Development middle schools.

**The Talent Development Evaluation**

**Analytic Appendix**

**Figure 6**

**Impacts on SSA Math NCE Scores for Eighth-Grade Students in Early-Implementing Talent Development Schools, Three-Year Follow-Up Results**




SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Results are pooled over six Talent Development Schools and six clusters of non-Talent Development comparison schools.

The black bars represent the deviations from baseline of the Talent Development schools. The white bars represent the deviations from baseline of the non-Talent Development comparison schools. The deviations were calculated as the change in math NCE points from the three-year pre-implementation baseline average to each follow-up year.

The impact was calculated as the difference in deviations from the baseline average between Talent Development schools and non-Talent Development comparison schools.

A two-tailed t-test was applied to the impacts. Standard errors were adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

# References

Bloom, Howard A., 2003. "Using 'Short' Interrupted Time Series Analysis to Measure the Impacts of Whole School Reforms." *Evaluation Review* 27, 1: 3-49.

Raudenbush, Stephen W., and Anthony S. Byrk. 2001. *Hierarchical Linear Models: Applications and Data Analysis Methods*, 2nd ed. Thousand Oaks, CA: Sage Publications.

Singer, Judith. 1998. "Using SAS Proc Mixed to Fit Multi-Level Models, Hierarchical Models, and Individual Growth Models." *Journal of Educational and Behavioral Statistics* 24 (4): 323-355.

Snipes, Jason C. 2003. "Using Interrupted Time Series with Comparison Groups to Estimate the Effects of Educational Interventions on Student Achievement." Paper presented at the annual meeting of the Association for Public Policy Analysis and Management, Washington, DC, November 2003.

## Unit 2

# Supplementary Tables

**Unit 2a**

# Expanded Tables for Eighth-Grade Students in Early-Implementing Schools

**The Talent Development Evaluation**

**TR Table A.1**

**Year-by-Year Levels and Impacts for SSA Math NCE Scores for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th-grade average NCE | 24.8 | 28.1 | 30.7 | 34.8 | 35.0 | 27.2 | 28.4 | 29.0 | 28.8 | 29.9 |
| Deviation from baseline | 0.8 | 4.1 | 6.6 ** | 10.8 *** | 11.0 *** | 1.6 | 2.9 ** | 3.4 *** | 3.2 *** | 4.4 *** |
| School B | | | | | | | | | | |
| 8th-grade average NCE | 29.0 | 30.6 | 34.5 | 34.0 | 33.1 | 27.6 | 31.6 | 31.5 | 30.9 | 30.8 |
| Deviation from baseline | 0.3 | 2.0 | 5.9 * | 5.3 | 4.5 | -0.2 | 3.7 * | 3.6 * | 3.0 | 2.9 |
| School C | | | | | | | | | | |
| 8th-grade average NCE | 23.7 | 23.8 | 25.7 | 28.0 | | 22.8 | 26.0 | 25.1 | 27.7 | |
| Deviation from baseline | 4.2 * | 4.3 * | 6.2 ** | 8.6 *** | | 2.1 ** | 5.3 *** | 4.4 *** | 7.0 *** | |
| School D | | | | | | | | | | |
| 8th-grade average NCE | 25.8 | 25.9 | 26.8 | 30.8 | | 22.5 | 26.5 | 25.4 | 26.8 | |
| Deviation from baseline | 3.2 * | 3.3 * | 4.2 ** | 8.2 *** | | -0.2 | 3.7 ** | 2.7 ** | 4.1 *** | |
| School E | | | | | | | | | | |
| 8th-grade average NCE | 26.1 | 26.3 | 30.3 | | | 27.2 | 27.1 | 28.7 | | |
| Deviation from baseline | 0.7 | 0.9 | 4.9 * | | | 1.4 | 1.3 | 3.0 *** | | |
| School F | | | | | | | | | | |
| 8th-grade average NCE | 27.2 | 29.1 | 27.4 | | | 25.6 | 25.1 | 26.9 | | |
| Deviation from baseline | 6.4 ** | 8.3 *** | 6.6 ** | | | 3.1 *** | 2.6 *** | 4.4 *** | | |
| All early-implementing schools | | | | | | | | | | |
| 8th-grade average NCE | 26.1 | 27.3 | 29.2 | 31.9 | 34.1 | 25.5 | 27.4 | 27.8 | 28.6 | 30.4 |
| Deviation from baseline | 2.6 ** | 3.8 *** | 5.7 *** | 8.2 *** | 7.7 *** | 1.3 *** | 3.2 *** | 3.6 *** | 4.3 *** | 3.6 *** |

(continued)

**The Talent Development Evaluation**

**TR Table A.1 (continued)**

**Year-by-Year Levels and Impacts for SSA Math NCE Scores for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.9 | 1.2 | 3.2 | 7.6 ** | 6.6 ** | -0.06 | 0.09 | 0.22 | 0.53 ** | 0.46 ** |
| School B | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.6 | -1.7 | 2.3 | 2.3 | 1.6 | 0.04 | -0.12 | 0.16 | 0.16 | 0.11 |
| School C | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 2.1 | -0.9 | 1.8 | 1.6 | | 0.15 | -0.07 | 0.13 | 0.11 | |
| School D | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 3.4 | -0.4 | 1.5 | 4.1 * | | 0.24 | -0.03 | 0.11 | 0.29 * | |
| School E | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.7 | -0.4 | 1.9 | | | -0.05 | -0.02 | 0.13 | | |
| School F | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 3.3 | 5.7 ** | 2.2 | | | 0.23 | 0.40 ** | 0.16 | | |
| All early-implementing schools | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 1.3 | 0.6 | 2.2 | 3.9 *** | 4.1 * | 0.09 | 0.04 | 0.15 | 0.27 *** | 0.28 * |

(continued)

## TR Table A.1 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table A.2**

**Year-by-Year Levels and Impacts for SSA Math Scores At or Above Grade Level for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | 3.5 | 7.2 | 7.4 | 17.3 | 14.0 | 7.0 | 10.1 | 9.3 | 6.9 | 8.0 |
| Deviation from baseline | -0.6 | 3.1 | 3.3 | 13.2 *** | 9.9 ** | 1.7 | 4.8 *** | 4.0 *** | 1.5 | 2.7 * |
| School B | | | | | | | | | | |
| At or above grade level (%) | 10.1 | 12.4 | 17.8 | 13.1 | 13.4 | 6.9 | 12.1 | 10.7 | 8.9 | 8.0 |
| Deviation from baseline | -0.8 | 1.5 | 6.9 * | 2.2 | 2.5 | -0.4 | 4.8 * | 3.4 | 1.6 | 0.7 |
| School C | | | | | | | | | | |
| At or above grade level (%) | 4.7 | 1.8 | 4.0 | 3.4 | | 2.2 | 6.2 | 4.4 | 3.9 | |
| Deviation from baseline | 1.7 | -1.2 | 1.0 | 0.4 | | 0.2 | 4.2 *** | 2.5 ** | 2.0 * | |
| School D | | | | | | | | | | |
| At or above grade level (%) | 3.3 | 4.7 | 5.3 | 11.7 | | 5.4 | 4.0 | 2.7 | 5.0 | |
| Deviation from baseline | 0.8 | 2.2 | 2.8 | 9.1 *** | | 2.2 | 0.8 | -0.5 | 1.8 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | 6.9 | 3.8 | 3.4 | | | 7.8 | 5.4 | 7.4 | | |
| Deviation from baseline | 2.2 | -0.9 | -1.4 | | | 1.4 | -1.0 | 1.0 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | 4.0 | 5.0 | 5.8 | | | 6.1 | 3.9 | 3.4 | | |
| Deviation from baseline | 1.5 | 2.5 | 3.3 | | | 3.0 *** | 0.8 | 0.3 | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | 5.4 | 5.8 | 7.3 | 11.4 | 13.7 | 5.9 | 7.0 | 6.3 | 6.2 | 8.0 |
| Deviation from baseline | 0.8 | 1.2 | 2.7 ** | 6.2 *** | 6.2 ** | 1.4 ** | 2.4 *** | 1.8 *** | 1.7 * | 1.7 |

(continued)

**The Talent Development Evaluation**

**TR Table A.2 (continued)**

**Year-by-Year Levels and Impacts for SSA Math Scores At or Above Grade Level for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -2.3 | -1.7 | -0.7 | 11.6 ** | 7.2 | -0.10 | -0.08 | -0.03 | 0.53 ** | 0.33 |
| School B | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.4 | -3.3 | 3.5 | 0.6 | 1.8 | -0.02 | -0.15 | 0.16 | 0.03 | 0.08 |
| School C | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 1.5 | -5.5 * | -1.5 | -1.6 | | 0.07 | -0.25 * | -0.07 | -0.07 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -1.5 | 1.4 | 3.3 | 7.3 * | | -0.07 | 0.06 | 0.15 | 0.33 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 0.8 | 0.1 | -2.3 | | | 0.04 | 0.00 | -0.11 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -1.5 | 1.6 | 3.0 | | | -0.07 | 0.07 | 0.14 | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.6 | -1.2 | 0.9 | 4.5 ** | 4.5 | -0.03 | -0.06 | 0.04 | 0.20 ** | 0.20 |

(continued)

## TR Table A.2 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table A.3**

**Year-by-Year Levels and Impacts for SSA Math Scores in the Bottom Quartile for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | 80.4 | 67.3 | 68.9 | 53.5 | 58.0 | 74.1 | 68.1 | 69.7 | 73.1 | 68.5 |
| Deviation from baseline | -3.0 | -16.1 * | -14.4 * | -29.9 *** | -25.3 *** | -4.6 | -10.5 *** | -9.0 *** | -5.6 * | -10.2 *** |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | 68.2 | 61.4 | 57.9 | 56.3 | 57.0 | 72.8 | 60.9 | 62.7 | 66.2 | 65.2 |
| Deviation from baseline | -4.0 | -10.7 | -14.2 | -15.8 * | -15.1 * | -0.8 | -12.7 ** | -10.9 * | -7.4 | -8.4 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | 86.5 | 79.3 | 81.8 | 78.7 | | 84.3 | 78.0 | 79.8 | 75.7 | |
| Deviation from baseline | -6.2 | -13.4 ** | -11.0 * | -14.0 ** | | -3.2 | -9.4 *** | -7.6 *** | -11.8 *** | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | 75.0 | 77.0 | 76.8 | 69.0 | | 82.6 | 78.4 | 81.6 | 78.5 | |
| Deviation from baseline | -12.1 * | -10.1 * | -10.3 * | -18.1 *** | | -0.7 | -4.9 | -1.7 | -4.7 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | 78.1 | 77.0 | 69.7 | | | 74.3 | 77.4 | 71.2 | | |
| Deviation from baseline | 0.1 | -0.9 | -8.2 | | | -2.0 | 1.2 | -5.0 ** | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | 79.2 | 70.8 | 78.5 | | | 78.8 | 81.1 | 77.9 | | |
| Deviation from baseline | -7.3 | -15.7 ** | -8.0 | | | -4.8 *** | -2.4 | -5.6 *** | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | 77.9 | 72.1 | 72.3 | 64.4 | 57.5 | 77.8 | 74.0 | 73.8 | 73.4 | 66.8 |
| Deviation from baseline | -5.4 * | -11.2 *** | -11.0 *** | -19.5 *** | -20.2 *** | -2.7 ** | -6.5 *** | -6.7 *** | -7.4 *** | -9.3 *** |

(continued)

**The Talent Development Evaluation**

**TR Table A.3 (continued)**

**Year-by-Year Levels and Impacts for SSA Math Scores in the Bottom Quartile for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 1.5 | -5.5 | -5.4 | -24.3 *** | -15.1 * | 0.04 | -0.14 | -0.14 | -0.61 *** | -0.38 * |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -3.2 | 2.0 | -3.3 | -8.4 | -6.8 | -0.08 | 0.05 | -0.08 | -0.21 | -0.17 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -3.0 | -4.0 | -3.3 | -2.2 | | -0.08 | -0.10 | -0.08 | -0.06 | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -11.4 | -5.2 | -8.7 | -13.4 * | | -0.29 | -0.13 | -0.22 | -0.34 * | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 2.1 | -2.1 | -3.2 | | | 0.05 | -0.05 | -0.08 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -2.6 | -13.3 ** | -2.4 | | | -0.06 | -0.34 ** | -0.06 | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -2.8 | -4.7 | -4.4 | -12.1 *** | -10.9 | -0.07 | -0.12 | -0.11 | -0.30 *** | -0.28 |

(continued)

**TR Table A.3 (continued)**

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table A.4**

**Year-by-Year Levels and Impacts for SSA Reading NCE Scores for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th-grade average NCE | 32.4 | 32.7 | 31.6 | 33.1 | 34.4 | 30.5 | 29.0 | 30.7 | 30.8 | 32.0 |
| Deviation from baseline | 1.1 | 1.3 | 0.2 | 1.7 | 3.0 | 0.6 | -0.9 | 0.8 | 0.8 | 2.1 ** |
| School B | | | | | | | | | | |
| 8th-grade average NCE | 33.8 | 35.8 | 35.9 | 35.3 | 38.0 | 32.3 | 31.1 | 32.9 | 33.2 | 33.3 |
| Deviation from baseline | 0.1 | 2.1 | 2.2 | 1.6 | 4.3 | -1.3 | -2.5 | -0.7 | -0.4 | -0.3 |
| School C | | | | | | | | | | |
| 8th-grade average NCE | 23.7 | 26.7 | 24.0 | 25.7 | | 26.0 | 27.4 | 24.6 | 30.5 | |
| Deviation from baseline | 0.5 | 3.5 | 0.8 | 2.5 | | 0.9 | 2.3 ** | -0.5 | 5.5 *** | |
| School D | | | | | | | | | | |
| 8th-grade average NCE | 23.1 | 28.5 | 27.7 | 29.2 | | 27.7 | 24.0 | 25.0 | 25.9 | |
| Deviation from baseline | -3.4 | 2.1 | 1.3 | 2.7 | | 1.5 | -2.2 | -1.2 | -0.3 | |
| School E | | | | | | | | | | |
| 8th-grade average NCE | 27.8 | 29.6 | 30.1 | | | 29.0 | 29.1 | 30.9 | | |
| Deviation from baseline | -3.4 | -1.5 | -1.0 | | | 0.4 | 0.5 | 2.3 *** | | |
| School F | | | | | | | | | | |
| 8th-grade average NCE | 26.2 | 30.2 | 26.3 | | | 27.5 | 26.1 | 29.9 | | |
| Deviation from baseline | 1.3 | 5.4 * | 1.4 | | | 1.0 | -0.4 | 3.4 *** | | |
| All early-implementing schools | | | | | | | | | | |
| 8th-grade average NCE | 27.8 | 30.6 | 29.3 | 30.8 | 36.2 | 28.8 | 27.8 | 29.0 | 30.1 | 32.7 |
| Deviation from baseline | -0.6 | 2.1 ** | 0.8 | 2.1 | 3.7 ** | 0.5 | -0.5 | 0.7 | 1.4 ** | 0.9 |

(continued)

**The Talent Development Evaluation**

**TR Table A.4 (continued)**

**Year-by-Year Levels and Impacts for SSA Reading NCE Scores for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.5 | 2.2 | -0.6 | 0.8 | 0.9 | 0.03 | 0.14 | -0.04 | 0.05 | 0.06 |
| School B | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 1.4 | 4.7 | 3.0 | 2.0 | 4.6 | 0.09 | 0.29 | 0.19 | 0.12 | 0.29 |
| School C | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.4 | 1.2 | 1.3 | -2.9 | | -0.03 | 0.07 | 0.08 | -0.19 | |
| School D | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -4.9 | 4.3 | 2.5 | 3.0 | | -0.30 | 0.27 | 0.16 | 0.19 | |
| School E | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -3.8 | -2.0 | -3.4 | | | -0.24 | -0.13 | -0.21 | | |
| School F | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.3 | 5.8 * | -2.0 | | | 0.02 | 0.36 * | -0.12 | | |
| All early-implementing schools | | | | | | | | | | |
| 8th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -1.1 | 2.7 ** | 0.1 | 0.7 | 2.8 | -0.07 | 0.17 ** | 0.01 | 0.05 | 0.17 |

(continued)

## TR Table A.4 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table A.5**

**Year-by-Year Levels and Impacts for SSA Reading Scores At or Above Grade Level for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | 10.8 | 13.9 | 10.6 | 13.2 | 10.9 | 9.4 | 8.7 | 12.1 | 10.1 | 9.9 |
| Deviation from baseline | 0.2 | 3.4 | 0.1 | 2.7 | 0.3 | -0.6 | -1.3 | 2.0 | 0.0 | -0.2 |
| School B | | | | | | | | | | |
| At or above grade level (%) | 16.0 | 21.2 | 22.5 | 15.4 | 18.6 | 10.3 | 10.8 | 14.7 | 14.0 | 10.6 |
| Deviation from baseline | 0.4 | 5.6 | 6.9 | -0.2 | 3.0 | -4.9 | -4.4 | -0.5 | -1.2 | -4.6 |
| School C | | | | | | | | | | |
| At or above grade level (%) | 5.2 | 9.5 | 3.4 | 1.6 | | 6.5 | 8.8 | 3.7 | 6.5 | |
| Deviation from baseline | 2.6 | 7.0 ** | 0.8 | -1.0 | | 0.6 | 3.0 ** | -2.2 * | 0.6 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | 2.4 | 8.8 | 5.6 | 9.5 | | 7.2 | 3.8 | 4.0 | 4.0 | |
| Deviation from baseline | -5.6 ** | 0.7 | -2.5 | 1.4 | | -0.6 | -4.1 ** | -3.8 ** | -3.8 ** | |
| School E | | | | | | | | | | |
| At or above grade level (%) | 11.7 | 8.0 | 6.2 | | | 10.3 | 7.8 | 8.5 | | |
| Deviation from baseline | 0.0 | -3.7 | -5.5 * | | | 2.1 * | -0.3 | 0.3 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | 5.9 | 6.8 | 3.9 | | | 8.4 | 4.6 | 6.3 | | |
| Deviation from baseline | 1.0 | 1.9 | -1.0 | | | 1.8 * | -2.1 ** | -0.3 | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | 8.7 | 11.4 | 8.7 | 9.9 | 14.7 | 8.7 | 7.4 | 8.2 | 8.6 | 10.2 |
| Deviation from baseline | -0.2 | 2.5 | -0.2 | 0.7 | 1.7 | -0.3 | -1.5 * | -0.7 | -1.1 | -2.4 |

(continued)

**The Talent Development Evaluation**

**TR Table A.5 (continued)**

**Year-by-Year Levels and Impacts for SSA Reading Scores At or Above Grade Level for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 0.9 | 4.7 | -1.9 | 2.7 | 0.5 | 0.03 | 0.16 | -0.07 | 0.09 | 0.02 |
| School B | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 5.3 | 10.0 | 7.4 | 1.0 | 7.6 | 0.18 | 0.35 | 0.26 | 0.03 | 0.26 |
| School C | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 2.0 | 4.0 | 3.0 | -1.6 | | 0.07 | 0.14 | 0.10 | -0.06 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -5.0 | 4.7 | 1.3 | 5.2 * | | -0.17 | 0.16 | 0.05 | 0.18 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -2.1 | -3.4 | -5.8 * | | | -0.07 | -0.12 | -0.20 * | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.7 | 4.0 | -0.7 | | | -0.03 | 0.14 | -0.02 | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 0.0 | 4.0 ** | 0.6 | 1.8 | 4.0 | 0.00 | 0.14 ** | 0.02 | 0.06 | 0.14 |

(continued)

## TR Table A.5 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table A.6**

**Year-by-Year Levels and Impacts for SSA Reading Scores in the Bottom Quartile for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | 64.9 | 65.2 | 64.7 | 57.3 | 59.2 | 65.0 | 71.5 | 67.5 | 66.6 | 64.8 |
| Deviation from baseline | 0.3 | 0.5 | 0.0 | -7.4 | -5.5 | -2.2 | 4.3 * | 0.3 | -0.6 | -2.4 |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | 57.0 | 54.0 | 51.6 | 51.4 | 46.0 | 60.3 | 68.6 | 63.5 | 58.2 | 59.4 |
| Deviation from baseline | -2.1 | -5.1 | -7.6 | -7.7 | -13.1 * | 2.2 | 10.5 ** | 5.4 | 0.1 | 1.3 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | 81.9 | 77.9 | 89.3 | 83.4 | | 77.3 | 75.3 | 80.1 | 68.7 | |
| Deviation from baseline | 0.9 | -3.1 | 8.3 | 2.4 | | 0.2 | -1.8 | 3.0 | -8.4 *** | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | 84.7 | 70.7 | 74.7 | 71.7 | | 72.6 | 79.2 | 77.6 | 81.3 | |
| Deviation from baseline | 10.3 | -3.6 | 0.3 | -2.7 | | -1.8 | 4.7 | 3.2 | 6.9 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | 75.7 | 66.9 | 72.1 | | | 71.3 | 71.6 | 68.7 | | |
| Deviation from baseline | 9.9 | 1.2 | 6.4 | | | 0.9 | 1.2 | -1.7 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | 75.6 | 75.0 | 78.3 | | | 74.9 | 78.0 | 70.8 | | |
| Deviation from baseline | -1.2 | -1.8 | 1.5 | | | -0.2 | 2.9 | -4.3 ** | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | 73.3 | 68.3 | 71.8 | 66.0 | 52.6 | 70.2 | 74.0 | 71.4 | 68.7 | 62.1 |
| Deviation from baseline | 3.0 | -2.0 | 1.5 | -3.8 | -9.3 * | -0.2 | 3.6 *** | 1.0 | -0.5 | -0.6 |

(continued)

**The Talent Development Evaluation**

**TR Table A.6 (continued)**

**Year-by-Year Levels and Impacts for SSA Reading Scores in the Bottom Quartile for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 2.5 | -3.7 | -0.3 | -6.8 | -3.1 | 0.06 | -0.08 | -0.01 | -0.15 | -0.07 |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -4.3 | -15.6 * | -13.0 | -7.8 | -14.4 * | -0.09 | -0.34 * | -0.28 | -0.17 | -0.32 * |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 0.7 | -1.3 | 5.3 | 10.8 | | 0.01 | -0.03 | 0.12 | 0.24 | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 12.1 | -8.4 | -2.9 | -9.6 | | 0.27 | -0.18 | -0.06 | -0.21 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 9.1 | 0.0 | 8.1 | | | 0.20 | 0.00 | 0.18 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -1.0 | -4.7 | 5.7 | | | -0.02 | -0.10 | 0.13 | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 3.2 | -5.6 * | 0.5 | -3.3 | -8.8 | 0.07 | -0.12 * | 0.01 | -0.07 | -0.19 |

(continued)

## TR Table A.6 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table A.7**

**Year-by-Year Levels and Impacts for Attendance Rate for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th grade attendance rate (%) | 84.7 | 87.0 | 86.9 | 87.7 | 87.0 | 86.5 | 87.2 | 86.1 | 86.3 | 86.7 |
| Deviation from baseline | 0.4 | 2.7 | 2.6 | 3.4 | 2.6 | 2.0 ** | 2.7 *** | 1.7 ** | 1.8 ** | 2.2 *** |
| School B | | | | | | | | | | |
| 8th grade attendance rate (%) | 88.7 | 90.6 | 89.6 | 88.8 | 88.4 | 87.8 | 87.3 | 87.0 | 87.4 | 89.4 |
| Deviation from baseline | 1.5 | 3.5 | 2.5 | 1.6 | 1.3 | 2.1 | 1.6 | 1.3 | 1.7 | 3.7 ** |
| School C | | | | | | | | | | |
| 8th grade attendance rate (%) | 83.5 | 83.6 | 82.9 | 81.6 | | 85.4 | 85.9 | 84.8 | 85.0 | |
| Deviation from baseline | 4.6 * | 4.8 * | 4.1 | 2.8 | | 2.0 * | 2.5 ** | 1.4 | 1.7 | *** |
| School D | | | | | | | | | | |
| 8th grade attendance rate (%) | 90.4 | 86.8 | 85.6 | 84.0 | | 82.3 | 83.0 | 83.3 | 84.0 | |
| Deviation from baseline | 6.4 ** | 2.8 | 1.6 | 0.0 | | 1.1 | 1.9 | 2.1 | 2.9 | |
| School E | | | | | | | | | | |
| 8th grade attendance rate (%) | 87.0 | 90.1 | 91.9 | | | 85.5 | 85.5 | 85.5 | | |
| Deviation from baseline | 2.0 | 5.1 ** | 6.9 *** | | | -0.4 | -0.4 ** | -0.4 *** | | |
| School F | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| 8th grade attendance rate (%) | 86.9 | 87.6 | 87.4 | 85.5 | 87.7 | 85.5 | 85.8 | 85.3 | 85.7 | 88.1 |
| Deviation from baseline | 3.0 *** | 3.8 *** | 3.5 *** | 1.9 | 2.0 | 1.4 ** | 1.7 *** | 1.2 ** | 2.0 *** | 3.0 *** |

**The Talent Development Evaluation**

**TR Table A.7 (continued)**

**Year-by-Year Levels and Impacts for Attendance Rate for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -1.6 | 0.0 | 0.9 | 1.6 | 0.4 | -0.05 | 0.00 | 0.03 | 0.05 | 0.01 |
| School B | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -0.6 | 1.8 | 1.2 | -0.1 | -2.4 | -0.02 | 0.06 | 0.04 | 0.00 | -0.08 |
| School C | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | 2.7 | 2.2 | 2.7 | 1.2 | | 0.09 | 0.07 | 0.09 | 0.04 | |
| School D | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | 5.3 | 0.9 | -0.5 | -2.9 | | 0.18 | 0.03 | -0.02 | -0.10 | |
| School E | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | 2.4 | 5.5 ** | 7.3 *** | | | 0.08 | 0.18 ** | 0.24 *** | | |
| School F | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| 8th grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | 1.6 | 2.1 * | 2.3 * | -0.1 | -1.0 | 0.05 | 0.07 | 0.08 | 0.00 | -0.03 |

## TR Table A.7 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

Attendance rates were calculated for each student by dividing the number of days the student was present by the total number of days the student was enrolled in a given school year.

**The Talent Development Evaluation**

## TR Table A.8

### Year-by-Year Levels and Impacts for Attendance Rates Greater Than or Equal to 90 Percent for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 48.4 | 48.2 | 52.7 | 55.7 | 58.7 | 54.4 | 54.1 | 52.0 | 52.7 | 54.3 |
| Deviation from baseline | 0.0 | -0.2 | 4.3 | 7.3 | 10.3 | 7.3 ** | 7.0 ** | 5.0 * | 5.6 ** | 7.2 ** |
| School B | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 62.5 | 69.3 | 61.9 | 61.7 | 64.1 | 58.1 | 55.8 | 54.2 | 55.5 | 61.5 |
| Deviation from baseline | 8.8 | 15.6 | 8.3 | 8.0 | 10.4 | 6.1 | 3.9 | 2.3 | 3.5 | 9.6 |
| School C | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 39.6 | 38.4 | 47.8 | 50.5 | | 51.0 | 53.5 | 46.3 | 49.7 | |
| Deviation from baseline | 9.7 | 8.5 | 17.9 ** | 20.6 ** | | 5.7 | 8.2 ** | 0.9 | 4.4 | |
| School D | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 70.7 | 56.6 | 51.9 | 43.7 | | 36.3 | 41.5 | 42.8 | 46.0 | |
| Deviation from baseline | 22.9 *** | 8.8 | 4.1 | -4.1 | | -7.5 | -2.3 | -1.0 | 2.2 | |
| School E | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 54.5 | 59.7 | 74.6 | | | 49.5 | 50.7 | 50.2 | | |
| Deviation from baseline | 0.0 | 5.3 | 20.1 *** | | | -1.9 | -0.7 | -1.2 | | |
| School F | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 55.1 | 54.5 | 57.8 | 52.9 | 61.4 | 49.8 | 51.1 | 49.1 | 51.0 | 57.9 |
| Deviation from baseline | 8.3 ** | 7.6 ** | 10.9 *** | 8.0 * | 10.4 | 2.0 | 3.2 * | 1.2 | 3.9 * | 8.4 ** |

(continued)

**The Talent Development Evaluation**

**TR Table A.8 (continued)**

**Year-by-Year Levels and Impacts for Attendance Rates Greater Than or Equal to 90 Percent for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | -7.3 | -7.2 | -0.7 | 1.6 | 3.1 | -0.15 | -0.15 | -0.01 | 0.03 | 0.06 |
| School B | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | 2.6 | 11.8 | 5.9 | 4.4 | 0.9 | 0.05 | 0.24 | 0.12 | 0.09 | 0.02 |
| School C | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | 4.0 | 0.3 | 17.0 * | 16.3 * | | 0.08 | 0.01 | 0.34 * | 0.33 * | |
| School D | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | 30.4 *** | 11.2 | 5.1 | -6.3 | | 0.62 *** | 0.23 | 0.10 | -0.13 | |
| School E | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | 1.9 | 5.9 | 21.3 *** | | | 0.04 | 0.12 | 0.43 *** | | |
| School F | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | 6.3 | 4.4 | 9.7 ** | 4.0 | 2.0 | 0.13 | 0.09 | 0.20 ** | 0.08 | 0.04 |

(continued)

## TR Table A.8 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

Attendance rates were calculated for each student by dividing the number of days the student was present by the total number of days the student was enrolled in a given school year.

**The Talent Development Evaluation**

## TR Table A.9

### Year-by-Year Levels and Impacts for Attendance Rates Less Than or Equal to 80 Percent for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 24.4 | 22.2 | 25.4 | 22.5 | 19.9 | 21.3 | 22.0 | 23.4 | 23.1 | 22.5 |
| Deviation from baseline | -1.4 | -3.6 | -0.3 | -3.3 | -5.8 | -6.7 *** | -6.0 *** | -4.6 ** | -4.9 ** | -5.5 *** |
| School B | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 16.2 | 11.1 | 14.8 | 15.8 | 15.4 | 18.4 | 21.1 | 22.9 | 20.9 | 18.6 |
| Deviation from baseline | -0.8 | -5.9 | -2.2 | -1.2 | -1.6 | -7.1 * | -4.5 | -2.7 | -4.6 | -7.0 * |
| School C | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 35.8 | 34.0 | 29.3 | 26.0 | | 25.2 | 24.0 | 25.9 | 26.7 | |
| Deviation from baseline | -9.6 | -11.4 | -16.0 ** | -19.4 ** | | -5.1 * | -6.3 ** | -4.4 | -3.6 | |
| School D | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 11.8 | 22.9 | 22.6 | 31.7 | | 35.4 | 29.0 | 30.9 | 29.5 | |
| Deviation from baseline | -17.0 ** | -5.9 | -6.2 | 2.9 | | 3.5 | -2.9 | -1.0 | -2.4 | |
| School E | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 20.8 | 13.9 | 10.3 | | | 24.8 | 24.7 | 24.9 | | |
| Deviation from baseline | -4.7 | -11.6 ** | -15.2 *** | | | 0.9 | 0.8 | 1.0 | | |
| School F | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 21.8 | 20.8 | 20.5 | 24.0 | 17.7 | 25.0 | 24.2 | 25.6 | 25.0 | 20.6 |
| Deviation from baseline | -6.7 ** | -7.7 *** | -8.0 *** | -5.2 * | -3.7 | -2.9 ** | -3.8 *** | -2.3 * | -3.9 ** | -6.2 *** |

(continued)

**The Talent Development Evaluation**

**TR Table A.9 (continued)**

**Year-by-Year Levels and Impacts for Attendance Rates Less Than or Equal to 80 Percent for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | 5.4 | 2.4 | 4.3 | 1.7 | -0.4 | 0.11 | 0.05 | 0.09 | 0.03 | -0.01 |
| School B | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | 6.3 | -1.4 | 0.4 | 3.5 | 5.3 | 0.13 | -0.03 | 0.01 | 0.07 | 0.11 |
| School C | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | -4.5 | -5.1 | -11.7 | -15.8 * | | -0.09 | -0.11 | -0.24 | -0.33 * | |
| School D | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | -20.4 ** | -3.0 | -5.3 | 5.3 | | -0.43 ** | -0.06 | -0.11 | 0.11 | |
| School E | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | -5.6 | -12.4 ** | -16.2 *** | | | -0.12 | -0.26 ** | -0.34 *** | | |
| School F | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | -3.8 | -3.9 | -5.7 * | -1.3 | 2.5 | -0.08 | -0.08 | -0.12 * | -0.03 | 0.05 |

(continued)

## TR Table A.9 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

Attendance rates were calculated for each student by dividing the number of days the student was present by the total number of days the student was enrolled in a given school year.

**The Talent Development Evaluation**

## TR Table A.10

### Year-by-Year Levels and Impacts for One-Year Promotion Rate for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Promoted to 9th grade | 99.5 | 98.9 | 100.1 | 99.8 | 99.0 | 98.0 | 97.4 | 98.9 | 96.4 | 98.4 |
| Deviation from baseline | 1.5 | 0.9 | 2.1 | 1.8 | 1.0 | -0.1 | -0.8 | 0.8 | -1.7 ** | 0.2 |
| School B | | | | | | | | | | |
| Promoted to 9th grade | 99.5 | 98.2 | 99.8 | 98.2 | 99.1 | 99.0 | 96.2 | 98.2 | 97.5 | 98.6 |
| Deviation from baseline | 0.6 | -0.6 | 1.0 | -0.6 | 0.3 | 0.7 | -2.0 ** | -0.1 | -0.8 | 0.3 |
| School C | | | | | | | | | | |
| Promoted to 9th grade | 94.4 | 96.9 | 100.4 | 100.4 | | 98.3 | 98.8 | 97.5 | 96.8 | |
| Deviation from baseline | -2.1 | 0.4 | 3.9 | 3.9 | | -0.2 | 0.3 | -0.9 | -1.7 * | |
| School D | | | | | | | | | | |
| Promoted to 9th grade | 96.2 | 98.7 | 99.5 | 97.9 | | 95.5 | 98.3 | 95.6 | 93.4 | |
| Deviation from baseline | -1.3 | 1.2 | 2.0 | 0.4 | | -0.8 | 2.0 | -0.7 | -2.9 | |
| School E | | | | | | | | | | |
| Promoted to 9th grade | 98.0 | 97.5 | | | | 99.1 | 96.0 | | | |
| Deviation from baseline | -0.1 | -0.6 | | | | 1.1 | -2.0 ** | | | |
| School F | | | | | | | | | | |
| Promoted to 9th grade | 98.8 | 97.8 | | | | 99.1 | 97.3 | | | |
| Deviation from baseline | 3.6 | 2.7 | | | | 1.3 * | -0.5 | | | |
| All early-implementing schools | | | | | | | | | | |
| Promoted to 9th grade | 97.7 | 98.0 | 100.0 | 99.1 | 99.1 | 98.2 | 97.3 | 97.6 | 96.0 | 98.5 |
| Deviation from baseline | 0.4 | 0.7 | 2.2 *** | 1.4 | 0.6 | 0.3 | -0.5 | -0.2 | -1.8 *** | 0.2 |

(continued)

**The Talent Development Evaluation**

**TR Table A.10 (continued)**

**Year-by-Year Levels and Impacts for One-Year Promotion Rate for Eighth-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Promoted to 9th grade | | | | | | | | | | |
| Deviation from baseline | 1.6 | 1.6 | 1.3 | 3.6 | 0.8 | 0.07 | 0.07 | 0.06 | 0.15 | 0.03 |
| School B | | | | | | | | | | |
| Promoted to 9th grade | | | | | | | | | | |
| Deviation from baseline | -0.1 | 1.4 | 1.1 | 0.2 | 0.0 | 0.00 | 0.06 | 0.04 | 0.01 | 0.00 |
| School C | | | | | | | | | | |
| Promoted to 9th grade | | | | | | | | | | |
| Deviation from baseline | -1.9 | 0.0 | 4.8 * | 5.6 ** | | -0.08 | 0.00 | 0.20 * | 0.24 ** | |
| School D | | | | | | | | | | |
| Promoted to 9th grade | | | | | | | | | | |
| Deviation from baseline | -0.5 | -0.9 | 2.7 | 3.2 | | -0.02 | -0.04 | 0.12 | 0.14 | |
| School E | | | | | | | | | | |
| Promoted to 9th grade | | | | | | | | | | |
| Deviation from baseline | -1.2 | 1.4 | | | | -0.05 | 0.06 | | | |
| School F | | | | | | | | | | |
| Promoted to 9th grade | | | | | | | | | | |
| Deviation from baseline | 2.3 | 3.2 | | | | 0.10 | 0.13 | | | |
| All early-implementing schools | | | | | | | | | | |
| Promoted to 9th grade | | | | | | | | | | |
| Deviation from baseline | 0.0 | 1.1 | 2.5 *** | 3.1 ** | 0.4 | 0.00 | 0.05 | 0.11 *** | 0.13 ** | 0.02 |

(continued)

## TR Table A.10 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

Eighth-grade students were considered promoted if they were listed as 9th-grade students in the district's administrative data file one year after the current year. Students whose records were not included on the data file one year after the current year, for whatever reason, were not in the analysis sample for this outcome.

**Unit 2b**

# Expanded Tables for Seventh-Grade Students in Early-Implementing Schools

**The Talent Development Evaluation**

**TR Table B.1**

**Year-by-Year Levels and Impacts for SAT-9 Math Total NCE Scores for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade average NCE | 34.5 | 35.5 | 34.7 | 37.0 | 38.1 | 37.7 | 37.5 | 34.7 | 32.8 | 37.2 |
| Deviation from baseline | 2.3 | 3.3 | 2.5 | 4.7 | 5.8 | 4.2 *** | 4.0 *** | 1.2 | -0.7 | 3.7 *** |
| School B | | | | | | | | | | |
| 7th-grade average NCE | 39.2 | 39.6 | 35.6 | 37.9 | 40.9 | 40.1 | 38.7 | 39.6 | 34.1 | 39.0 |
| Deviation from baseline | 0.0 | 0.4 | -3.6 | -1.3 | 1.7 | 4.3 * | 2.8 | 3.7 * | -1.7 | 3.2 |
| School C | | | | | | | | | | |
| 7th-grade average NCE | 31.3 | 26.2 | 29.7 | 32.7 | | 31.9 | 29.3 | 31.0 | 33.0 | |
| Deviation from baseline | 1.9 | -3.2 | 0.3 | 3.3 | | 1.2 | -1.4 | 0.3 | 2.3 * | |
| School D | | | | | | | | | | |
| 7th-grade average NCE | 32.4 | 30.1 | 31.5 | 36.3 | | 35.0 | 33.4 | 31.1 | 35.9 | |
| Deviation from baseline | 0.9 | -1.4 | -0.1 | 4.8 ** | | 2.8 ** | 1.2 | -1.0 | 3.8 ** | |
| School E | | | | | | | | | | |
| 7th-grade average NCE | 33.4 | 34.1 | 36.9 | | | 31.8 | 31.6 | 36.0 | | |
| Deviation from baseline | -5.5 * | -4.8 | -2.1 | | | -3.3 *** | -3.5 *** | 0.9 | | |
| School F | | | | | | | | | | |
| 7th-grade average NCE | 35.4 | 36.3 | | | | 29.8 | 31.0 | | | |
| Deviation from baseline | 3.0 | 3.9 | | | | -2.8 *** | -1.6 ** | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade average NCE | 34.4 | 33.7 | 33.7 | 36.0 | 39.5 | 34.4 | 33.6 | 34.5 | 33.9 | 38.1 |
| Deviation from baseline | 0.4 | -0.3 | -0.6 | 2.9 * | 3.8 | 1.1 * | 0.2 | 1.0 | 0.9 | 3.5 *** |

(continued)

**The Talent Development Evaluation**

**TR Table B.1 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Math Total NCE Scores for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -1.9 | -0.7 | 1.3 | 5.5 | 2.1 | -0.13 | -0.05 | 0.09 | 0.38 | 0.14 |
| School B | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -4.3 | -2.4 | -7.3 * | 0.4 | -1.5 | -0.29 | -0.16 | -0.50 * | 0.03 | -0.10 |
| School C | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.6 | -1.8 | 0.0 | 1.0 | | 0.04 | -0.13 | 0.00 | 0.07 | |
| School D | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -2.0 | -2.6 | 1.0 | 1.0 | | -0.13 | -0.18 | 0.07 | 0.07 | |
| School E | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -2.2 | -1.2 | -2.9 | | | -0.15 | -0.09 | -0.20 | | |
| School F | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 5.9 ** | 5.5 * | | | | 0.40 ** | 0.38 * | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.6 | -0.5 | -1.6 | 2.0 | 0.3 | -0.04 | -0.04 | -0.11 | 0.14 | 0.02 |

(continued)

## TR Table B.1 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.2**

**Year-by-Year Levels and Impacts for SAT-9 Math Total Scores At or Above Grade Level for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | 20.0 | 15.1 | 17.3 | 15.2 | 16.9 | 21.2 | 20.2 | 15.2 | 9.8 | 18.5 |
| Deviation from baseline | 7.5 | 2.7 | 4.8 | 2.7 | 4.4 | 7.9 *** | 6.8 *** | 1.9 | -3.6 | 5.1 ** |
| School B | | | | | | | | | | |
| At or above grade level (%) | 26.4 | 25.0 | 14.4 | 17.3 | 21.8 | 26.2 | 23.3 | 26.1 | 12.4 | 21.4 |
| Deviation from baseline | 1.1 | -0.3 | -10.9 | -7.9 | -3.4 | 9.6 ** | 6.7 | 9.5 ** | -4.3 | 4.8 |
| School C | | | | | | | | | | |
| At or above grade level (%) | 12.9 | 7.8 | 5.1 | 6.8 | | 12.0 | 6.6 | 6.6 | 7.7 | |
| Deviation from baseline | 6.3 | 1.2 | -1.5 | 0.2 | | 3.9 ** | -1.5 | -1.5 | -0.4 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | 8.5 | 3.5 | 7.1 | 13.7 | | 12.9 | 14.2 | 4.8 | 12.4 | |
| Deviation from baseline | -0.9 | -5.8 * | -2.2 | 4.4 | | 3.6 | 4.9 ** | -4.5 ** | 3.2 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | 13.9 | 9.4 | 15.2 | | | 9.6 | 7.4 | 15.8 | | |
| Deviation from baseline | -6.1 | -10.6 | -4.8 | | | -6.6 ** | -8.7 *** | -0.4 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | 14.5 | 11.8 | | | | 6.3 | 6.5 | | | |
| Deviation from baseline | 3.3 | 0.5 | | | | -5.2 *** | -5.0 *** | | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | 16.0 | 12.1 | 11.8 | 13.3 | 19.4 | 14.7 | 13.0 | 13.7 | 10.6 | 19.9 |
| Deviation from baseline | 1.9 | -2.0 | -2.9 | -0.2 | 0.5 | 2.2 ** | 0.5 | 1.0 | -1.3 | 5.0 ** |

(continued)

**The Talent Development Evaluation**

**TR Table B.2 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Math Total Scores At or Above Grade Level for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.4 | -4.2 | 3.0 | 6.3 | -0.7 | -0.01 | -0.13 | 0.09 | 0.19 | -0.02 |
| School B | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -8.5 | -7.0 | -20.3 ** | -3.7 | -8.2 | -0.26 | -0.22 | -0.63 ** | -0.11 | -0.25 |
| School C | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 2.4 | 2.7 | 0.0 | 0.6 | | 0.07 | 0.08 | 0.00 | 0.02 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -4.4 | -10.6 ** | 2.3 | 1.3 | | -0.14 | -0.33 ** | 0.07 | 0.04 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 0.5 | -1.9 | -4.4 | | | 0.01 | -0.06 | -0.14 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 8.5 * | 5.5 | | | | 0.26 * | 0.17 | | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.3 | -2.6 | -3.9 | 1.1 | -4.5 | -0.01 | -0.08 | -0.12 | 0.03 | -0.14 |

(continued)

## TR Table B.2 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2o and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.3**

**Year-by-Year Levels and Impacts for SAT-9 Math Total Scores in the Bottom Quartile for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | 54.1 | 56.9 | 58.9 | 54.8 | 49.5 | 50.1 | 51.4 | 57.3 | 65.3 | 52.5 |
| Deviation from baseline | -12.0 | -9.2 | -7.2 | -11.3 | -16.6 | -10.0 *** | -8.8 ** | -2.9 | 5.1 | -7.6 ** |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | 44.0 | 46.3 | 53.3 | 46.4 | 39.5 | 43.5 | 47.7 | 42.9 | 62.0 | 45.6 |
| Deviation from baseline | -5.4 | -3.1 | 3.9 | -3.0 | -9.9 | -10.3 | -6.1 | -10.8 | 8.2 | -8.2 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | 62.5 | 80.7 | 75.4 | 63.5 | | 65.2 | 73.9 | 70.5 | 67.6 | |
| Deviation from baseline | -11.8 | 6.5 | 1.2 | -10.8 | | -4.9 | 3.8 | 0.3 | -2.5 | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | 66.0 | 71.9 | 65.4 | 54.7 | | 56.6 | 62.4 | 71.7 | 57.6 | |
| Deviation from baseline | -2.5 | 3.4 | -3.1 | -13.8 * | | -10.1 * | -4.2 | 5.0 | -9.0 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | 60.9 | 59.9 | 58.5 | | | 65.8 | 68.6 | 56.6 | | |
| Deviation from baseline | 13.9 | 12.8 | 11.5 | | | 8.4 ** | 11.2 *** | -0.8 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | 56.7 | 53.6 | | | | 72.7 | 71.0 | | | |
| Deviation from baseline | -8.4 | -11.4 | | | | 8.5 *** | 6.8 ** | | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | 57.4 | 61.5 | 62.3 | 54.8 | 44.5 | 59.0 | 62.5 | 59.8 | 63.1 | 49.0 |
| Deviation from baseline | -4.3 | -0.2 | 1.3 | -9.7 ** | -13.2 * | -3.1 * | 0.5 | -1.8 | 0.4 | -7.9 ** |

(continued)

**The Talent Development Evaluation**

**TR Table B.3 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Math Total Scores in the Bottom Quartile for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -1.9 | -0.4 | -4.3 | -16.3 | -9.0 | -0.04 | -0.01 | -0.09 | -0.34 | -0.19 |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 4.9 | 3.0 | 14.7 | -11.2 | -1.7 | 0.10 | 0.06 | 0.31 | -0.24 | -0.04 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -6.8 | 2.7 | 0.8 | -8.2 | | -0.14 | 0.06 | 0.02 | -0.17 | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 7.6 | 7.7 | -8.1 | -4.7 | | 0.16 | 0.16 | -0.17 | -0.10 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 5.4 | 1.6 | 12.3 | | | 0.11 | 0.03 | 0.26 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -16.8 * | -18.2 * | | | | -0.35 * | -0.38 * | | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -1.3 | -0.6 | 3.1 | -10.1 * | -5.3 | -0.03 | -0.01 | 0.06 | -0.21 * | -0.11 |

(continued)

## TR Table B.3 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.4**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving NCE Scores for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade average NCE | 36.4 | 38.4 | 36.5 | 38.7 | 40.1 | 37.3 | 37.7 | 35.2 | 33.2 | 37.8 |
| Deviation from baseline | 4.4 | 6.4 * | 4.5 | 6.7 * | 8.1 ** | 4.1 *** | 4.5 *** | 2.0 * | 0.0 | 4.6 *** |
| School B | | | | | | | | | | |
| 7th-grade average NCE | 39.2 | 41.3 | 36.9 | 39.3 | 42.6 | 38.7 | 38.8 | 39.7 | 35.0 | 39.4 |
| Deviation from baseline | -0.4 | 1.8 | -2.6 | -0.3 | 3.0 | 4.2 ** | 4.3 ** | 5.3 ** | 0.6 | 5.0 ** |
| School C | | | | | | | | | | |
| 7th-grade average NCE | 31.9 | 25.9 | 30.1 | 34.0 | | 32.6 | 29.7 | 31.4 | 33.2 | |
| Deviation from baseline | 2.4 | -3.6 | 0.6 | 4.5 | | 2.2 | -0.7 | 1.0 | 2.8 ** | |
| School D | | | | | | | | | | |
| 7th-grade average NCE | 32.9 | 32.0 | 32.0 | 37.3 | | 35.8 | 34.7 | 33.1 | 33.9 | |
| Deviation from baseline | 1.7 | 0.8 | 0.8 | 6.1 ** | | 3.3 * | 2.2 | 0.6 | 1.4 | |
| School E | | | | | | | | | | |
| 7th-grade average NCE | 35.5 | 33.9 | 38.2 | | | 32.3 | 31.9 | 36.6 | | |
| Deviation from baseline | -3.0 | -4.6 | -0.3 | | | -2.9 ** | -3.3 *** | 1.4 | | |
| School F | | | | | | | | | | |
| 7th-grade average NCE | 36.4 | 35.1 | | | | 29.9 | 31.3 | | | |
| Deviation from baseline | 3.2 | 2.0 | | | | -2.8 *** | -1.4 | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade average NCE | 35.4 | 34.4 | 34.8 | 37.3 | 41.3 | 34.4 | 34.0 | 35.2 | 33.8 | 38.6 |
| Deviation from baseline | 1.4 | 0.4 | 0.6 | 4.2 *** | 5.6 ** | 1.4 ** | 0.9 * | 2.1 *** | 1.2 | 4.8 *** |

(continued)

**The Talent Development Evaluation**

**TR Table B.4 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving NCE Scores for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.3 | 1.8 | 2.5 | 6.7 * | 3.5 | 0.02 | 0.12 | 0.16 | 0.44 * | 0.23 |
| School B | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -4.6 | -2.6 | -7.9 ** | -0.9 | -1.9 | -0.31 | -0.17 | -0.52 ** | -0.06 | -0.13 |
| School C | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.2 | -2.9 | -0.4 | 1.7 | | 0.01 | -0.19 | -0.02 | 0.11 | |
| School D | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -1.6 | -1.4 | 0.2 | 4.6 | | -0.11 | -0.09 | 0.01 | 0.31 | |
| School E | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.1 | -1.3 | -1.7 | | | -0.01 | -0.09 | -0.11 | | |
| School F | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 6.0 * | 3.4 | | | | 0.40 * | 0.22 | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.0 | -0.5 | -1.5 | 3.1 * | 0.8 | 0.00 | -0.03 | -0.10 | 0.20 * | 0.05 |

(continued)

## TR Table B.4 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.5**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving Scores At or Above Grade Level for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | 21.4 | 20.2 | 18.5 | 16.5 | 20.3 | 19.2 | 20.3 | 16.2 | 10.8 | 20.4 |
| Deviation from baseline | 11.7 | 10.4 | 8.8 | 6.8 | 10.6 | 6.2 ** | 7.3 *** | 3.2 | -2.2 | 7.4 *** |
| School B | | | | | | | | | | |
| At or above grade level (%) | 28.4 | 29.2 | 19.4 | 18.7 | 26.8 | 21.8 | 23.7 | 26.5 | 15.0 | 23.3 |
| Deviation from baseline | 2.3 | 3.1 | -6.7 | -7.4 | 0.7 | 7.2 * | 9.2 ** | 11.9 *** | 0.5 | 8.8 ** |
| School C | | | | | | | | | | |
| At or above grade level (%) | 14.0 | 7.1 | 6.0 | 8.7 | | 12.8 | 6.9 | 7.4 | 10.2 | |
| Deviation from baseline | 6.0 | -0.9 | -2.0 | 0.7 | | 5.1 ** | -0.9 | -0.4 | 2.4 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | 10.6 | 5.3 | 7.3 | 15.7 | | 14.8 | 15.5 | 10.2 | 11.3 | |
| Deviation from baseline | 0.3 | -5.0 | -3.0 | 5.4 | | 3.9 | 4.6 * | -0.7 | 0.4 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | 13.5 | 10.4 | 17.9 | | | 10.7 | 7.9 | 18.0 | | |
| Deviation from baseline | -7.0 | -10.1 | -2.6 | | | -5.3 ** | -8.1 *** | 2.0 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | 15.9 | 12.7 | | | | 6.4 | 7.4 | | | |
| Deviation from baseline | 3.4 | 0.3 | | | | -5.2 *** | -4.3 *** | | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | 17.3 | 14.1 | 13.8 | 14.9 | 23.5 | 14.3 | 13.6 | 15.7 | 11.8 | 21.8 |
| Deviation from baseline | 2.8 | -0.4 | -1.1 | 1.4 | 5.7 | 2.0 * | 1.3 | 3.2 *** | 0.3 | 8.1 *** |

(continued)

**The Talent Development Evaluation**

**TR Table B.5 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving Scores At or Above Grade Level for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 5.5 | 3.1 | 5.5 | 9.0 | 3.2 | 0.17 | 0.10 | 0.17 | 0.28 | 0.10 |
| School B | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -4.9 | -6.1 | -18.6 ** | -7.9 | -8.1 | -0.15 | -0.19 | -0.58 ** | -0.25 | -0.25 |
| School C | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 0.9 | 0.0 | -1.6 | -1.8 | | 0.03 | 0.00 | -0.05 | -0.06 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -3.6 | -9.6 ** | -2.3 | 5.1 | | -0.11 | -0.30 ** | -0.07 | 0.16 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -1.7 | -2.0 | -4.7 | | | -0.05 | -0.06 | -0.15 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 8.6 | 4.5 | | | | 0.27 | 0.14 | | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 0.8 | -1.7 | -4.3 | 1.1 | -2.4 | 0.03 | -0.05 | -0.14 | 0.03 | -0.08 |

(continued)

**TR Table B.5 (continued)**

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data was not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.6**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving Scores in the Bottom Quartile for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | 52.6 | 44.9 | 55.7 | 42.5 | 35.4 | 52.9 | 51.7 | 56.2 | 61.4 | 50.4 |
| Deviation from baseline | -13.6 | -21.3 ** | -10.5 | -23.6 ** | -30.8 *** | -9.2 *** | -10.3 *** | -5.8 * | -0.7 | -11.6 *** |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | 43.9 | 45.4 | 52.7 | 39.3 | 34.1 | 48.6 | 49.2 | 44.3 | 56.7 | 45.7 |
| Deviation from baseline | -5.2 | -3.7 | 3.6 | -9.7 | -15.0 | -10.3 * | -9.7 * | -14.6 ** | -2.2 | -13.2 ** |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | 62.7 | 83.0 | 72.7 | 63.0 | | 64.5 | 72.8 | 65.5 | 62.7 | |
| Deviation from baseline | -10.6 | 9.7 | -0.6 | -10.3 | | -6.4 * | 1.8 | -5.4 | -8.2 ** | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | 63.3 | 65.8 | 62.3 | 54.0 | | 53.9 | 57.6 | 62.3 | 60.8 | |
| Deviation from baseline | -5.8 | -3.3 | -6.8 | -15.1 * | | -10.3 * | -6.6 | -1.9 | -3.4 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | 56.9 | 60.0 | 49.6 | | | 63.9 | 64.9 | 54.3 | | |
| Deviation from baseline | 9.6 | 12.7 | 2.3 | | | 5.6 * | 6.6 ** | -4.0 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | 57.9 | 59.8 | | | | 71.7 | 66.4 | | | |
| Deviation from baseline | -4.6 | -2.7 | | | | 6.9 ** | 1.6 | | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | 56.2 | 59.8 | 58.6 | 49.7 | 34.8 | 59.3 | 60.4 | 56.5 | 60.4 | 48.1 |
| Deviation from baseline | -5.0 | -1.4 | -2.4 | -14.7 *** | -22.9 *** | -3.9 ** | -2.8 * | -6.4 *** | -3.6 | -12.4 *** |

(continued)

**The Talent Development Evaluation**

**TR Table B.6 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving Scores in the Bottom Quartile for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -4.4 | -10.9 | -4.7 | -22.9 ** | -19.1 * | -0.09 | -0.23 | -0.10 | -0.48 ** | -0.40 * |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 5.0 | 6.0 | 18.2 | -7.5 | -1.8 | 0.11 | 0.13 | 0.38 | -0.16 | -0.04 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -4.2 | 7.9 | 4.8 | -2.1 | | -0.09 | 0.17 | 0.10 | -0.04 | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 4.5 | 3.3 | -4.8 | -11.8 | | 0.09 | 0.07 | -0.10 | -0.25 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 4.1 | 6.2 | 6.3 | | | 0.09 | 0.13 | 0.13 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -11.6 | -4.3 | | | | -0.24 | -0.09 | | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -1.1 | 1.3 | 4.0 | -11.1 ** | -10.5 | -0.02 | 0.03 | 0.08 | -0.23 ** | -0.22 |

(continued)

## TR Table B.6 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4 and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4 and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4 and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all eighth-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.7**

**Year-by-Year Levels and Impacts for SAT-9 Reading NCE Scores for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade average NCE | 36.9 | 37.0 | 41.7 | 38.3 | 39.5 | 39.0 | 38.8 | 36.4 | 34.7 | 40.0 |
| Deviation from baseline | -0.8 | -0.7 | 4.1 | 0.7 | 1.8 | 2.2 ** | 2.0 ** | -0.4 | -2.1 ** | 3.2 *** |
| School B | | | | | | | | | | |
| 7th-grade average NCE | 40.5 | 43.2 | 41.6 | 41.0 | 45.2 | 40.4 | 41.3 | 41.4 | 37.7 | 43.0 |
| Deviation from baseline | 0.5 | 3.1 | 1.6 | 0.9 | 5.1 | 1.0 | 1.9 | 2.0 | -1.7 | 3.5 * |
| School C | | | | | | | | | | |
| 7th-grade average NCE | 35.5 | 30.4 | 33.6 | 34.6 | | 35.7 | 32.2 | 33.9 | 35.8 | |
| Deviation from baseline | 4.2 | -1.0 | 2.2 | 3.2 | | 2.7 ** | -0.8 | 0.9 | 2.8 ** | |
| School D | | | | | | | | | | |
| 7th-grade average NCE | 33.4 | 32.3 | 31.7 | 36.3 | | 35.5 | 35.4 | 30.4 | 35.4 | |
| Deviation from baseline | -1.5 | -2.7 | -3.3 | 1.3 | | 0.6 | 0.5 | -4.4 * | 0.6 | |
| School E | | | | | | | | | | |
| 7th-grade average NCE | 36.5 | 36.1 | 39.6 | | | 34.3 | 33.4 | 38.8 | | |
| Deviation from baseline | -2.9 | -3.3 | 0.2 | | | -2.8 *** | -3.7 *** | 1.7 * | | |
| School F | | | | | | | | | | |
| 7th-grade average NCE | 34.4 | 32.4 | | | | 32.3 | 33.3 | | | |
| Deviation from baseline | 1.4 | -0.6 | | | | -2.9 *** | -1.8 ** | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade average NCE | 36.2 | 35.2 | 37.6 | 37.5 | 42.3 | 36.2 | 35.7 | 36.2 | 35.9 | 41.5 |
| Deviation from baseline | 0.1 | -0.8 | 1.0 | 1.5 | 3.5 | 0.2 | -0.3 | -0.1 | -0.1 | 3.3 *** |

(continued)

**The Talent Development Evaluation**

**TR Table B.7 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Reading NCE Scores for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -3.0 | -2.7 | 4.5 | 2.8 | -1.3 | -0.17 | -0.16 | 0.26 | 0.16 | -0.08 |
| School B | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.5 | 1.2 | -0.4 | 2.6 | 1.6 | -0.03 | 0.07 | -0.02 | 0.15 | 0.09 |
| School C | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 1.4 | -0.1 | 1.4 | 0.4 | | 0.08 | -0.01 | 0.08 | 0.02 | |
| School D | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -2.2 | -3.2 | 1.1 | 0.7 | | -0.13 | -0.19 | 0.07 | 0.04 | |
| School E | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | -0.1 | 0.4 | -1.5 | | | -0.01 | 0.02 | -0.09 | | |
| School F | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 4.2 | 1.2 | | | | 0.25 | 0.07 | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade average NCE | | | | | | | | | | |
| Deviation from baseline | 0.0 | -0.5 | 1.0 | 1.6 | 0.1 | 0.00 | -0.03 | 0.06 | 0.09 | 0.01 |

(continued)

## TR Table B.7 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.8**

**Year-by-Year Levels and Impacts for SAT-9 Reading Scores At or Above Grade Level for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | 24.0 | 22.2 | 34.1 | 25.3 | 27.0 | 24.4 | 25.8 | 22.8 | 18.9 | 24.7 |
| Deviation from baseline | -0.4 | -2.2 | 9.7 | 0.9 | 2.6 | 0.3 | 1.7 | -1.2 | -5.2 ** | 0.6 |
| School B | | | | | | | | | | |
| At or above grade level (%) | 31.5 | 36.3 | 31.5 | 27.7 | 34.4 | 25.6 | 30.4 | 34.3 | 25.6 | 30.4 |
| Deviation from baseline | 2.6 | 7.4 | 2.6 | -1.2 | 5.5 | -3.1 | 1.7 | 5.7 * | -3.0 | 1.8 |
| School C | | | | | | | | | | |
| At or above grade level (%) | 24.0 | 10.0 | 14.1 | 13.9 | | 20.3 | 13.7 | 17.8 | 15.8 | |
| Deviation from baseline | 9.5 * | -4.5 | -0.4 | -0.6 | | 3.8 ** | -2.8 | 1.3 | -0.7 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | 16.1 | 14.9 | 11.2 | 19.7 | | 17.8 | 20.3 | 13.3 | 16.7 | |
| Deviation from baseline | -1.1 | -2.2 | -5.9 | 2.5 | | -0.9 | 1.6 | -5.4 | -2.1 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | 22.7 | 19.9 | 23.9 | | | 17.9 | 16.0 | 22.3 | | |
| Deviation from baseline | -5.7 | -8.5 | -4.5 | | | -5.4 *** | -7.4 *** | -1.1 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | 14.7 | 11.2 | | | | 13.7 | 16.1 | | | |
| Deviation from baseline | -2.6 | -6.2 | | | | -5.7 *** | -3.3 ** | | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | 22.2 | 19.1 | 23.0 | 21.6 | 30.7 | 20.0 | 20.4 | 22.1 | 19.2 | 27.6 |
| Deviation from baseline | 0.4 | -2.7 | 0.3 | 0.4 | 4.0 | -1.8 * | -1.4 | -0.2 | -2.8 * | 1.2 |

(continued)

**The Talent Development Evaluation**

**TR Table B.8 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Reading Scores At or Above Grade Level for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.7 | -3.9 | 11.0 * | 6.1 | 2.0 | -0.02 | -0.10 | 0.28 * | 0.16 | 0.05 |
| School B | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 5.6 | 5.7 | -3.1 | 1.8 | 3.7 | 0.14 | 0.14 | -0.08 | 0.05 | 0.09 |
| School C | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 5.7 | -1.6 | -1.7 | 0.1 | | 0.14 | -0.04 | -0.04 | 0.00 | |
| School D | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.2 | -3.9 | -0.5 | 4.6 | | -0.01 | -0.10 | -0.01 | 0.12 | |
| School E | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | -0.2 | -1.1 | -3.4 | | | -0.01 | -0.03 | -0.09 | | |
| School F | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 3.1 | -2.8 | | | | 0.08 | -0.07 | | | |
| All early-implementing schools | | | | | | | | | | |
| At or above grade level (%) | | | | | | | | | | |
| Deviation from baseline | 2.2 | -1.3 | 0.4 | 3.2 | 2.9 | 0.06 | -0.03 | 0.01 | 0.08 | 0.07 |

(continued)

## TR Table B.8 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.9**

**Year-by-Year Levels and Impacts for SAT-9 Reading Scores in the Bottom Quartile for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | 51.7 | 46.2 | 41.4 | 43.7 | 45.0 | 43.8 | 44.8 | 50.5 | 54.9 | 43.5 |
| Deviation from baseline | 5.7 | 0.2 | -4.6 | -2.3 | -1.0 | -5.3 * | -4.3 | 1.4 | 5.8 ** | -5.6 ** |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | 38.9 | 32.9 | 39.4 | 36.9 | 30.2 | 40.2 | 38.4 | 38.9 | 44.4 | 36.0 |
| Deviation from baseline | -3.5 | -9.4 | | -5.5 | -12.2 | -2.4 | -4.2 | -3.7 | 1.8 | -6.6 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | 50.3 | 69.5 | 56.3 | 58.9 | | 52.1 | 61.6 | 57.4 | 54.7 | |
| Deviation from baseline | -14.2 * | 4.9 | -8.2 | -5.6 | | -6.4 ** | 3.1 | -1.0 | -3.8 | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | 57.8 | 62.7 | 63.3 | 49.9 | | 50.2 | 50.9 | 64.2 | 54.6 | |
| Deviation from baseline | 4.7 | 9.6 | 10.2 | -3.2 | | -6.4 | -5.7 | 7.6 | -2.0 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | 49.0 | 52.3 | 46.2 | | | 56.3 | 59.1 | 46.1 | | |
| Deviation from baseline | 6.4 | 9.7 | 3.6 | | | 7.6 *** | 10.4 *** | -2.6 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | 55.3 | 63.4 | | | | 61.2 | 58.9 | | | |
| Deviation from baseline | -7.1 | 1.0 | | | | 7.2 *** | 4.9 ** | | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | 50.5 | 54.5 | 49.3 | 47.3 | 37.6 | 50.6 | 52.3 | 51.4 | 52.2 | 39.8 |
| Deviation from baseline | -1.3 | 2.7 | -0.4 | -4.1 | -6.6 | -0.9 | 0.7 | 0.3 | 0.5 | -6.1 ** |

(continued)

**The Talent Development Evaluation**

**TR Table B.9 (continued)**

**Year-by-Year Levels and Impacts for SAT-9 Reading Scores in the Bottom Quartile for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 11.1 | 4.5 | -6.0 | -8.1 | 4.6 | 0.22 | 0.09 | -0.12 | -0.16 | 0.09 |
| School B | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -1.1 | -5.2 | 0.7 | -7.3 | -5.6 | -0.02 | -0.11 | 0.01 | -0.15 | -0.11 |
| School C | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -7.8 | 1.8 | -7.2 | -1.8 | | -0.16 | 0.04 | -0.14 | -0.04 | |
| School D | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | 11.2 | 15.3 * | 2.6 | -1.2 | | 0.22 | 0.31 * | 0.05 | -0.02 | |
| School E | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -1.3 | -0.7 | 6.2 | | | -0.03 | -0.01 | 0.12 | | |
| School F | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -14.3 * | -4.0 | | | | -0.29 * | -0.08 | | | |
| All early-implementing schools | | | | | | | | | | |
| In the bottom quartile (%) | | | | | | | | | | |
| Deviation from baseline | -0.4 | 2.0 | -0.7 | -4.6 | -0.5 | -0.01 | 0.04 | -0.01 | -0.09 | -0.01 |

(continued)

## TR Table B.9 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

**The Talent Development Evaluation**

**TR Table B.10**

**Year-by-Year Levels and Impacts for Attendance Rate for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade attendance rate (%) | 85.9 | 87.2 | 88.5 | 87.5 | 86.9 | 87.4 | 86.8 | 86.3 | 86.2 | 86.3 |
| Deviation from baseline | -1.2 | 0.1 | 1.3 | 0.4 | -0.2 | 1.5 * | 0.8 | 0.3 | 0.3 | 0.4 |
| School B | | | | | | | | | | |
| 7th-grade attendance rate (%) | 88.0 | 88.6 | 89.4 | 88.1 | 89.3 | 88.8 | 87.9 | 87.2 | 87.8 | 87.5 |
| Deviation from baseline | -0.9 | -0.3 | 0.5 | -0.7 | 0.5 | 0.6 | -0.2 | -1.0 | -0.4 | -0.7 |
| School C | | | | | | | | | | |
| 7th-grade attendance rate (%) | 82.2 | 84.3 | 80.1 | 76.8 | | 84.9 | 85.0 | 84.8 | 84.5 | |
| Deviation from baseline | 0.2 | 2.3 | -1.9 | -5.2 ** | | 0.7 | 0.9 | 0.7 | 0.3 | |
| School D | | | | | | | | | | |
| 7th-grade attendance rate (%) | 86.1 | 86.3 | 83.6 | 85.0 | | 82.5 | 85.0 | 82.6 | 86.4 | |
| Deviation from baseline | 0.5 | 0.7 | -2.0 | -0.6 | | 0.7 | 3.2 * | 0.8 | 4.7 ** | |
| School E | | | | | | | | | | |
| 7th-grade attendance rate (%) | 85.2 | 88.4 | 90.6 | | | 85.7 | 85.5 | 85.9 | | |
| Deviation from baseline | -2.0 | 1.1 | 3.4 * | | | -0.3 | -0.5 | 0.0 | | |
| School F | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade attendance rate (%) | 85.5 | 87.0 | 86.4 | 84.4 | 88.1 | 85.8 | 86.0 | 85.3 | 86.2 | 86.9 |
| Deviation from baseline | -0.7 | 0.8 | 0.3 | -1.5 | 0.1 | 0.7 | 0.8 ** | 0.2 | 1.2 ** | -0.2 |

(continued)

**The Talent Development Evaluation**

**TR Table B.10 (continued)**

**Year-by-Year Levels and Impacts for Attendance Rate for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -2.7 | -0.7 | 1.0 | 0.1 | -0.6 | -0.09 | -0.02 | 0.03 | 0.00 | -0.02 |
| School B | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -1.5 | 0.0 | 1.5 | -0.3 | 1.2 | -0.05 | 0.00 | 0.05 | -0.01 | 0.04 |
| School C | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -0.5 | 1.5 | -2.6 | -5.5 ** | | -0.02 | 0.05 | -0.09 | -0.18 ** | |
| School D | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -0.2 | -2.5 | -2.8 | -5.2 * | | -0.01 | -0.08 | -0.09 | -0.17 * | |
| School E | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -1.7 | 1.7 | 3.5 | | | -0.06 | 0.06 | 0.12 | | |
| School F | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| 7th-grade attendance rate (%) | | | | | | | | | | |
| Deviation from baseline | -1.3 | 0.0 | 0.1 | -2.8 ** | 0.3 | -0.04 | 0.00 | 0.00 | -0.09 ** | 0.01 |

(continued)

## TR Table B.10 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

Attendance rates were calculated for each student by dividing the number of days the student was present by the total number of days the student was enrolled in a given school year.

**The Talent Development Evaluation**

**TR Table B.11**

**Year-by-Year Levels and Impacts for Attendance Rates Greater Than or Equal to 90 Percent for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 50.0 | 52.0 | 54.6 | 49.9 | 49.2 | 55.4 | 51.2 | 51.2 | 50.8 | 50.3 |
| Deviation from baseline | 0.0 | 2.0 | 4.6 | -0.1 | -0.8 | 3.6 | -0.6 | -0.6 | -1.0 | -1.5 |
| School B | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 62.1 | 60.7 | 61.3 | 61.7 | 63.6 | 58.8 | 55.1 | 52.1 | 56.5 | 53.8 |
| Deviation from baseline | 2.6 | 1.2 | 1.8 | 2.2 | 4.1 | 0.0 | -3.7 | -6.7 ** | -2.3 | -5.0 |
| School C | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 34.1 | 42.0 | 41.8 | 35.0 | | 46.8 | 46.4 | 44.2 | 43.6 | |
| Deviation from baseline | -1.8 | 6.1 | 6.0 | -0.9 | | 1.7 | 1.3 | -0.9 | -1.5 | |
| School D | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 44.4 | 49.3 | 40.5 | 45.1 | | 36.1 | 43.9 | 35.1 | 51.1 | |
| Deviation from baseline | -2.0 | 2.8 | -6.0 | -1.3 | | -4.0 | 3.8 | -5.0 | 11.0 ** | |
| School E | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 43.9 | 53.5 | 65.4 | | | 49.7 | 47.3 | 49.3 | | |
| Deviation from baseline | -13.6 ** | -4.0 | 7.9 | | | -0.9 | -3.2 | -1.3 | | |
| School F | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | 46.9 | 51.5 | 52.7 | 47.9 | 56.4 | 49.4 | 48.8 | 46.4 | 50.5 | 52.1 |
| Deviation from baseline | -2.9 | 1.6 | 2.9 | 0.0 | 1.7 | 0.1 | -0.5 | -2.9 ** | 1.6 | -3.2 * |

(continued)

**The Talent Development Evaluation**

**TR Table B.11 (continued)**

**Year-by-Year Levels and Impacts for Attendance Rates Greater Than or Equal to 90 Percent for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | -3.6 | 2.7 | 5.2 | 0.8 | 0.7 | -0.07 | 0.05 | 0.11 | 0.02 | 0.01 |
| School B | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | 2.7 | 4.9 | 8.5 | 4.5 | 9.1 * | 0.05 | 0.10 | 0.17 | 0.09 | 0.18 * |
| School C | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | -3.5 | 4.8 | 6.8 | 0.6 | | -0.07 | 0.10 | 0.14 | 0.01 | |
| School D | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | 2.0 | -0.9 | -1.0 | -12.3 | | 0.04 | -0.02 | -0.02 | -0.25 | |
| School E | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | -12.8 * | -0.8 | 9.1 | | | -0.26 * | -0.02 | 0.18 | | |
| School F | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 90% or higher (%) | | | | | | | | | | |
| Deviation from baseline | -3.0 | 2.1 | 5.7 * | -1.6 | 4.9 | -0.06 | 0.04 | 0.12 * | -0.03 | 0.10 |

(continued)

## TR Table B.11 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared to individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years as compared Year 4 and Year 5.

Attendance rates were calculated for each student by dividing the number of days the student was present by the total number of days the student was enrolled in a given school year.

**The Talent Development Evaluation**

**TR Table B.12**

**Year-by-Year Levels and Impacts for Attendance Rates Less Than or Equal to 80 Percent for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Outcome Levels Compared with Baseline Average | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Talent Development Schools | | | | | Non-Talent Development Schools | | | | |
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 18.1 | 22.6 | 21.8 | 23.5 | 24.2 | 19.5 | 24.8 | 24.1 | 25.4 | 25.0 |
| Deviation from baseline | -5.1 | -0.6 | -1.4 | 0.3 | 1.0 | -4.7 ** | 0.6 | -0.2 | 1.1 | 0.7 |
| School B | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 17.6 | 14.7 | 17.3 | 18.3 | 14.9 | 16.6 | 21.9 | 22.3 | 22.6 | 23.7 |
| Deviation from baseline | 2.0 | -0.9 | 1.7 | 2.7 | -0.7 | -2.8 | 2.4 | 2.8 | 3.2 | 4.3 * |
| School C | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 41.5 | 28.5 | 35.4 | 36.9 | | 28.9 | 27.3 | 27.6 | 28.8 | |
| Deviation from baseline | 4.7 | -8.3 | -1.4 | 0.1 | | 0.2 | -1.4 | -1.1 | 0.2 | |
| School D | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 22.6 | 21.9 | 34.4 | 28.2 | | 35.2 | 30.5 | 36.0 | 27.1 | |
| Deviation from baseline | 0.0 | -0.8 | 11.7 * | 5.5 | | 1.7 | -3.0 | 2.5 | -6.4 | |
| School E | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 23.6 | 19.6 | 13.4 | | | 26.0 | 27.2 | 25.2 | | |
| Deviation from baseline | 1.8 | -2.2 | -8.3 | | | 1.3 | 2.5 | 0.5 | | |
| School F | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | 24.7 | 21.5 | 24.5 | 26.7 | 19.6 | 25.2 | 26.3 | 27.0 | 26.0 | 24.4 |
| Deviation from baseline | 0.7 | -2.5 | 0.5 | 2.2 | 0.2 | -0.9 | 0.2 | 0.9 | -0.5 | 2.5 * |

(continued)

**The Talent Development Evaluation**

**TR Table B.12 (continued)**

**Year-by-Year Levels and Impacts for Attendance Rates Less Than or Equal to 80 Percent for Seventh-Grade Students in Early-Implementing Talent Development Schools and Their Comparison Schools, Five-Year Follow-Up Results, by School Cluster**

| | Impact | | | | | Impact Effect Size | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School Cluster | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| School A | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | -0.4 | -1.2 | -1.2 | -0.8 | 0.3 | -0.01 | -0.03 | -0.03 | -0.02 | 0.01 |
| School B | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | 4.8 | -3.3 | -1.2 | -0.4 | -5.0 | 0.10 | -0.07 | -0.03 | -0.01 | -0.11 |
| School C | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | 4.5 | -6.8 | -0.3 | 0.0 | | 0.10 | -0.15 | -0.01 | 0.00 | |
| School D | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | -1.8 | 2.2 | 9.3 | 11.9 | | -0.04 | 0.05 | 0.20 | 0.26 | |
| School E | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | 0.5 | -4.7 | -8.9 | | | 0.01 | -0.10 | -0.19 | | |
| School F | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | | | | | | | | | | |
| All early-implementing schools | | | | | | | | | | |
| Attendance rate of 80% or lower (%) | | | | | | | | | | |
| Deviation from baseline | 1.5 | -2.8 | -0.5 | 2.7 | -2.3 | 0.03 | -0.06 | -0.01 | 0.06 | -0.05 |

(continued)

## TR Table B.12 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 6 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of between 2 and 11 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

The deviation from the baseline for Year 1, Year 2, Year 3, Year 4, and Year 5 was calculated as the difference between the baseline average and the Year 1, Year 2, Year 3, Year 4, and Year 5 averages, respectively.

The impacts for Year 1, Year 2, Year 3, Year 4, and Year 5 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Blank spaces under the Year 4 and Year 5 columns indicate that, at the time of analysis, some clusters had not yet completed a fourth or fifth year of implementation or data were not available for that outcome.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates. Similarly, across-school averages at the bottom of each page include a larger sample of schools in the first three follow-up years, as compared with Year 4 and Year 5.

Attendance rates were calculated for each student by dividing the number of days the student was present by the total number of days the student was enrolled in a given school year.

**Unit 2c**

# Expanded Tables for Eighth-Grade Students in Later-Implementing Schools

**The Talent Development Evaluation**

**TR Table C.1**

**Year-by-Year Levels and Impacts for Math NCE Scores for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| 8th-grade average NCE | 28.5 | 31.8 | 3.2 | 31.3 | 33.0 | 1.7 | 1.5 | 0.10 |
| School H | | | | | | | | |
| 8th-grade average NCE | 29.7 | 29.4 | -0.4 | 26.1 | 28.6 | 2.5 *** | -2.9 | -0.20 |
| School I | | | | | | | | |
| 8th-grade average NCE | 26.2 | 33.1 | 6.9 ** | 24.6 | 27.6 | 2.9 ** | 3.9 | 0.27 |
| School J | | | | | | | | |
| 8th-grade average NCE | 26.9 | 31.3 | 4.4 | 25.3 | 26.8 | 1.5 | 2.9 | 0.20 |
| School K | | | | | | | | |
| 8th-grade average NCE | 27.0 | 29.2 | 2.1 | 28.4 | 29.6 | 1.3 * | 0.9 | 0.06 |
| All later-implementing schools | | | | | | | | |
| 8th-grade average NCE | 27.7 | 30.9 | 3.3 *** | 27.1 | 29.1 | 2.0 *** | 1.3 | 0.09 |

(continued)

## TR Table C.1 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared wtih individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.2**

**Year-by-Year Levels and Impacts for Math Scores At or Above Grade Level for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| At or above grade level (%) | 9.6 | 9.2 | -0.4 | 11.2 | 11.9 | 0.7 | -1.1 | -0.05 |
| School H | | | | | | | | |
| At or above grade level (%) | 8.7 | 10.0 | 1.3 | 6.0 | 6.0 | -0.1 | 1.4 | 0.06 |
| School I | | | | | | | | |
| At or above grade level (%) | 5.1 | 9.4 | 4.3 | 4.2 | 3.7 | -0.5 | 4.8 | 0.22 |
| School J | | | | | | | | |
| At or above grade level (%) | 7.3 | 10.7 | 3.3 | 6.1 | 3.7 | -2.4 | 5.7 | 0.26 |
| School K | | | | | | | | |
| At or above grade level (%) | 6.8 | 5.4 | -1.4 | 8.2 | 7.7 | -0.5 | -0.9 | -0.04 |
| All later-implementing schools | | | | | | | | |
| At or above grade level (%) | 7.5 | 8.9 | 1.4 | 7.1 | 6.6 | -0.5 | 2.0 | 0.09 |

(continued)

## TR Table C.2 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.3**

**Year-by-Year Levels and Impacts for Math Scores in the Bottom Quartile for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Impact Effect Size |
| School G | | | | | | | | |
| In the bottom quartile (%) | 72.5 | 67.4 | -5.1 | 64.3 | 58.9 | -5.4 | 0.3 | 0.01 |
| School H | | | | | | | | |
| In the bottom quartile (%) | 68.8 | 65.7 | -3.0 | 77.5 | 72.9 | -4.6 * | 1.6 | 0.04 |
| School I | | | | | | | | |
| In the bottom quartile (%) | 76.1 | 56.8 | -19.3 *** | 80.9 | 76.3 | -4.6 ** | -14.7 ** | -0.37 ** |
| School J | | | | | | | | |
| In the bottom quartile (%) | 73.0 | 72.8 | -0.2 | 77.4 | 80.1 | 2.7 | -2.9 | -0.07 |
| School K | | | | | | | | |
| In the bottom quartile (%) | 76.1 | 72.3 | -3.8 | 71.6 | 68.9 | -2.6 | -1.2 | -0.03 |
| All later-implementing schools | | | | | | | | |
| In the bottom quartile (%) | 73.3 | 67.0 | -6.3 ** | 74.3 | 71.4 | -2.9 ** | -3.4 | -0.09 |

(continued)

## TR Table C.3 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.4**

**Year-by-Year Levels and Impacts for Reading NCE Scores for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| 8th-grade average NCE | 29.4 | 30.4 | 1.0 | 31.7 | 34.0 | 2.4 ** | -1.4 | -0.09 |
| School H | | | | | | | | |
| 8th-grade average NCE | 25.1 | 27.3 | 2.3 | 27.6 | 30.9 | 3.3 *** | -1.0 | -0.06 |
| School I | | | | | | | | |
| 8th-grade average NCE | 26.0 | 30.7 | 4.7 | 26.0 | 30.6 | 4.7 *** | 0.0 | 0.00 |
| School J | | | | | | | | |
| 8th-grade average NCE | 28.6 | 35.3 | 6.6 ** | 26.6 | 25.5 | -1.1 | 7.7 ** | 0.48 ** |
| School K | | | | | | | | |
| 8th-grade average NCE | 30.4 | 30.6 | 0.2 | 29.8 | 31.7 | 1.9 ** | -1.7 | -0.11 |
| All later-implementing schools | | | | | | | | |
| 8th-grade average NCE | 27.9 | 30.9 | 2.9 *** | 28.3 | 30.5 | 2.2 *** | 0.7 | 0.05 |

(continued)

## TR Table C.4 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.5**

**Year-by-Year Levels and Impacts for Reading Scores At or Above Grade Level for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| At or above grade level (%) | 9.0 | 5.8 | -3.3 | 12.9 | 11.6 | -1.4 | -1.9 | -0.07 |
| School H | | | | | | | | |
| At or above grade level (%) | 5.0 | 4.8 | -0.2 | 7.8 | 7.9 | 0.1 | -0.3 | -0.01 |
| School I | | | | | | | | |
| At or above grade level (%) | 6.0 | 9.3 | 3.3 | 6.3 | 6.5 | 0.2 | 3.1 | 0.11 |
| School J | | | | | | | | |
| At or above grade level (%) | 11.2 | 13.5 | 2.3 | 6.1 | 3.9 | -2.2 | 4.5 | 0.16 |
| School K | | | | | | | | |
| At or above grade level (%) | 10.7 | 9.3 | -1.4 | 10.0 | 9.2 | -0.8 | -0.6 | -0.02 |
| All later-implementing schools | | | | | | | | |
| At or above grade level (%) | 8.4 | 8.5 | 0.1 | 8.6 | 7.8 | -0.8 | 1.0 | 0.03 |

(continued)

## TR Table C.5 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.6**

**Year-by-Year Levels and Impacts for Reading Scores in the Bottom Quartile for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| In | 69.3 | 67.6 | -1.7 | 65.2 | 58.7 | -6.4 * | 4.7 | 0.10 |
| School H | | | | | | | | |
| In the bottom quartile (%) | 78.0 | 78.6 | 0.6 | 74.2 | 68.5 | -5.7 ** | 6.3 | 0.14 |
| School I | | | | | | | | |
| In the bottom quartile (%) | 76.3 | 69.4 | -7.0 | 77.6 | 68.5 | -9.1 *** | 2.2 | 0.05 |
| School J | | | | | | | | |
| In the bottom quartile (%) | 72.5 | 54.0 | -18.4 ** | 73.8 | 80.2 | 6.4 | -24.8 ** | -0.54 ** |
| School K | | | | | | | | |
| In the bottom quartile (%) | 68.2 | 70.1 | 1.8 | 69.6 | 65.6 | -4.0 | 5.8 | 0.13 |
| All later-implementing schools | | | | | | | | |
| In the bottom quartile (%) | 72.9 | 67.9 | -4.9 * | 72.1 | 68.3 | -3.8 *** | -1.2 | -0.03 |

(continued)

**TR Table C.6 (continued)**

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.7**

**Year-by-Year Levels and Impacts for Attendance Rate for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| 8th-grade attendance rate (%) | 88.1 | 88.5 | 0.4 | 86.5 | 87.7 | 1.3 | -0.9 | -0.03 |
| School H | | | | | | | | |
| 8th-grade attendance rate (%) | 84.7 | 86.0 | 1.3 | 85.7 | 85.2 | -0.5 | 1.8 | 0.06 |
| School I | | | | | | | | |
| 8th-grade attendance rate (%) | 81.7 | 82.4 | 0.7 | 85.4 | 85.1 | -0.3 | 1.0 | 0.03 |
| School J | | | | | | | | |
| 8th-grade attendance rate (%) | 82.3 | 84.2 | 1.9 | 83.9 | 81.6 | -2.3 | 4.3 * | 0.14 * |
| School K | | | | | | | | |
| 8th-grade attendance rate (%) | 86.2 | 85.4 | -0.7 | 86.5 | 86.6 | 0.2 | -0.9 | -0.03 |
| All later-implementing schools | | | | | | | | |
| 8th-grade attendance rate (%) | 84.6 | 85.3 | 0.7 | 85.6 | 85.3 | -0.3 | 1.1 | 0.04 |

(continued)

## TR Table C.7 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.8**

**Year-by-Year Levels and Impacts for Attendance of 90 Percent or Higher for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Impact Effect Size |
| School G | | | | | | | | |
| Attendance rate of 90% or higher (%) | 59.7 | 64.1 | 4.4 | 53.9 | 58.4 | 4.5 | -0.1 | 0.00 |
| School H | | | | | | | | |
| Attendance rate of 90% or higher (%) | 47.3 | 48.1 | 0.8 | 50.8 | 49.7 | -1.0 | 1.8 | 0.04 |
| School I | | | | | | | | |
| Attendance rate of 90% or higher (%) | 35.1 | 43.5 | 8.4 | 50.4 | 49.8 | -0.6 | 9.0 | 0.18 |
| School J | | | | | | | | |
| Attendance rate of 90% or higher (%) | 41.3 | 46.9 | 5.6 | 40.9 | 38.9 | -2.0 | 7.6 | 0.16 |
| School K | | | | | | | | |
| Attendance rate of 90% or higher (%) | 52.3 | 50.7 | -1.5 | 52.7 | 54.1 | 1.4 | -2.9 | -0.06 |
| All later-implementing schools | | | | | | | | |
| Attendance rate of 90% or higher (%) | 47.1 | 50.7 | 3.5 | 49.8 | 50.2 | 0.4 | 3.1 | 0.06 |

(continued)

## TR Table C.8 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.9**

**Year-by-Year Levels and Impacts for Attendance Rates Less Than or Equal to 80 Percent for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| Attendance rate of 80% or lower (%) | 20.3 | 18.9 | -1.4 | 23.2 | 21.9 | -1.3 | -0.2 | 0.00 |
| School H | | | | | | | | |
| Attendance rate of 80% or lower (%) | 29.1 | 24.5 | -4.6 | 24.4 | 26.0 | 1.5 | -6.2 | -0.13 |
| School I | | | | | | | | |
| Attendance rate of 80% or lower (%) | 37.9 | 30.8 | -7.2 | 25.0 | 26.5 | 1.5 | -8.7 | -0.18 |
| School J | | | | | | | | |
| Attendance rate of 80% or lower (%) | 33.9 | 28.0 | -5.9 | 29.5 | 31.3 | 1.8 | -7.7 | -0.16 |
| School K | | | | | | | | |
| Attendance rate of 80% or lower (%) | 24.0 | 24.0 | -0.1 | 23.0 | 22.8 | -0.2 | 0.2 | 0.00 |
| All later-implementing schools | | | | | | | | |
| Attendance rate of 80% or lower (%) | 29.1 | 25.2 | -3.8 * | 25.0 | 25.7 | 0.7 | -4.5 ** | -0.09 ** |

(continued)

## TR Table C.9 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table C.10**

**Year-by-Year Levels and Impacts for One-Year Promotion Rates for Eighth-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| Promoted to 9th grade | 95.9 | 94.8 | -1.1 | 97.3 | 98.6 | 1.4 | -2.4 | -0.10 |
| School H | | | | | | | | |
| Promoted to 9th grade | 99.1 | 97.8 | -1.2 | 97.8 | 97.6 | -0.2 | -1.1 | -0.05 |
| School I | | | | | | | | |
| Promoted to 9th grade | 98.8 | 99.3 | 0.6 | 98.1 | 97.0 | -1.2 | 1.7 | 0.07 |
| School J | | | | | | | | |
| Promoted to 9th grade | 92.3 | 101.8 | 9.5 | 96.2 | 89.8 | -6.5 | 15.9 * | 0.68 * |
| School K | | | | | | | | |
| Promoted to 9th grade | 98.7 | 94.6 | -4.0 * | 97.5 | 98.4 | 0.9 | -5.0 ** | -0.21 ** |
| All later-implementing schools | | | | | | | | |
| Promoted to 9th grade | 96.9 | 97.7 | 0.7 | 97.4 | 96.3 | -1.1 | 1.8 | 0.08 |

(continued)

## TR Table C.10 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 8th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 8th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**Unit 2d**

# Expanded Tables for Seventh-Grade Students in Later-Implementing Schools

**The Talent Development Evaluation**

**TR Table D.1**

**Year-by-Year Levels and Impacts for SAT-9 Math Total NCE Scores for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| 7th-grade average NCE | 37.8 | 39.8 | 2.0 | 36.8 | 41.1 | 4.3 ** | -2.3 | -0.16 |
| School H | | | | | | | | |
| 7th-grade average NCE | 33.9 | 42.0 | 8.1 ** | 32.8 | 35.2 | 2.4 ** | 5.6 | 0.39 |
| School I | | | | | | | | |
| 7th-grade average NCE | 31.5 | 37.0 | 5.6 * | 31.0 | 33.3 | 2.4 * | 3.2 | 0.22 |
| School J | | | | | | | | |
| 7th-grade average NCE | 36.4 | 39.3 | 2.9 | 33.6 | 37.0 | 3.4 | -0.5 | -0.04 |
| School K | | | | | | | | |
| 7th-grade average NCE | 34.6 | 35.2 | 0.6 | 34.9 | 37.1 | 2.3 * | -1.6 | -0.11 |
| All later-implementing schools | | | | | | | | |
| 7th-grade average NCE | 34.8 | 38.7 | 3.8 ** | 33.8 | 36.8 | 3.0 *** | 0.9 | 0.06 |

(continued)

**TR Table D.1 (continued)**

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.2**

**Year-by-Year Levels and Impacts for SAT-9 Math Total Scores At or Above Grade Level for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Impact Effect Size |
| School G | | | | | | | | |
| At or above grade level (%) | 19.1 | 21.2 | 2.1 | 19.2 | 27.0 | 7.8 * | -5.7 | -0.18 |
| School H | | | | | | | | |
| At or above grade level (%) | 12.0 | 28.9 | 16.9 * | 11.0 | 13.6 | 2.6 | 14.3 | 0.44 |
| School I | | | | | | | | |
| At or above grade level (%) | 8.7 | 15.0 | 6.3 | 8.7 | 8.5 | -0.1 | 6.4 | 0.20 |
| School J | | | | | | | | |
| At or above grade level (%) | 16.5 | 18.9 | 2.4 | 11.6 | 13.9 | 2.3 | 0.2 | 0.00 |
| School K | | | | | | | | |
| At or above grade level (%) | 14.7 | 13.9 | -0.8 | 14.8 | 18.4 | 3.5 | -4.3 | -0.13 |
| All later-implementing schools | | | | | | | | |
| At or above grade level (%) | 14.2 | 19.6 | 5.4 | 13.1 | 16.3 | 3.2 * | 2.2 | 0.07 |

(continued)

## TR Table D.2 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.3**

**Year-by-Year Levels and Impacts for SAT-9 Math Total Scores in the Bottom Quartile for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| In the bottom quartile (%) | 50.1 | 44.7 | -5.3 | 53.0 | 41.2 | -11.8 ** | 6.5 | 0.14 |
| School H | | | | | | | | |
| In the bottom quartile (%) | 63.3 | 40.9 | -22.3 * | 64.5 | 60.1 | -4.5 | -17.9 | -0.38 |
| School I | | | | | | | | |
| In the bottom quartile (%) | 67.8 | 54.2 | -13.6 | 69.2 | 66.7 | -2.5 | -11.1 | -0.23 |
| School J | | | | | | | | |
| In the bottom quartile (%) | 53.3 | 42.0 | -11.3 | 62.4 | 52.1 | -10.3 | -1.0 | -0.02 |
| School K | | | | | | | | |
| In the bottom quartile (%) | 57.9 | 56.8 | -1.2 | 58.5 | 53.0 | -5.6 | 4.4 | 0.09 |
| All later-implementing schools | | | | | | | | |
| In the bottom quartile (%) | 58.5 | 47.7 | -10.8 ** | 61.5 | 54.6 | -6.9 *** | -3.8 | -0.08 |

(continued)

**TR Table D.3 (continued)**

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.4**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving NCE Scores for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| 7th-grade average NCE | 38.5 | 40.7 | 2.2 | 37.3 | 41.5 | 4.2 ** | -2.0 | -0.13 |
| School H | | | | | | | | |
| 7th-grade average NCE | 33.6 | 41.7 | 8.1 ** | 33.2 | 35.8 | 2.6 ** | 5.4 | 0.36 |
| School I | | | | | | | | |
| 7th-grade average NCE | 31.7 | 38.7 | 7.0 ** | 31.5 | 33.6 | 2.1 | 4.9 | 0.32 |
| School J | | | | | | | | |
| 7th-grade average NCE | 36.6 | 39.8 | 3.2 | 35.4 | 32.1 | -3.4 | 6.6 * | 0.43 * |
| School K | | | | | | | | |
| 7th-grade average NCE | 33.7 | 36.4 | 2.7 | 35.2 | 37.6 | 2.4 ** | 0.3 | 0.02 |
| All later-implementing schools | | | | | | | | |
| 7th-grade average NCE | 34.8 | 39.5 | 4.6 *** | 34.5 | 36.1 | 1.6 ** | 3.0 * | 0.20 * |

(continued)

## TR Table D.4 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.5**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving Scores At or Above Grade Level for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| At or above grade level (%) | 22.1 | 22.1 | 0.0 | 20.1 | 29.2 | 9.2 ** | -9.2 | -0.29 |
| School H | | | | | | | | |
| At or above grade level (%) | 11.6 | 26.9 | 15.3 * | 11.6 | 16.0 | 4.4 * | 11.0 | 0.34 |
| School I | | | | | | | | |
| At or above grade level (%) | 10.3 | 18.6 | 8.3 | 9.4 | 10.7 | 1.3 | 7.0 | 0.22 |
| School J | | | | | | | | |
| At or above grade level (%) | 17.5 | 21.1 | 3.6 | 15.4 | 8.7 | -6.7 | 10.3 | 0.32 |
| School K | | | | | | | | |
| At or above grade level (%) | 14.0 | 17.8 | 3.8 | 15.5 | 20.3 | 4.9 * | -1.1 | -0.03 |
| All later-implementing schools | | | | | | | | |
| At or above grade level (%) | 15.1 | 21.3 | 6.2 * | 14.4 | 17.0 | 2.6 | 3.6 | 0.11 |

(continued)

## TR Table D.5 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.6**

**Year-by-Year Levels and Impacts for SAT-9 Math Problem Solving Scores in the Bottom Quartile for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| In the bottom quartile (%) | 48.0 | 37.9 | -10.1 | 51.4 | 41.4 | -10.0 ** | -0.1 | 0.00 |
| School H | | | | | | | | |
| In the bottom quartile (%) | 65.5 | 38.6 | -26.9 ** | 62.7 | 55.8 | -6.9 ** | -20.0 * | -0.42 * |
| School I | | | | | | | | |
| In the bottom quartile (%) | 65.9 | 45.3 | -20.6 ** | 67.0 | 62.1 | -4.9 | -15.7 | -0.33 |
| School J | | | | | | | | |
| In the bottom quartile (%) | 53.4 | 41.6 | -11.8 | 55.8 | 67.5 | 11.7 * | -23.5 ** | -0.50 ** |
| School K | | | | | | | | |
| In the bottom quartile (%) | 57.9 | 53.2 | -4.8 | 57.2 | 51.2 | -6.0 ** | 1.2 | 0.03 |
| All later-implementing schools | | | | | | | | |
| In the bottom quartile (%) | 58.1 | 43.3 | -14.8 *** | 58.8 | 55.6 | -3.2 ** | -11.6 *** | 3.25 *** |

(continued)

## TR Table D.6 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.7**

**Year-by-Year Levels and Impacts for SAT-9 Reading NCE Scores for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| 7th-grade average NCE | 39.3 | 42.3 | 3.0 | 39.0 | 42.7 | 3.8 ** | -0.8 | -0.05 |
| School H | | | | | | | | |
| 7th-grade average NCE | 31.1 | 41.4 | 10.2 *** | 34.9 | 37.7 | 2.8 *** | 7.4 ** | 0.43 ** |
| School I | | | | | | | | |
| 7th-grade average NCE | 33.7 | 41.1 | 7.3 ** | 34.4 | 35.9 | 1.5 | 5.8 * | 0.34 * |
| School J | | | | | | | | |
| 7th-grade average NCE | 38.0 | 38.6 | 0.6 | 35.5 | 32.3 | -3.2 | 3.8 | 0.22 |
| School K | | | | | | | | |
| 7th-grade average NCE | 36.5 | 38.5 | 2.0 | 36.5 | 39.9 | 3.4 *** | -1.4 | -0.08 |
| All later-implementing schools | | | | | | | | |
| 7th-grade average NCE | 35.7 | 40.4 | 4.6 *** | 36.0 | 37.7 | 1.7 ** | 3.0 * | 0.17 * |

(continued)

## TR Table D.7 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.8**

**Year-by-Year Levels and Impacts for SAT-9 Reading Scores At or Above Grade Level for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| At or above grade level (%) | 26.8 | 25.0 | -1.8 | 26.9 | 29.7 | 2.8 | -4.5 | -0.11 |
| School H | | | | | | | | |
| At or above grade level (%) | 14.2 | 30.5 | 16.3 ** | 18.8 | 20.2 | 1.5 | 14.8 * | 0.37 * |
| School I | | | | | | | | |
| At or above grade level (%) | 14.9 | 26.1 | 11.2 ** | 18.0 | 16.2 | -1.9 | 13.1 ** | 0.33 ** |
| School J | | | | | | | | |
| At or above grade level (%) | 25.4 | 27.3 | 1.9 | 20.2 | 8.3 | -11.9 * | 13.8 | 0.35 |
| School K | | | | | | | | |
| At or above grade level (%) | 21.3 | 14.8 | -6.5 | 21.8 | 24.2 | 2.4 | -8.9 | -0.23 |
| All later-implementing schools | | | | | | | | |
| At or above grade level (%) | 20.5 | 24.7 | 4.2 | 21.1 | 19.7 | -1.4 | 5.6 | 0.14 |

(continued)

## TR Table D.8 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.9**

**Year-by-Year Levels and Impacts for SAT-9 Reading Scores in the Bottom Quartile for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| In the bottom quartile (%) | 42.4 | 37.1 | -5.3 | 43.8 | 37.2 | -6.6 | 1.3 | 0.03 |
| School H | | | | | | | | |
| In the bottom quartile (%) | 62.5 | 46.1 | -16.4 * | 55.0 | 49.3 | -5.7 ** | -10.7 | -0.22 |
| School I | | | | | | | | |
| In the bottom quartile (%) | 57.9 | 37.6 | -20.3 ** | 55.9 | 54.5 | -1.4 | -18.9 ** | -0.38 ** |
| School J | | | | | | | | |
| In the bottom quartile (%) | 44.7 | 44.0 | -0.7 | 51.3 | 62.0 | 10.7 | -11.3 | -0.23 |
| School K | | | | | | | | |
| In the bottom quartile (%) | 51.8 | 41.4 | -10.4 | 50.5 | 43.7 | -6.7 ** | -3.7 | -0.07 |
| All later-implementing schools | | | | | | | | |
| In the bottom quartile (%) | 51.9 | 41.2 | -10.6 *** | 51.3 | 49.4 | -2.0 | -8.7 * | -0.17 * |

(continued)

## TR Table D.9 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.10**

**Year-by-Year Levels and Impacts for Attendance Rate for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Impact Effect Size |
| School G | | | | | | | | |
| 7th-grade attendance rate (%) | 88.6 | 87.6 | -1.0 | 86.9 | 87.0 | 0.1 | -1.1 | -0.04 |
| School H | | | | | | | | |
| 7th-grade attendance rate (%) | 85.0 | 86.9 | 1.9 | 85.4 | 85.1 | -0.3 | 2.2 | 0.07 |
| School I | | | | | | | | |
| 7th-grade attendance rate (%) | 83.2 | 83.2 | 0.0 | 85.0 | 84.5 | -0.5 | 0.4 | 0.01 |
| School J | | | | | | | | |
| 7th-grade attendance rate (%) | 83.0 | 81.8 | -1.2 | 84.3 | 85.4 | 1.2 | -2.4 | -0.08 |
| School K | | | | | | | | |
| 7th-grade attendance rate (%) | 85.6 | 85.7 | 0.1 | 86.5 | 86.4 | -0.1 | 0.2 | 0.01 |
| All later-implementing schools | | | | | | | | |
| 7th-grade attendance rate (%) | 85.1 | 85.0 | -0.1 | 85.6 | 85.7 | 0.1 | -0.1 | 0.00 |

(continued)

## TR Table D.10 (continued)

SOURCE: MDRC calculations from individual students' school records from a large, urban school district.

NOTES: Sample includes 7th-grade students from 5 Talent Development middle schools and 18 non-Talent Development middle schools. The analysis sample includes students not designated as ESOL or special education for whom a test score record is available or who were enrolled for at least 145 days during a given school year.

Each school cluster consists of a Talent Development school matched with a group of 1 to 12 non-Talent Development schools. Some non-Talent Development schools were counted in more than one cluster.

Numbers in the "Baseline" columns reflect averages over a three-year period prior to the initial implementation of Talent Development for a given school cluster.

Numbers in the "Year 1" columns reflect averages for the first year of Talent Development implementation.

Numbers in the "Difference" columns reflect the difference in deviations from the baseline average and the average in Year 1.

The impacts for Year 1 were calculated as the difference in deviations from baseline average between Talent Development schools and non-Talent Development schools.

The impact effect size was calculated by dividing the impact by the standard deviation of the outcome for all 7th-grade students in the 11 Talent Development schools and the 18 non-Talent Development comparison schools from school years 1995-1996 through 1996-1997.

Estimates are regression-adjusted using ordinary least squares, controlling for 4th-grade math and reading SAT-9 test scores, race, and whether a student had repeated a prior grade.

A two-tailed t-test was applied to the deviations from baseline for Talent Development and non-Talent Development comparison schools, and to the impact estimates. Standard errors and statistical significance levels are adjusted to account for cohort effects. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent. Statistical significance, which in part depends on sample size, may be achieved with deviations of a smaller magnitude for non-Talent Development school estimates, which represent the average of several schools, as compared with individual Talent Development school estimates.

**The Talent Development Evaluation**

**TR Table D.11**

**Year-by-Year Levels and Impacts for Attendance Rates Greater Than or Equal to 90 Percent for Seventh-Grade Students in Later-Implementing Talent Development Schools and Their Comparison Schools, One-Year Follow-Up Results, by School Cluster**

| | Talent Development Schools | | | Non-Talent Development Schools | | | | Impact |
|---|---|---|---|---|---|---|---|---|
| School Cluster | Baseline | Year 1 | Difference | Baseline | Year 1 | Difference | Impact | Effect Size |
| School G | | | | | | | | |
| Attendance rate of 90% or higher (%) | 58.4 | 58.7 | 0.3 | 53.7 | 53.4 | -0.2 | 0.5 | 0.01 |
| School H | | | | | | | | |
| Attendance rate of 90% or higher (%) | 44.2 | 56.3 | 12.1 * | 47.7 | 46.1 | -1.6 | 13.7 * | 0.28 * |
| School I | | | | | | | | |
| Attendance rate of 90% or higher (%) | 41.0 | 43.3 | 2.3 | 46.3 | 44.0 | -2.3 | 4.6 | 0.09 |
| School J | | | | | | | | |
| Attendance rate of 90% or higher (%) | 38.3 | 28.9 | -9.5 | 38.8 | 49.8 | 11.0 * | -20.4 ** | -0.41 ** |
| School K | | | | | | | | |
| Attendance rate of 90% or higher (%) | 45.8 | 51.4 | 5.6 | 51.5 | 50.5 | -0.9 | 6.5 | 0.13 |
| All later-implementing schools | | | | | | | | |
| Attendance rate of 90% or higher (%) | 45.6 | 47.7 | 2.2 | 47.6 | 48.8 | 1.2 | 1.0 | 0.02 |

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