

The Talent Development High School Model Context, Components, and Initial Impacts on Ninth-Grade Students' Engagement and Performance

James J. Kemple, Corinne M. Herlihy

Executive Summary

In many large, nonselective, urban high schools, less than half the students who enter the ninth grade graduate, and those who do often leave with weak academic skills and inadequate preparation for further education or the workforce. One of the factors creating such conditions is the quality of schooling that occurs in lower grades: The elementary and middle schools that feed into nonselective, urban high schools are not equipping their students with the reading, writing, mathematics, and study skills they need to succeed. As a result, ninth-graders experience high rates of course failure, and as many as half are not promoted on time to the tenth grade. Students retained in the ninth grade are much more likely to drop out of high school eventually.

The Talent Development High School model is a comprehensive reform initiative designed to help transform the structure and curriculum of large high schools in urban districts, with the aim of improving students' levels of achievement and raising teachers' and students' expectations. Talent Development was created by practitioners and researchers at the Center for Research on the Education of Students Placed At Risk (CRESPAR), based at The Johns Hopkins University; the model operates in 33 schools nationwide. MDRC is conducting an independent, third-party evaluation of Talent Development, funded by the U.S. Department of Education's Institute for Education Sciences through CRESPAR. The evaluation and CRESPAR's efforts to expand the use of Talent Development are part of the U.S. Department of Education's Comprehensive School Reform Demonstration (CSR/D) program.

This report examines 5 large, nonselective, comprehensive high schools that implemented Talent Development in a northeastern, urban school district that includes 22 such high schools.¹ The district is the locus of Talent Development's initial and most extensive scaling-up effort. As a whole, it is considering a broad high school reform initiative based on the model's underlying principles, and just since the beginning of this evaluation, two more of its high schools have begun implementing the model.

The report describes the context in which the Talent Development high schools in the district operate, explains the model's core components, and examines the initial implementation

¹In order to preserve the anonymity of the subjects in this study, this report refers to the participating school district as "the district."

of those components in the district. Its main focus is an assessment of Talent Development's impact on ninth-grade students in the five implementing high schools during the first three years of program operation (1998-1999, 1999-2000, 2000-2001). The findings provide information about the effectiveness of an early but intensive phase of Talent Development's expansion and offer lessons about the potential of the ongoing work of Talent Development and related reform efforts.

Key Implementation Findings

With many of its schools exhibiting low student achievement and high dropout rates, the district has a great need for high school reform. At the same time, because it is subject to a shifting policy environment, leadership changes at the district and school levels, and high rates of teacher turnover, the district represents a challenging context for implementing and sustaining positive change.

The high schools in the district face a number of specific challenges. Together, these add up to one of the most troubling problems confronting large, urban high schools: the degree to which students become disengaged and eventually drop out. While this process typically begins before students reach high school, its devastating effects are concentrated in the ninth-grade.

- **The nonselective high schools in the district are characterized by low student engagement, poor prior preparation among entering ninth-graders, low ninth-grade promotion rates, and continued problems in the upper grades.**

More than 75 percent of the students in the district's nonselective schools entered the ninth grade with reading and math skills below grade level, and over 50 percent could be considered chronic absentees (students with attendance rates of 80 percent or lower). Moreover, fewer than two-thirds of the students who entered the ninth grade during the three school years before Talent Development's implementation in the district were promoted to the tenth grade for the following school year. Less than 40 percent were on schedule to graduate four years after starting high school. For those who continued on to the upper grades, only about 10 percent performed at or above grade level on state standardized tests.

- **Talent Development's initial scaling-up effort in the district focused on establishing and refining the ninth-grade components of the model.**

For the schools in the study, early implementation focused primarily on the ninth grade. During the first year of implementation, each of the five schools created a Ninth Grade Success Academy. Within each Success Academy are self-contained teams that are composed of at least 4 teachers from several disciplines and 150-200 ninth-grade students. The teacher teams have common daily planning time, and students share several classes with the same peers.

Also, during the first implementation year, the schools established extended-length class periods for the ninth-grade to facilitate the provision of a double mathematics courseload and a double reading/English courseload. These double-load courses are part of a standards-based curriculum that was put into place for ninth-graders and that calls for a strategic reading class followed by an English class, a transitional math class followed by algebra 1, and a study and life-skills class. In addition, implementation of the model included providing professional development for ninth-grade teachers, such as coaching, team-teaching, and regular seminars. Finally, the Talent Development model includes an after-hours program called Twilight School for students with serious attendance and discipline problems that constitute barriers to enrollment in the regular school program.

Even though the initial focus of Talent Development in the district was on the ninth grade, CRESPAR is creating new curricula (including, for example, double courseloads of geometry and English) and professional development opportunities for teachers in the upper grades. Moreover, each of the Talent Development schools has established career-themed small learning communities for grades 10 through 12.

Full implementation of the Talent Development High School model includes:

- Reorganizing schools into small learning communities, including a Ninth Grade Success Academy, Career Academies for the upper grades, and an after-hours Twilight School.
- Instituting a research-based curriculum designed to move all students toward advanced high school work in English and mathematics.
- Offering recovery opportunities and extra help for students who need it.
- Providing professional development opportunities for teachers and administrators to support implementation of the recommended reforms.
- Creating parent- and community-involvement activities that encourage students' career and college development.

A key feature of the implementation process for Talent Development is the support provided to each school by an on-site organizational facilitator and a team of coaches who work daily with school leaders to support implementation of the model. In addition, a team of Talent Development curriculum developers and trainers are in frequent contact with the school-based facilitators and with key members of the school's leadership and instructional teams. According to CRESPAR, implementation costs may range from \$250 to \$300 per student per year, which includes materials, technical assistance, and salaries for curriculum coaches and a full-time program facilitator. Funding for these expenses typically comes from federal CSRD grants, local school districts, and national or community-based foundations.

As of the 2001-2002 school year, the last year for which student data are available for this report, none of the five schools in the study had reached full implementation. Two of the schools had implemented Talent Development for three years, one school had implemented it for two years, and two schools were in their first year of implementation.

Analytic Approach

There are few rigorous studies of the effectiveness of comprehensive high school reform interventions. Because such reforms affect an entire school, a great challenge in evaluating their impact lies in comparing the performance of students in intervention schools with that of similar students in similar schools. In the parlance of evaluation research, rigorous impact studies need to rely on a valid counterfactual to estimate what would have occurred in the absence of the intervention being studied. The evaluation described in this report breaks new ground by using a combination of particularly strong quasi-experimental evaluation methods: interrupted time series analysis, value-added analysis, and hierarchical linear modeling. The evaluation builds on the strengths of each method to address the limitations that any one might have alone.

The interrupted time series analysis compares student performance in Talent Development schools with the performance of similar students in the same schools prior to Talent Development implementation. The value-added analysis compares the historical patterns (and deviations from these patterns) for the Talent Development schools with those of similar non-Talent Development schools during the same period to account for other factors in the broader school district that may influence student performance. Together these analytic approaches, combined with hierarchical linear modeling and statistical controls for individual-level differences in student characteristics, provide a rigorous basis on which to make causal inferences about the effects of Talent Development on student performance. It should be noted, however, that even this combination of approaches may not control for all factors that may confound such inferences. For example, the analytic approach may not account for the school leadership's motivation to undertake a school change process and the influence that that may have had on both school functioning and student achievement, even without the Talent Development components and supports.

Key Impact Findings

The impact analysis in this report focuses on outcomes for first-time ninth-graders — those whose records indicated that they were in the ninth grade in the spring of the year under study and in the eighth grade the previous spring. This group made up the majority of the ninth-grade class at each school in the study. Repeating ninth-graders (who were in the ninth grade in the spring of the year under study and in the ninth grade the previous spring) made up another segment of each ninth-grade class, but a primary goal of Talent Development is on-time promotion from the ninth grade to the tenth; the model therefore specifically targets students

entering the ninth grade for the first time. Although the model also makes an effort to promote repeating ninth-graders midyear, available data did not permit a thorough investigation of impacts for students repeating the ninth grade.

- **For first-time ninth-grade students, Talent Development produced substantial gains in academic course credits earned and promotion rates and modest improvements in attendance.**

Figure ES-1 provides a summary of the key impact findings. The solid bars represent the changes in key outcomes for the Talent Development schools between the baseline period and the follow-up period. The white bars represent changes in key outcomes for the comparison schools during the same period. The difference between the two bars represents the impact of Talent Development.

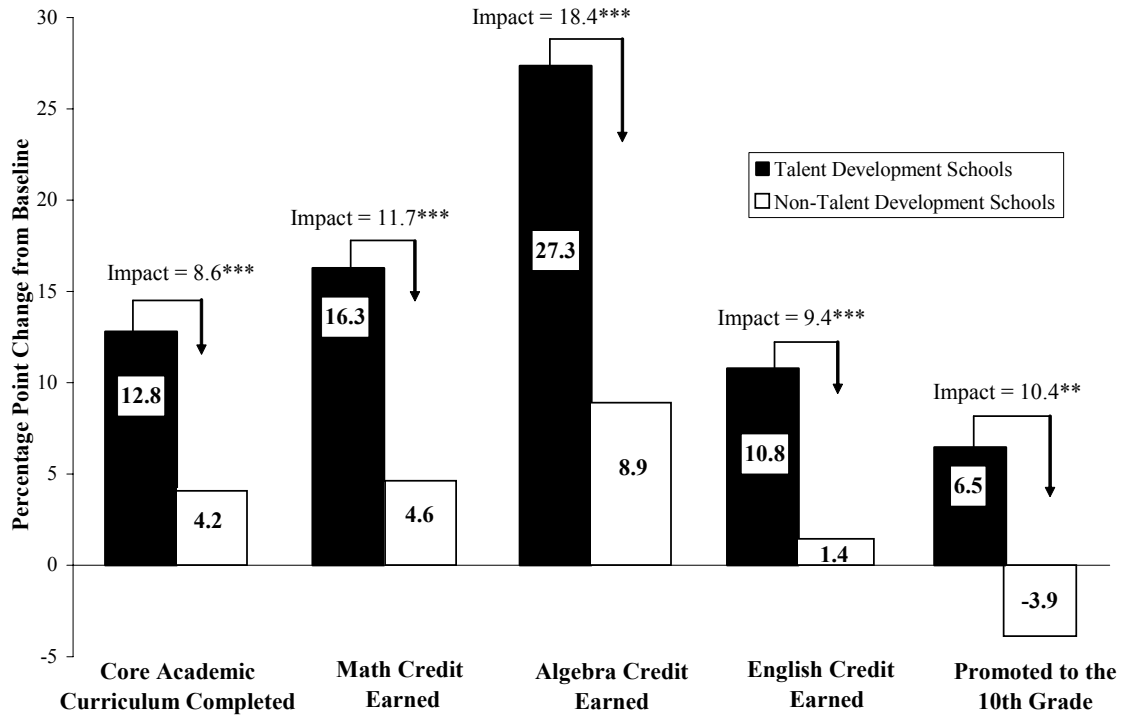
A major goal for Talent Development is to get ninth-grade students to complete what could be considered a core academic curriculum: earning at least five credits during the school year, with three of those credits being in mathematics, English, and science. On average, in Talent Development schools, about 43 percent of first-time ninth-graders completed a core academic curriculum before the implementation of Talent Development, and an average of 56 percent completed this combination of courses during the years after the model began to be implemented. This 13 percentage point increase is represented by the first bar in Figure ES-1. By contrast, the percentage of first-time ninth-graders who completed a core academic curriculum in non-Talent Development comparison schools increased by only 4 percentage points (from 46 to 50 percent) during the same period. The 9 percentage point difference (between the 13 percentage point improvement and the 4 percentage point improvement) represents the impact of Talent Development on first-time ninth-graders completing a core academic curriculum.

Talent Development produced even larger impacts on the percentage of first-time ninth-grade students completing math courses. The program had about a 12 percentage point impact on the rate at which students completed any type of math course and about a 19 percentage point impact on the rate at which students completed an algebra course. At the same time, Talent Development had about a 9 percentage point impact on the percentage of students earning one or more English credits.

Talent Development also improved the overall rate of promotion from the ninth grade to the tenth (including both on-time promotion and midyear promotion). Promotion rates in Talent Development schools rose by 6 percentage points after the program began implementation. During the same time period, these rates fell by 4 percentage points in the comparison schools. Thus, Talent Development produced about a 10 percentage point impact on promotion from the ninth grade to the tenth. Talent Development impacts on attendance rates

Talent Development Evaluation

Figure ES.1
Impacts on Key Outcomes for First-Time Ninth-Grade Students
in Talent Development Schools and Non-Talent Development Schools



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

NOTES: Sample includes 9th-grade students from five clusters. Each cluster consisted of a Talent Development school matched with a group of between two and five non-Talent Development schools. Students in the sample were included on the district's transcript and attendance records. The sample excludes students who did not attempt at least one credit during a given school year. First-time 9th-grade students were defined as students whose records indicate that they were in the 9th grade in the year under study and in the 8th grade in the previous year's administrative data file.

Each bar represents the difference between the baseline average (the average over the three-year period prior to the initial implementation of Talent Development for a given cluster) and the average over the follow-up period (a one-, two-, or three-year period, depending on the cluster, after Talent Development was implemented). The impact at follow-up was calculated as the difference in deviations from the baseline average between Talent Development schools and non-Talent Development schools.

A two-tailed t-test was applied to the difference between the baseline average and the average over the follow-up period and to the impact at follow-up. 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.

outcomes (not shown in the figure) were more modest but still statistically significant: about a 3 percentage point impact in overall attendance rates and a 5 percentage point impact on regular attendance rates (defined as 90 percent or higher).

In summary, the analyses indicate that students in each of the five Talent Development schools exhibited strong improvements on several measures of engagement and performance over their pre-Talent Development counterparts in the same schools. By contrast, students in the comparison schools showed smaller or even negative changes during the same period. This amounts to consistent and positive Talent Development impacts in almost every follow-up year for each of the five schools. Further analyses show that the positive impacts for course credits and promotion outcomes are apparent in the very first year of Talent Development implementation. These impacts tend to be sustained for those schools for which more than one year of follow-up data is available.

- **Improvements in the ninth-grade outcomes were strongest in the first three schools to begin using the model, and these schools sustained improvements into the second and third years of implementation.**

In this study, the “pioneer” schools — the three that began using Talent Development first — implemented and sustained the model with a process and a level of intensity that set them apart from the other two schools. While positive impacts were present in the first year of implementation for all schools, the largest improvements occurred in the pioneer schools, where positive impacts were sustained into the second and third years of implementation.

Sizing Up the Results

As stated earlier, as many as half of the ninth-graders in the district do not earn sufficient course credits to be promoted on time to the tenth grade. Further analysis indicates that the district’s rates of persistence to the twelfth grade are dramatically lower for students who have repeated the ninth grade. The impacts reported here are promising because they show that Talent Development has positive and significant impacts for increasing course completion and for promotion to the tenth grade. Thus, Talent Development helps keep ninth-grade students on-track for graduation, which is one of the most important goals of current high school reform efforts. Because successful completion of the ninth grade is a necessary but not sufficient step toward earning a high school diploma, future reports will look explicitly at Talent Development’s impact on graduation rates.

Next Steps

As the evaluation moves forward, it will investigate how variation in implementation across school sites affects Talent Development’s capacity to improve student engagement and performance. Because the intended components of implementation are essentially the same at

each school, it will be critical to learn more about the extent to which the quality of implementation varies across schools and over time. As the study moves forward, the analysis will focus as much on the questions about implementation as it does on the questions about impacts.

It will be particularly important to determine whether the strong impacts are sustained in the pioneer schools and whether they also accrue to the upper grades in those schools. In addition, the generalizability of the findings will be enhanced if the same types of impacts occur eventually in the later-implementing schools. This is a key issue, as the success of later-implementing schools are an indication of Talent Development's capacity to scale-up in a large district and also to work with schools that may not have the same leadership and initiative as the "pioneer" schools who were first to embrace the reform.

Subsequent reports will also track outcomes for up to five follow-up years and will include analyses of tenth-, eleventh-, and twelfth-grade students. For some schools, where sufficient follow-up data can be collected, it will be possible to determine whether improvements in ninth-grade promotion rates translate to increased graduation rates. In addition, the evaluation will examine other measures of student achievement to support the findings related to course credits earned.