Meeting Five Critical Challenges of High School Reform

LESSONS FROM RESEARCH ON THREE REFORM MODELS

Janet Quint
May 2006

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BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY

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Overview

High school reform has moved to the top of the education policy agenda, commanding the attention of the federal government, governors, urban school superintendents, philanthropists, and the general public. All are alarmed by stubbornly high dropout rates and by the low academic achievement of many high school students. These problems disproportionately affect disadvantaged young people, especially those who are African-American and Hispanic and who attend urban schools and certain rural schools in the South and Southwest.

This is the first in a series of reports for policymakers, practitioners, and others who must make hard choices about how to change high schools. It discusses three comprehensive initiatives evaluated by MDRC — Career Academies, First Things First, and Talent Development — that have grappled with the challenges of improving low-performing urban and rural schools. Together, these three interventions are being implemented in more than 2,500 high schools across the country, and various components of these models are being used in thousands more schools.

MDRC's evaluations of these programs provide unusually strong evidence about each intervention's effects. For districts and schools interested in replicating a comprehensive school reform and benefiting from the potential synergies of components that program developers designed as an integrated package, turning to one of MDRC's reports on these models would be a good first step. This report takes a different path, however. It offers research-based lessons from across these evaluations about five major challenges associated with low-performing high schools: (1) creating a personalized and orderly learning environment, (2) assisting students who enter high school with poor academic skills, (3) improving instructional content and practice, (4) preparing students for the world beyond high school, and (5) stimulating change in overstressed high schools.

The overall message of this synthesis is that *structural changes* to improve personalization and *instructional improvement* are the twin pillars of high school reform. Small learning communities and faculty advisory systems can increase students' feelings of connectedness to their teachers. Especially in interaction with one another, extended class periods, special catch-up courses, high-quality curricula, training on these curricula, and efforts to create professional learning communities can improve student achievement. School-employer partnerships that involve career awareness activities and work internships can help students attain higher earnings after high school. Furthermore, students who enter ninth grade facing substantial academic deficits can make good progress if initiatives single them out for special support. These supports include caring teachers and special courses designed to help entering ninth-graders acquire the content knowledge and learning skills that they missed out on in earlier grades.

Whether districts and schools adopt a comprehensive reform initiative like the ones MDRC studied or put together the elements of a comprehensive intervention on their own, much has been learned about what is needed — and what seems to work. What remains is to make sure that practitioners have the support they need to put that learning into practice.

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Preface

Over the past two years, MDRC has published rigorous evaluations of three high school reform models: Career Academies, First Things First, and Talent Development. These models stand out because each one packages together into an integrated reform selected interventions designed to address key problems that plague high schools. The packages are supported by a consistent overall message, and the components are intended to fit together. The studies we have completed on each model offer promising findings about how comprehensive initiatives can make a difference in improving low-performing schools. In addition, each evaluation has examined the intervention in its totality — including all program components and the technical assistance provided by the program developers. Thus, the best evidence we have is about a model's effects as a whole; our ability to make judgments about the relative contribution of individual components is more limited. For those districts and schools interested in *launching* a comprehensive reform, looking at one of the three models that MDRC has studied would be a good place to start.

However, many districts and schools want to develop their own reform — or fill in the gaps of an existing initiative with individual program components. This report, by Janet Quint, a Senior Research Associate at MDRC, draws lessons from across these studies to address five important challenges that low-performing high schools face. It was originally prepared for a November 2005 conference hosted by MDRC, the National High School Alliance, and the Council of the Great City Schools, with the generous support of the Bill & Melinda Gates Foundation and the James Irvine Foundation. The meeting brought together education policymakers and practitioners from around the country. They, like most leaders on the front line of transforming American high schools, were hungry for evidence about interventions that work.

Meeting Five Critical Challenges of High School Reform is only the first in a series of planned reports that summarize what MDRC and others have learned from rigorous and large-scale evaluations of high school reform initiatives. Working with other researchers, we look forward to helping meet educators' need for evidence-based, practical knowledge.

Gordon L. Berlin
President

Executive Summary

High school reform has moved to the top of the education policy agenda, commanding the attention of the federal government, governors, urban school superintendents, philanthropists, and the general public. All are alarmed by stubbornly high dropout rates, by the low academic achievement of many high school students, and by the large numbers of high school graduates who are required to take remedial classes in college. These trends disproportionately affect urban and certain rural areas and minority groups: The most troubled high schools are concentrated in about 50 large cities and 15 primarily southern and southwestern states, and the majority of their students tend to be African-American or Hispanic.

This is the first in a series of reports summarizing and synthesizing what has been learned from rigorous and large-scale evaluations of high school reform initiatives. It discusses three comprehensive initiatives — Career Academies, First Things First, and Talent Development — that have grappled with the challenges of improving low-performing urban and rural schools. Together, these three interventions are being implemented in more than 2,500 high schools across the country, and various components of these models are being used in thousands more schools. This report focuses almost exclusively on MDRC research, but subsequent reports will synthesize lessons from additional studies of high school reform conducted by MDRC and others. While aiming to be useful to researchers, this series of reports is directed primarily toward policymakers, practitioners, and others who must make hard choices about how to change high schools.

Each of the three programs that MDRC studied involved multiple components. (Table ES.1 briefly describes the programs and their evaluations.) Each program, too, featured a philosophy or theory of action that linked the various components into a coherent whole that program developers believed would be more than the sum of its parts, and the developers offered considerable technical assistance about how best to put the components in place. MDRC's evaluations of these programs built on rigorous research designs using comparison or control groups, and they provide unusually strong evidence about the interventions' effects on attendance, academic achievement, persistence in school through graduation, and postsecondary education and labor market outcomes. Importantly, these impacts reflect the combined effects of *all* the components, packaged in a particular way by the programs' developers. For districts and schools interested in replicating a comprehensive school reform, turning to one of MDRC's reports on these models would be a good first step.

Some policymakers and practitioners, however, may not want to join forces with a multicomponent comprehensive school reform model like the ones that MDRC studied; instead, they seek informed advice about how to fill in the missing pieces in their current reform

Table ES.1

Key Features of the Initiatives and Their Evaluations

Career Academies

Key Program Features

- "School-within-a-school" structure
- Integrated academic and occupational curriculum
- Employer partnerships providing career awareness activities and work internships

Study Design

- **Methodology:** Random assignment of eligible and interested students either to the Career Academy in their school or to the regular high school program
- **Evaluation period:** 1993-2006 (projected)
- **Sites evaluated:** Nine Career Academies in San Jose, Santa Ana, and Watsonville, California; Washington, DC; Miami Beach, Florida; Baltimore, Maryland; Pittsburgh, Pennsylvania; and Socorro, Texas
- **Student characteristics:** Race/ethnicity: 30% African-American, 56% Hispanic; family receiving welfare or food stamps: 24%; average baseline performance on state assessments: 39% at 24th percentile or lower in math, 35% at 24th percentile or lower in reading

First Things First

Key Program Features

- Four-year, theme-based small learning communities
- Family Advocate System (faculty advisory program)
- Instructional improvement efforts

Study Design

- **Methodology:** Comparative interrupted time series analysis
- **Evaluation period:** 1999-2004
- **Sites evaluated:** Four high schools in Kansas City, Kansas; three high schools in Houston, Texas; one high school each in Greenville and Shaw, Mississippi, and in the Riverview Gardens School District, Missouri
- **Student characteristics:** Race/ethnicity: 46% African-American, 39% Hispanic; eligible for free/reduced-price lunch: 65%; average baseline performance on state assessments: 44% failing or in bottom two proficiency categories in math, 37% failing or in bottom two proficiency categories in reading

Talent Development

Key Program Features

- Ninth Grade Success Academy
- Career Academies for students in grades 10 through 12
- Extended block schedule
- Catch-up courses in reading and math for ninth-graders with low skills

Study Design

- **Methodology:** Comparative interrupted time series analysis
- **Evaluation period:** 1999-2004
- **Sites evaluated:** Five nonselective high schools in Philadelphia, Pennsylvania
- **Student characteristics:** Race/ethnicity: 75% African-American, 23% Hispanic; eligible for free/reduced-price lunch: 86%; average baseline performance on state assessments: 86% below basic level in math, 76% below basic level in reading

strategies. For them, this report takes a different path. It discusses five major challenges associated with low-performing high schools and offers lessons addressing each. Looking inside the "black box" of the three comprehensive reforms, the report seeks to draw reasoned conclusions about which particular aspects of the reforms made them effective (or, in some cases, proved ineffective). It tries to link particular outcomes to particular inputs, using available evidence from MDRC's evaluations, including analysis of student records, teacher and student surveys, and field research, along with the program developers' own theories of change, where possible. At the same time, it acknowledges that each program may be more than the sum of its components and that conclusions about particular components of the initiatives can never be as solidly grounded as conclusions about the effects of the programs as a whole. Thus, while phrases like "appears to" and "suggests that" are not completely satisfying, they remind readers that the lessons go beyond the bounds of what is known with confidence.

Because of these methodological issues, lessons in this report should be viewed as judgments, not facts. Almost all the judgments are grounded in evidence, although that evidence is thick in some cases, thinner in others. In a few instances, these lessons represent the assessments of the program developers or of researchers who have studied the programs for many years. In this Executive Summary, an effort has been made to give the reader a sense of the evidence on which each lesson is based; for further details, readers are referred to the body of the report.

Challenge 1
Creating a Personalized and Orderly Learning Environment

A positive school climate — where students and adults know each other well and where adults express care and concern for students' well-being, intellectual growth, and educational success — is a key motivational element in the learning process for adolescents. But the large size of many low-performing high schools leaves many students, especially those who are less academically successful, feeling lost and anonymous and prevents the development of an atmosphere conducive to learning. This problem may be exacerbated for ninth-graders leaving behind the more family-like environment of middle school — a critical issue because students attending low-performing schools who do not complete ninth grade successfully and on schedule are at greatly heightened risk of dropping out altogether. The MDRC studies of the three reform models suggest that changes in the structure and functioning of large high schools can help remedy the impersonality of large high schools.

- **Student survey data suggest that small learning communities — groups of students who share the same cadres of core-subject teachers — make students feel known and cared about by their teachers.** Students in First Things First schools registered higher levels of perceived support from their teachers after the demonstration was implemented than they had before it

was put in place, and Career Academy students reported higher levels of teacher support than members of a control group.

- **The experiences of First Things First in Kansas City, Kansas, and of Talent Development in Philadelphia indicate that both small learning communities that encompass all four grade levels and separate Freshman Academies followed by communities for upperclassmen can play a role in increasing attendance and reducing dropout rates.** While feeling connected to teachers and classmates is only one factor that promotes attendance and persistence, both interventions, with their different small learning community structures, had positive effects on these outcomes.

- **The separate Freshman Academy structure may have played a key role in helping more ninth-graders succeed in the critical first year of high school.** Students in Talent Development's Ninth Grade Success Academies received special attention from their teachers, and their rates of attendance and on-time promotion were higher than those of ninth-graders in comparison schools.

- **Faculty advisory systems can give students a sense that there is an adult in the school looking out for their well-being.** Almost three-quarters of First Things First students reported on surveys that their advisor was either "very important" or "sort of important" in giving them someone to talk to when needed, helping them do better on schoolwork, and recognizing their accomplishments. Training helped family advocates perform their roles more effectively.

- **Implementing small learning communities is not easy. School administrators and program operators report that scheduling classes to ensure that they contain only teachers and students within the same small learning community can present a major challenge.** This problem is especially marked for students in the upper grades, who may want to take electives offered only by communities other than the one to which they belong.

- **Implementing small learning communities is likely to improve the climate of schools but will not, in and of itself, increase student achievement. It may help to do so, but the studies do not provide conclusive evidence on this point.** All three initiatives that were studied involved small learning communities. Talent Development improved eleventh-grade math and reading test scores for students where the intervention had been in place longest (although other elements of the model undoubtedly also contributed to these results). By contrast, Career Academies had no effect on achievement, and First Things

First was effective in boosting achievement only in the first district where it was implemented and in one school in a second district.

Challenge 2
Assisting Students Who Enter High School with Poor Academic Skills

Large numbers of students enter urban high schools poorly prepared for academic success. The Ninth Grade Success Academy — the centerpiece of the Talent Development model — tackled the problem of low achievement among entering ninth-graders head-on through interconnected changes in scheduling and curricula and produced positive results for many students. The Talent Development experience suggests the following lessons:

- **A double-blocked class schedule is useful because it permits students to attempt and earn more credits per year than other scheduling arrangements.** In contrast to a traditional schedule (entailing daily 50-minute classes) or a single-blocked schedule (involving 80- or 90-minute classes meeting every other day), a double-blocked schedule calls for classes that meet daily for extended periods. Because double-blocked classes can cover in a single semester what would normally be a year's worth of material, students in Talent Development schools could earn four full course credits each term and eight credits each year, compared with the six or sometimes seven credits per year that students would receive in schools following a traditional schedule.

- **Semester-long, intensive "catch-up" courses that shore up ninth-grade students' skills in reading and mathematics appear to help students succeed in the regular curriculum, with gains in credits earned being sustained over time.** The catch-up courses in Talent Development awarded elective credits and were designed to precede and prepare students for college preparatory classes in English and algebra. (The double-blocked schedule allowed the catch-up and regular classes to be sequenced in this way.) First-time ninth-graders in the Talent Development schools were significantly more likely than their counterparts elsewhere to earn one or more credits in English and algebra. For these students, too, the intervention increased the total number of credits earned in the first three years of high school.

- **The structured curriculum of catch-up courses, combined with longer class periods, may have helped ensure that students spent more time "on task" in these classes.** More time in the classroom may not in itself be enough to improve student achievement; what appears to matter is that the extra time

be used to maximize learning. Most First Things First schools made substantial progress in implementing longer English and math class periods. However, no special curricula were in place during the period under study (a situation that First Things First has subsequently addressed), and most expansion-site schools did not register increases in student achievement.

- **Little is known about how best to assist and prevent dropping out among those students who struggle the most in ninth grade.** While Talent Development increased the rate of promotion to tenth grade, those students in Talent Development schools who were required to repeat a full year of ninth grade were more likely to drop out of high school than their counterparts in other schools. Different grouping arrangements and modes of instruction may be needed for such students.

Challenge 3
Improving Instructional Content and Practice

Teachers in schools serving disadvantaged populations are often less experienced and less knowledgeable about the subjects they teach than teachers in more affluent communities. The high school reforms that MDRC studied have addressed questions about how to improve the content and delivery of what is taught through the use of new curricula and through professional development. While only limited data are available linking instructional improvement efforts to changes in student outcomes, the experiences of the program developers and of the participating schools and teachers suggest a number of operational lessons about putting instructional improvement efforts in place.

- **It may not be realistic to expect teachers to create their own curricula reflecting the themes of their small learning communities; instead, they are likely to benefit from well-designed curricula and lesson plans that have already been developed.** First Things First's developers expected teachers to integrate the theme of their small learning communities into their classes, but teachers said that they had neither time nor training to do this, and field research observations and interviews indicate that thematic instruction was uncommon. Similarly, teachers of academic subjects in the Career Academies generally followed the standard curriculum, rather than creating lessons that reflected their Academy's occupational focus.

- **Good advance training and ongoing coaching can help teachers make better use of even well-designed curricula.** Teachers in Talent Development

schools who received training on teaching the catch-up courses reported that the training had helped them deliver their lessons more effectively.

- **There is suggestive evidence that student achievement may be enhanced by professional development activities that involve teachers working together to align curricula with standards, review assignments for rigor, and discuss ways of making classroom activities more engaging.** The expansion-site high school that the First Things First developer and researchers agreed had made the most progress in developing "professional learning communities" of teachers — who met regularly to discuss pedagogy — showed positive impacts on reading achievement.

- **Both academic departments and small learning communities should be regarded as key venues for instructional improvement.** First Things First developers initially sought to focus instructional improvement efforts on the small learning community. But they came to realize that while the small learning community is an appropriate setting for professional development directed toward improving pedagogical *methods,* teachers look to other department members as repositories of *content* expertise and, therefore, that departments should be incorporated into initiatives to improve instructional quality.

- **If administrators want teachers' meetings to focus on instructional improvement, they must both provide guidance about how to do this and follow up to ensure that meeting time is used productively.** Researchers' observations of teachers' meetings in small learning communities revealed that, without specific direction about how to spend their time together, teachers talked mostly about matters unrelated to instruction (such as discipline issues, individual students' personal or academic problems, or planned small learning community field trips or parties). When administrators issued guidelines specifying that meetings were to focus on instruction — and when they sat in on these meetings — discussion centered instead on pedagogical concerns.

Challenge 4
Preparing Students for the World Beyond High School

Students in low-performing schools need special assistance in preparing for postsecondary education and for better-paying jobs. Among the initiatives considered in this report, Career Academies are most clearly oriented toward the goal of helping students prepare for a productive future after they leave high school. Both Talent Development and First Things First seek to improve academic achievement and graduation rates — which presumably would in-

crease opportunities for students in the labor market and in postsecondary education — but neither has a strong postsecondary thrust, nor did the MDRC studies follow students beyond high school. The Career Academies study, which has the advantage of long-term follow-up, suggests the following lessons:

- **Earnings impacts for young men in Career Academies appear to be linked to career awareness activities and work internships during high school.** Young men in the Career Academies group earned over $10,000 more than members of a control group over the four-year period following their high school graduation. Participation in career awareness sessions and work internships most clearly distinguished the high school experiences of Career Academy students from those of their counterparts who were not in the Academies.

- **The potential benefits of partnerships between high schools and employers can be more fully realized when these partnerships are more structured and when schools can designate a full-time, nonteaching staff person to serve as a liaison with employers.** Students in Career Academies with more structured partnerships and with full-time liaisons reported higher levels of participation in career awareness and work-based learning activities than did students in Academies where arrangements were less formal and where liaisons also had teaching responsibilities.

- **It may be necessary to improve the academic component of Career Academies in order to raise students' achievement on standardized tests and help them secure admission to college.** Students in the Career Academies did not have higher academic achievement or graduate from high school at higher rates than their non-Academy counterparts, nor were they more likely to enroll in college or earn a credential. Field researchers found that core-subject courses in the Academies were very similar to courses in the rest of the school.

Challenge 5
Stimulating Change

Introducing change into high schools and making it stick goes beyond the discrete challenges discussed above. The following implementation lessons primarily reflect the perceptions and judgments of program developers and researchers. The lessons are likely to apply not only to ambitious and large-scale reforms like the ones studied here but also to less far-reaching efforts to introduce change into overstressed high schools.

- **Creating effective change demands an investment of personnel resources.** Whether personnel come from inside or outside a school or district, they must be skilled in designing reforms, putting them in place, and monitoring ongoing operations.

- **In deciding whether to adopt a comprehensive reform model or add new components to existing programs, school and district administrators should consider the adequacy of what is already in place and the capacity of local personnel to envision and implement change.** The fewer the reform elements already in place and the more limited the capacity of local staff, the more sense it may make for administrators to turn for assistance to the developers of comprehensive models.

- **Strong support of the initiative by the school district helps to ensure effective implementation and the reform's continuing existence.** The contrasting experiences of First Things First in Kansas City, Kansas, and of Talent Development in Philadelphia exemplify this point. In Kansas City, the central office leadership both exerted pressure on the schools to operate in conformity with First Things First guidelines and supported the schools' efforts to do so; close and consistent monitoring was a hallmark of the district's efforts. While the School District of Philadelphia initially welcomed Talent Development, it never formally endorsed the initiative or gave it support, and some of its actions (for example, the introduction of a new standardized curriculum and reductions in funding) undercut the program model.

- **It is important for policymakers and administrators to avoid jumping from one reform to the next; instead, they should stay the course until initiatives have been put in place long enough and well enough for their effectiveness to receive a fair test.** Research has shown that comprehensive reforms in place for five years or more had stronger impacts than those with briefer periods of implementation. Extended research follow-up may also be important: In the Career Academies evaluation, for instance, the initiative's substantial effects on postsecondary employment were evident four years after students' scheduled graduation from high school.

- **It is important to have high ambitions but also reasonable expectations about the size of impacts that reforms can produce.** Careful evaluations of reform efforts seldom find large and dramatic effects. But even impacts that appear to be small can nonetheless be important. For example, Talent Development's 8 percentage point effect on the rate of promotion from ninth to

tenth grade means that hundreds of freshmen in Talent Development schools did not have to repeat the year and were at much lower risk of dropping out of school altogether.

Conclusion

The larger lesson of this report may be that *structural changes to improve personalization* and *instructional improvement* are the twin pillars of high school reform. Small learning communities and faculty advisory systems can increase students' feelings of connectedness to their teachers. Especially in interaction with one another, extended class periods, special catch-up courses, high-quality curricula, training on these curricula, and efforts to create professional learning communities can improve student achievement. Furthermore, school-employer partnerships that involve career awareness activities and work internships can help students attain higher earnings after high school.

A further message is that students who enter ninth grade facing substantial academic deficits can make good progress if initiatives single them out for special support. These supports include caring teachers and special courses designed to help entering ninth-graders acquire the content knowledge and learning skills that they missed out on in earlier grades.

Whether districts and schools adopt a comprehensive reform initiative like the ones MDRC studied or put together the elements of a comprehensive intervention on their own, much has been learned about what is needed — and what seems to work. What remains is to make sure that practitioners have the support they need to put that learning into practice.

Introduction

High school reform has moved to the top of the education policy agenda, commanding the attention of the federal government, governors, urban school superintendents, philanthropists, and the general public. All are alarmed by stubbornly high dropout rates — estimated at 29 percent nationally and much higher for African-American and Hispanic students.[1] All share deep concern about the low academic achievement of many high school students and the large numbers of high school graduates who are required to take remedial classes in college — 28 percent of all students entering public two-and four-year colleges in the fall of 2000, according to a recent study.[2] These findings are especially troubling given recent research indicating that more than two-thirds of new jobs created between 2000 and 2010 require a postsecondary education, with the fastest-growing, best-paying jobs requiring the most education.[3] Taken together, these trends signal both real limits on individual potential and serious constraints on America's competitive position in the global economy.

The most serious problems in high schools are concentrated in America's large urban centers and in rural areas of the South and Southwest. Robert Balfanz and Nettie Legters at The Johns Hopkins University have identified approximately 2,000 high schools — about 20 percent of all regular and vocational high schools — in which the typical freshmen class shrinks by 40 percent or more by the time students reach their scheduled twelfth-grade year. These high schools are concentrated in about 50 large cities and 15 primarily southern and southwestern states; the majority of their students tend to be African-American or Hispanic. In fact, according to Balfanz and Legters, 46 percent of the nation's African-American students and 39 percent of its Latino students attend high schools where graduation is no better than a 50-50 proposition.[4]

This is the first in a series of reports summarizing and synthesizing what MDRC has learned from rigorous studies of high school reform initiatives. It discusses lessons from MDRC's evaluations of three initiatives — Career Academies, First Things First, and Talent Development — that have principally targeted low-performing high schools in urban and rural areas. This report includes only limited findings from non-MDRC research, but subsequent reports in the series will incorporate lessons from studies of high school reform efforts conducted at MDRC and elsewhere.

The three initiatives that are the focus here were comprehensive interventions involving multiple components. In particular, they combined several structural changes designed to in-

[1]Greene and Winters (2005).
[2]Parsad and Lewis (2003).
[3]Carnevale and Desrochers (2003).
[4]Balfanz and Legters (2005).

crease students' feelings of attachment to their teachers and peers with changes in instructional content and pedagogy. Each program, too, featured a philosophy or theory of action that linked the various components into a coherent whole, and the program developers offered considerable technical assistance about how best to put the components in place. MDRC's evaluations — built on strong research designs using control or comparison groups — reflect the *combined* efforts of *all* the program components, along with a significant infusion of technical assistance.

This report looks instead inside the "black box" of these comprehensive reforms and seeks to draw reasoned conclusions about which particular aspects of the reforms made them effective (or, in some cases, proved ineffective). Judgments about the effects of specific program components can never be as firmly grounded in the evidence nor as fully credible as conclusions about the effects of the complete program models. Nonetheless, these judgments about component effects are important as guides to action for the audience to whom this report is primarily directed: policymakers, funders, and practitioners who must make hard decisions about how to change high schools.

Some districts and schools may ultimately opt to join forces with one of the comprehensive reform models that MDRC studied. Other districts and schools may have already adopted other reform initiatives, or they may have put some structural and instructional reforms in place on their own and now want to fill in the missing pieces in their current reform strategies. Whatever the circumstances, leaders can benefit from evidence-based judgments and conclusions about how particular inputs lead to particular outputs. This report seeks to provide this information, while acknowledging that the evidence is imperfect. The goal is to be at once bold, reasoned, clear, and cautious: bold in speculating about which components caused effects, reasoned about why these components and not others were selected, clear about which statements are speculations, and cautious about the degree of confidence that these speculations warrant.

MDRC's Goals in Studying High School Reform: Aiding Disadvantaged Students and Raising Research Standards

MDRC's interest in school reform flows naturally from the organization's larger mission of providing evidence about the effectiveness of programs and policies aimed at disadvantaged populations. MDRC was drawn into the field of education research because so many participants in the welfare-to-work and youth programs that it studied in the first two decades of its history were high school dropouts who had failed in — and been failed by — the educational system.

The Career Academies evaluation, launched in 1993 and still under way, was MDRC's first major investigation of the effects of a prominent high school reform initiative and was a logical outgrowth of the organization's concern with preparing young people for work. A Career Academy is a "school within a school" — that is, a community of teachers and students

within a larger high school. Centered on career themes, Career Academies aim to help students achieve academically while providing them with marketable skills, work-based learning and experiences, and clear pathways to postsecondary education and productive employment.

The First Things First and Talent Development initiatives were both designed to address the problems of low-performing schools. The two interventions involve changes in curriculum and instruction that are intended to affect the entire student body and faculty, not just a relatively small group of students and teachers within the school; consequently, the two models exemplify what have come to be known as "comprehensive school reforms" or "whole-school reforms." MDRC began its evaluations of these two models in 1999 and completed final reports on the initiatives in the spring of 2005.

In undertaking these studies, a major aim has been to raise standards of evidence in the field of education research. All three studies contain information about what it takes to put the initiatives in place and operate them successfully. And all three use the most rigorous research designs available for assessing the *impacts,* or *effects,* of the interventions. The strength of an impact evaluation depends in large part on the believability of the *counterfactual* — that is, what would have happened had the intervention being tested not been put in place. It is against this estimate of what *would have happened* that what *actually did happen* is compared to produce an estimate of the intervention's impact — that is, the amount of difference it made.

The Career Academies evaluation pioneered the use of an experimental design involving random assignment of students to a program group and a control group to determine impacts. In this design — widely accepted as the "gold standard" for assessing program impacts — the control group constitutes the counterfactual for the evaluation.[5] In demonstrating the feasibility of conducting random assignment within an ongoing high school program, the Career Academies study marked a milestone in the field of education research, and the U.S. Department of Education has since mandated use of such a design in a number of evaluations that it has funded.

Because the reforms involve all students in First Things First and Talent Development schools, the random assignment research design that was used in the Career Academies evaluation was not appropriate for these studies, and random assignment of schools to program and

[5]Random assignment took place in schools where there were more students who were interested in enrolling in a Career Academy and who met its eligibility criteria than there were available spaces in the Academy. Under these conditions, students were assigned at random either to a program group, whose members were invited to enroll in the Academy, or to a control group, whose members were barred from participation in the Academy. Because of the randomization, there were no systematic differences between the two groups at the time they entered the evaluation, so that any subsequent differences in outcomes between the groups — for example, in attitudes, attendance, graduation, or postsecondary employment patterns — reflect the program's true effects on these outcomes.

control conditions was also not a viable option. The "comparative interrupted time series" design that MDRC used to measure the effects of both initiatives — while not meeting the random assignment "gold standard" — is nonetheless among the strongest designs being used to analyze the effects of high school reforms.[6]

Behind the Crisis in Low-Performing Schools: The Issues Addressed by This Report

The underlying issues that give rise to students' dropping out of high school and showing low academic achievement are complex and multiply determined. They have to do with students, with teachers and other school personnel, and with the environment in which both groups find themselves. These issues are discussed in greater depth in the sections that follow but are briefly previewed here.

The academic problems that economically disadvantaged students face in high school generally begin long before ninth grade. Many such students enter high school without the basic skills in reading and mathematics that will enable them to succeed in more demanding high school courses. Unable to do well, they are all too likely to stop trying, to cut classes, and, ultimately, to drop out entirely.

For their part, teachers in schools serving disadvantaged populations are often less experienced and less knowledgeable about the subjects they teach than teachers in more affluent communities. And, faced with students who have low skills and who do not appear to be interested in learning, teachers in low-performing schools may avoid giving the students challenging assignments. Instead, their lessons may entail repeated drill in basic skills — further alienating students from the learning process.

These problems are exacerbated in the large, impersonal, and sometimes unsafe environments of many comprehensive urban high schools. Students and teachers do not get to know each other, or to develop bonds of caring and trust. Guidance counselors, called on to intervene with students who are chronically absent or who present behavior problems, are frequently too overburdened to give all students the guidance they need to select the right courses for college

[6]The design entails comparing changes in student outcomes at the program schools between a baseline period and a follow-up period (generally before and after the intervention was put in place) with changes in outcomes over the same time at similar nonprogram schools located in the same state (and preferably in the same school district) as the program schools. The program's impacts are the *differences* between the changes in outcomes over time at the two sets of schools. The comparison school data constitute the counterfactual in the research design. They offer a means of "controlling for" changes in state and district policies that occurred at the same time as the implementation of the special initiative, thereby strengthening the conclusion that measured changes at the program schools are the result of the initiative rather than of these other factors.

admission — or even for high school graduation. Finally, in these large schools, there may be no one who can help students understand the connection between what they are studying and their lives after high school. Students who see their classes as both extremely difficult and irrelevant to their futures have little reason to remain in school.

Many of these problems affect students at all grade levels. But the problems of size and impersonality are likely to hit ninth-graders especially hard as they make the transition from the smaller, relatively sheltered atmosphere of middle school to the more turbulent and anonymous world of high school. Research points to ninth grade as a critical "make or break" point for many students. How they fare in ninth grade and whether they are promoted on time to tenth grade are good prognosticators of whether students will succeed in the rest of their high school careers.

The data in Figure 1 illustrate this point. The statistics come from an MDRC analysis tracing the high school trajectories of all students enrolled as ninth-graders in comprehensive, nonselective high schools in four large urban districts in 1999. Students in these schools were mostly low-income and mostly African-American or Hispanic. The figure shows that, of a representative group of 100 ninth-grade entrants, 44 students did not complete ninth grade on time. And within this group of 44, only 12 students remained in school three years later; the rest had left the system.[7] Among the 56 students who successfully completed ninth grade, 36 were promoted on time to twelfth grade. The fact that more than one-third of those who completed ninth grade on time failed to enter twelfth grade on schedule means that getting through ninth grade was not an inoculation against all subsequent difficulties. But while high school reform cannot stop at ninth grade, a reform probably cannot succeed unless it successfully addresses the ninth-grade transition. The importance of giving students a good start in high school is a theme sounded repeatedly in this report.

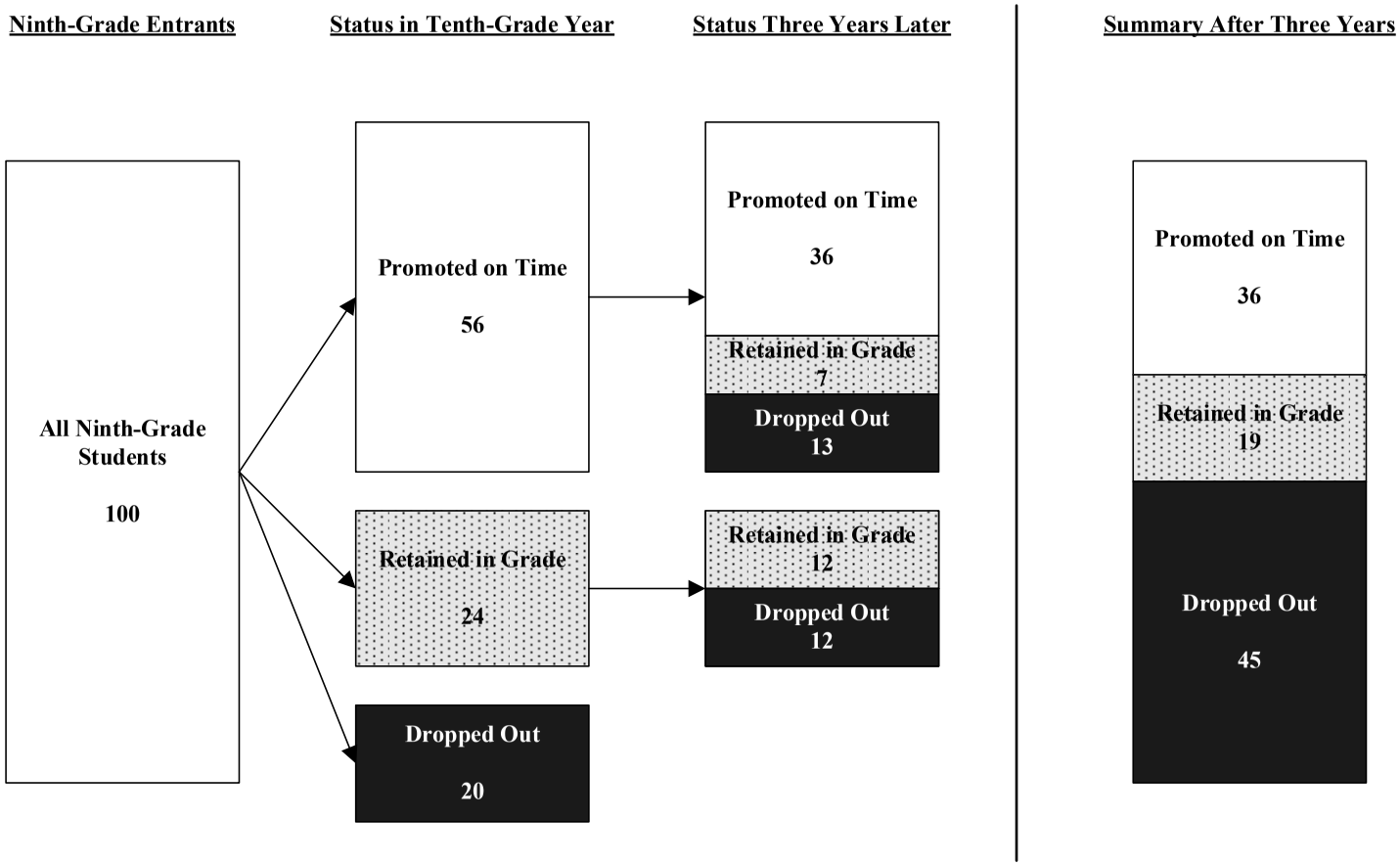
To provide a solid evidentiary basis for the rest of the document, the next section briefly describes the three initiatives that MDRC has studied and summarizes the main findings of those evaluations. But the core of the report focuses on five challenges that low-performing high schools commonly face and what these three initiatives indicate about effective responses to these challenges. The first four challenges relate to specific aspects of school atmosphere and teaching and learning, while the fifth pertains to all school reform efforts:

- Creating personalized, orderly environments that are conducive to learning
- Helping students who enter high school with poor academic skills to catch up with their peers

[7]While some of these students may have transferred out of the district or into private schools, the large majority almost certainly dropped out of school altogether.

Figure 1

Transitions From Ninth Grade to Twelfth Grade in Four Large Urban School Districts: Ninth-Grade Students in Comprehensive High Schools, 1999



- Improving instructional content and pedagogy
- Preparing students for postsecondary education and employment
- Investing the personnel resources and time needed to bring about changes that are ambitious yet achievable

With respect to each of these topics, the report discusses the ways in which the programs under study addressed the problem and what the evidence suggests about how well these solutions worked. It also considers implementation experiences and issues associated with the strategies that the programs adopted.

The Three Initiatives: Program Models and Evaluation Findings

This section serves as a "mini-reference volume" for the rest of the report. It summarizes the key features of the three initiatives that MDRC has evaluated and the principal implementation and impact findings associated with each one. Some readers may wish to proceed directly to the core sections of the report (Challenges 1 through 5, below); others may find that this section supplies useful background information.

The Programs

MDRC researchers sometimes speak of the three initiatives as constituting a "family" of high school reforms. To the extent that the family metaphor is an apt one, then Career Academies can be considered the parent program, for two reasons.

First, Career Academies have been in existence much longer than the other initiatives. First developed and implemented in Philadelphia in 1969, they are now found in some 2,500 schools across the country; this expansion has occurred under the auspices of several established networks of Career Academies and through the efforts of individual schools and school districts. The First Things First and Talent Development models are a quarter-century younger, having been developed in the mid-1990s by the Institute for Research and Reform in Education (IRRE) and the Center for Research on the Education of Students Placed At Risk (CRESPAR), respectively.[8]

Second, First Things First and Talent Development have both embraced the combination of structural and instructional changes called for by the Career Academies model. Table 1 summarizes the key features of each model in a compact format that is intended to facilitate comparisons. It shows that while the specific forms that the structural and instructional changes take differ among the initiatives, the small learning community, in various incarnations, plays a leading role in all the program models. (In fact, Talent Development has three types of small learning communities: the Ninth Grade Success Academy, Career Academies for students in grades 10 through 12, and the Twilight Academy for students for whom a regular daytime schedule is undesirable or infeasible.) The Career Academies and the First Things First small learning communities are organized around themes intended to respond to students' academic and vocational interests and to guide instruction in both core-subject and elective courses.[9]

[8]IRRE is a not-for-profit organization based in Philadelphia. During the period under study, CRESPAR was a not-for-profit entity housed within The Johns Hopkins University and Howard University. Since then, it has been absorbed into the Center for the Social Organization of Schools at Johns Hopkins.

[9]Core-subject classes are English, mathematics, social studies, and science.

Table 1

Key Elements of the Programs Under Study

Career Academies

Structural Reform Features

- **"School-within-a-school" structure:** Students who are in grades 9 or 10 through 12 share several classes per day and have the same teachers over multiple years; teachers meet regularly and share decision-making.

Instructional Reform Features

- **Integrated academic and occupational curriculum:** Academies emphasize preparing students for both college and the world of work; each year, students generally take three or more academic courses and at least one occupational course related to the Academy's career theme.

Other Key Elements

- **Employer partnerships:** Local employers provide career-awareness activities and internships for students and aid schools in developing curricula for vocational classes.

First Things First

Structural Reform Features

- **Schoolwide, theme-based small learning communities:** These are clusters of up to 350 students and their core-subject and thematic elective teachers who remain together through all four years of high school; teachers meet regularly to discuss students' progress and their own teaching practices.

Instructional Reform Features

- **Instructional improvement:** Professional development activities are centered on promoting active, cooperative learning; setting clearly defined, high academic standards; and aligning curricula with state and local standards.
- **Instruction related to the theme of the small learning community**

Other Key Elements

- **Family Advocate System:** Each student has a teacher "advocate," who is charged with monitoring and supporting the student's progress and establishing positive relationships with the student's family. The Family Advocate Period is a regularly scheduled meeting time for students and their advocates.

(continued)

Table 1 (continued)

Talent Development

Structural Reform Features

- **Ninth Grade Success Academy:** This small learning community is composed of interdisciplinary teacher teams, ideally responsible for about 90 ninth-grade students each, with common planning time to enable team teaching.
- **Tenth- to Twelfth-Grade Career Academies:** These are small learning communities (250 to 350 students each) encompassing both a core academic curriculum and work-based learning experiences.
- **Twilight Academy:** This provides an after-hours alternative to the regular school day for students who have serious attendance or discipline problems or other needs.
- **Extended block schedule:** Four 90-minute classes meet daily, making possible "double doses" of English and math.

Instructional Reform Features

- **Catch-up courses:** These math and reading courses developed by CRESPAR are offered in the first semester of ninth grade.
- **Freshman Seminar:** This semester-long class focuses on building the academic and social skills that ninth-graders will need to succeed.

The major instructional changes intended to be put in place also vary among the program models. Career Academies offer a curriculum combining academic and career development courses. The focus of instructional improvement efforts in First Things First has evolved over time; during the period under study, these efforts consisted largely of professional development sessions that trained teachers in strategies for making classes more lively and engaging. CRESPAR designed special catch-up courses in reading and math for ninth-graders entering Talent Development schools with low skills, as well as a course aimed at helping freshmen develop self-management and interpersonal skills.

Table 1 shows that, along with the common emphasis on structural and instructional changes, there are features unique to particular initiatives: for example, the Family Advocate System in First Things First and the employer partnerships that are central to the Career Academies.

One final point, noted in the Introduction, bears emphasis: IRRE and CRESPAR not only developed First Things First and Talent Development but also provided considerable ongoing support and technical assistance to participating schools and districts. The implementation and

impact findings presented below reflect the efforts of staff members of these organizations — as well as of district and school administrators and teachers — to reform policies and practices.

Evaluation Findings

The major implementation and impact findings from each of the three evaluations are described below. The findings also appear in Table 2, along with further details about the evaluations' designs.

In comparing the impacts of the three initiatives, it is important to keep in mind that results were measured over time for all students in the First Things First study schools and for all students who entered as ninth-graders in the Talent Development schools. The Career Academies evaluation, in contrast, measured outcomes for a group of students who applied for admission to these Academies. Not all who applied were selected to enroll, of course; but both those who were selected for the program group and those who were assigned instead to the control group displayed a level of motivation that was not shared by other students in their schools.

Career Academies

The Career Academy movement began some 35 years ago. MDRC's evaluation of the Career Academy approach tests the program's effects in a diverse group of nine high schools located in medium- and large-sized school districts across the United States. The participating Career Academies served a cross-section of the student populations in their host schools; approximately 85 percent of the research sample members are Hispanic or African-American.

The Academies in the MDRC evaluation were able to implement and sustain the core features of the approach: the school-within-a-school structure, a curriculum combining academic and career courses, and partnerships with local employers. There was little change, however, in the context of academic courses to reflect the Academies' career themes.

The evaluation has used an unusually rigorous research design involving random assignment of students to the Career Academy group or to a control group to assess the program's impacts on a wide range of outcomes, measured both while students were in high school and after they had graduated. Among the principal findings are that:

- The Academies improved students' average level of school engagement; they also increased the rates at which students participated in career awareness and work-related learning activities.

Table 2

Characteristics and Findings of the Evaluations

Career Academies

Study Design

- **Methodology:** Random assignment of eligible and interested students either to the Career Academy in their school or to the regular high school program
- **Evaluation period:** 1993-2006 (projected)
- **Follow-up period:** 12 years (planned)
- **Sites evaluated:** Nine Career Academies at high schools in San Jose, Santa Ana, and Watsonville, California; Washington, DC; Miami Beach, Florida; Baltimore, Maryland; Pittsburgh, Pennsylvania; and Socorro, Texas
- **Student characteristics:** Race/ethnicity: 30% African-American, 56% Hispanic; family receiving welfare or food stamps: 24%; average baseline performance on state assessments: 39% at 24th percentile or lower in math, 35% at 24th percentile or lower in reading[a]

Key Implementation Findings

- All the Career Academies in the study implemented and sustained the three defining characteristics of the model: the school-within-a-school structure, integrated academic and occupational curriculum, and partnerships with local employers.
- Teachers did not generally integrate career-related content into core academic courses; electives provided the occupational component of the Career Academy curriculum.

Key Impact Findings

- **Student engagement and performance in high school:**
  - Increased participation in career awareness and work internships
  - For students at high risk of school failure, substantial positive impacts including decreased dropout rates, increased attendance rates, and increased number of academic and vocational credits earned
  - For students at medium or low risk of high school failure, increased vocational credits earned without decreasing the likelihood of completing a core academic curriculum
  - No impacts on achievement on standardized math or reading assessments for any subgroup
  - No impacts on high school completion rates
- **Postsecondary educational attainment outcomes:**
  - No significant impacts on enrollment in college or other postsecondary programs
- **Labor market outcomes:**
  - Increased average monthly earnings over the four years after graduation for men in the Academy group relative to non-Academy students
  - Impacts concentrated among those at high or medium risk of dropping out of high school
  - No significant impact on labor market outcomes for the low-risk subgroup or for women

Other Key Findings

- Academies increased student reports of interpersonal support from teachers and peers.
- Academies with the highest student reports of interpersonal support also registered more positive impacts on student engagement (low-support Academies registered negative impacts on engagement for some students).

(continued)

Table 2 (continued)

First Things First

Study Design

- **Methodology:** Comparative interrupted time series analysis
- **Evaluation period:** 1999-2004
- **Follow-up period:** Three years in Kansas City, Kansas; two to three years in expansion sites, depending on the school
- **Sites evaluated:** Four high schools in Kansas City, Kansas; three high schools in Houston, Texas; one high school in the Riverview Gardens School District, Missouri; one high school each in Greenville and Shaw, Mississippi
- **Student characteristics:** Race/ethnicity: 46% African-American, 39% Hispanic; eligible for free/reduced-price lunch: 65%; average baseline performance on state assessments: 44% failing or in bottom two proficiency categories in math, 37% failing or in bottom two proficiency categories in reading[b]

Key Implementation Findings

- The model evolved considerably over time.
- In Kansas City, Kansas:
  - The central office adopted FTF as a districtwide reform and provided considerable implementation support for many years.
  - Spurred to do so by IRRE, the district paid considerable attention to instructional improvement.
- Outside Kansas City:
  - Schools achieved basic implementation of the program components.
  - District and school leadership and outside technical assistance were key determinants of implementation success.

Key Impact Findings

- In Kansas City, Kansas: Increased attendance and graduation rates, decreased dropout rate, and improved student performance on state tests of reading and math
- Outside Kansas City: Some promising indications but a general lack of consistent, statistically significant positive impacts on student outcomes

Other Key Findings

- In Kansas City, Kansas: Increased student and teacher reports of support and engagement
- Outside Kansas City: Increased student reports of support, but decreased student reports of engagement; increased teacher reports of engagement

(continued)

Table 2 (continued)

The Talent Development High School

Study Design

- **Methodology:** Comparative interrupted time series analysis
- **Evaluation period:** 1999-2004
- **Follow-up period:** Three to five years, depending on the school
- **Sites evaluated:** Five nonselective high schools in the School District of Philadelphia
- **Student characteristics:** Race/ethnicity: 75% African-American, 23% Hispanic; eligible for free/reduced-price lunch: 86%; average baseline performance on state assessments: 86% below basic level in math, 76% below basic level in reading[c]

Key Implementation Findings

- All schools successfully implemented the key elements of the Ninth Grade Success Academy.
- All schools had upper-grade Career Academies, but they had existed throughout the district before Talent Development and varied widely in academic rigor and the centrality of the career theme.
- The School District of Philadelphia allowed CRESPAR to mount Talent Development in some high schools but did not formally endorse the initiative or provide it with direct support.

Key Impact Findings

- Substantial gains for first-time ninth-grader cohorts: improved attendance, increased number of academic course credits earned in all four years of high school (especially in ninth-grade algebra), and increased on-time promotion rates to tenth, eleventh, and twelfth grades
- Mixed findings for ninth-graders who repeated a full year: improved ninth-grade attendance rate but no other positive impacts relative to comparison groups and an increased probability of dropping out
- Slight improvements in student performance on state assessment in math for early cohorts of students and stronger positive impacts for later cohorts; no systematic change in reading scores
- Improved graduation rates for the first cohort of first-time ninth-graders in the two earliest-implementing schools

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SOURCES: MDRC evaluations of the Talent Development High School, First Things First, and Career Academies.

NOTES: [a]All demographic information for Career Academies was measured at the beginning of the study, prior to random assignment of students to Academy or non-Academy groups.

[b]All demographic information for First Things First is representative of the study sample during the planning year before implementation of the program. Test scores are from the baseline year for the MDRC evaluation of program impacts.

[c]For Talent Development, student ethnicity is representative of the study sample during three baseline years prior to program implementation. Free/reduced-price lunch eligibility data were obtained from the Common Core of Data of the U.S. Department of Education, National Center for Education Statistics, for the year 1999, and are representative of students at all but one participating high school, for which data on this item were missing.

- For students who entered the programs at high risk of dropping out, the Academies increased the likelihood of staying in school through the end of the twelfth-grade year, improved attendance, and increased the number of credits earned toward graduation.
- For students least likely to drop out, the Academies increased vocational course-taking without reducing the likelihood of completing a core academic curriculum.
- The Academies had no effect on standardized math and reading achievement test scores.
- The generally positive effects of the Career Academies while students were enrolled in high school did not translate into impacts on high school graduation rates or rates of college enrollment. Relative to similar students nationally, both program and control group members were more likely to graduate from high school and enter college.
- Young men in the Career Academies group — through a combination of increased wages, hours worked, and employment stability — earned over $10,000 (18 percent) more than those in the non-Academy control group during the four-year period following their scheduled graduation from high school. For the group as a whole, these employment impacts did not come at the expense of enrollment in postsecondary education.
- These positive labor market impacts were concentrated among Academy group members who were at high or medium risk of dropping out of school when they entered the programs. The lack of labor market impacts for the low-risk subgroup may be due to this group's greater focus, relative to the others, on college and other types of postsecondary education.

Taken together, the last two findings are particularly impressive. They provide strong evidence that investments in career-related experiences during high school can enhance the labor market prospects of otherwise at-risk youth during their postsecondary years.

First Things First

First Things First was initially implemented as a districtwide reform in all elementary, middle, and high schools in the Kansas City, Kansas, school district, and it is now operating in more than 70 schools in nine districts. In the Scaling Up First Things First Demonstration (a five-and-a-half-year research and demonstration project), MDRC examined the initiative's implementation in six high schools located in four additional districts: Houston; the Riverview

Gardens School District in suburban St. Louis County, Missouri; and Greenville and Shaw, Mississippi. All these districts serve high proportions of minority and economically disadvantaged students. MDRC used a comparative interrupted time series design to analyze the initiative's impacts in these sites and in the Kansas City, Kansas, home base.

With respect to implementation, MDRC concluded that the expansion sites were able to implement the key elements of the model — small learning communities, instructional improvement efforts, and the Family Advocate System (which assigned teachers to connect with individual students and their families) — within three to four years after the initiative's launch at the program sites.[10] Predictably, structural changes took hold more easily than changes in instruction. Implementation progressed further in settings where district and school leaders provided consistent support for the initiative and IRRE staff offered intensive technical assistance. The researchers also found that First Things First has evolved continuously not only at the sites but also in the minds of its developers, as IRRE personnel have learned from both successes and challenges; in particular, instructional improvement efforts have become more fully specified and more ambitious over time.

For several reasons, the impact findings represent a conservative test of First Things First's effectiveness. First, changes over time in the program schools were measured against changes in comparison schools that may have undertaken their own school improvement efforts (although little information was available about how intensive, extensive, or successful these efforts may have been). Second, by necessity, single schools or only a few schools were the foci of the study at each site; under these circumstances, only very large effects would be statistically significant and thus could be detected with confidence. Third, for all sites except Kansas City, Kansas, the follow-up period covered only one to three years after First Things First was put in place.

That said, the researchers found that effects in Kansas City, Kansas, and in the expansion sites were quite different:

- High school students in Kansas City, Kansas, registered large gains on a wide range of academic outcomes that were sustained over several years and were pervasive across the district's schools; similar gains were not present in the most comparable schools in the state. The improvements occurred over the course of eight years of substantial effort by the school district and IRRE to implement First Things First as the district's central education reform. Findings include increased rates of student attendance and graduation, reduced student dropout rates, and improved student performance on the state tests of reading and mathematics.

[10]The three to four years of implementation included one year devoted to planning.

- There were limited signs of early positive impacts at some of the expansion sites, but it was not yet clear whether the expansion sites — which had operated First Things First for two or three years at the time of the research follow-up — would replicate the findings for Kansas City, Kansas.

Along with length of implementation, the researchers identified several other factors that distinguished First Things First in Kansas City, Kansas, from the program in the expansion sites: the strong commitment of the Kansas City, Kansas, district as a whole to supporting and sustaining the reform's changes; a greater emphasis on instructional improvement early on; and more intensive use of IRRE's technical assistance.

Talent Development

CRESPAR first mounted Talent Development in a Baltimore, Maryland, high school; the initiative now operates in 83 high schools in 32 school districts. Throughout the planning year and implementation period, CRESPAR and the Philadelphia Education Fund (PEF) — a not-for-profit intermediary organization — provided oversight and technical assistance to the expansion effort in Philadelphia, where MDRC evaluated the program's effects in the first five high schools to implement the initiative in the School District of Philadelphia.

In terms of implementation, the researchers found that although Talent Development was intended as a whole-school reform, in Philadelphia the most strongly and consistently implemented aspects of the model were those related to the program for ninth-graders: a physically separate space, an emotionally supportive environment, and first-semester catch-up courses designed to help students overcome skill and knowledge deficits. Efforts to transform the upper grades into Career Academy programs fully supportive of the model met with more limited success. Implementing the initiative drew on the resources of CRESPAR and PEF and also involved placing a full-time reform coordinator and part-time curricular coaches at each school.

The ninth-grade focus of the initiative was also reflected by the evaluation's design, which followed 20 cohorts of ninth-grade students for up to four years of high school, using a comparative interrupted time series research design.

Key impact findings include the following:

- Talent Development produced substantial gains in attendance, academic course credits earned, and promotion rates during students' first year of high school. These impacts emerged in the first year of implementation and were reproduced as the model was extended to other schools in the district and as subsequent cohorts of students entered the ninth grade. The improvements in

credits earned and promotion rates for ninth-graders were sustained as students moved through high school.

- Talent Development produced slight improvements in student performance on the eleventh-grade state assessment in math for early cohorts of students and more marked improvements for later cohorts, although it did not have an effect on reading scores.

- There were also early indications that Talent Development was improving graduation rates.

- Talent Development reduced the percentage of students who were required to repeat a full year of ninth grade. However, results for students who did repeat ninth grade were distinctly mixed. While they exhibited larger improvements in attendance than their counterparts at non-Talent Development schools, the intervention also increased the likelihood that those students who repeated a full year would leave the school system before the end of their fourth year of high school.

The findings on Talent Development provide encouraging evidence that real improvements can be made in some of the lowest-performing high schools in the country. For instance, Talent Development increased school attendance by nine days per year for each student. For a high school with 500 first-time ninth-graders, it helped an additional 125 students pass algebra and an extra 40 students get promoted to tenth grade. Even with Talent Development's substantial and persistent positive impacts, however, large proportions of the students in these high schools were not making adequate progress toward graduation. Moreover, because this evaluation focuses on Talent Development's initial scaling-up effort in a single school district, it is not clear what would be required to produce the same effects in a larger number of schools or in other settings.

* * *

The balance of this report focuses on the lessons that these three models offer for addressing the five challenges outlined in the Introduction: creating a personalized and orderly learning environment, assisting students who enter high school with poor academic skills, making instruction more powerful, preparing students for the world beyond high school, and — perhaps most important — stimulating change.

Challenge 1

Creating a Personalized and Orderly Learning Environment

A positive school climate — where students and adults know each other well and where adults express care and concern for students' well-being, intellectual growth, and educational success — is a key motivational element in the learning process for adolescents.[11] And for students who are academically able and motivated to learn, large high schools may present such a climate. Indeed, such students may thrive in these schools because their teachers demonstrably enjoy being with them, offer them extra academic assistance or personal support, or otherwise show that they care about them. Moreover, these students are often in college-track or Advanced Placement classes, set apart from students who exhibit significant academic and behavioral problems.

But the large size of many high schools leaves many students, especially those who are less academically successful, feeling lost and anonymous and prevents the development of an atmosphere conducive to learning.[12] Students who drop out of high school often say that they feel distant and estranged from teachers and administrators.[13] In many large high schools, students may encounter a different group of classmates in each course they take, further diminishing their sense of community and continuity. While the problem of anonymity can afflict students at all grade levels, it may be especially severe for ninth-graders, who leave behind the more family-like environment of middle school to occupy a position at the bottom of the high school totem pole.

Impersonality may create or exacerbate behavior problems. At their worst, large schools can be dangerous and violent places where neither students nor teachers feel safe and secure. Even in less troubled settings, young people with emotional or academic problems that go unattended all too often engage in misconduct that disrupts not only their own learning but also that of their peers. As any teacher can attest, one or two such students in a class can commandeer a great deal of the teacher's and their classmates' attention. Dealing with difficult students is especially a problem in urban schools because these schools typically have large proportions of new and inexperienced teachers whose classroom management skills are not yet honed.

[11] Wilson and Corbett (1999).
[12] Sizer (1984); Hill, Foster, and Gendler (1990); Powell, Cohen, and Farrar (1985).
[13] Altenbaugh (1998).

Take-Away Lessons on Creating a Personalized and Orderly Environment

- Student survey data suggest that small learning communities — groups of students who share the same cadre of core-subject teachers — make students feel known and cared about by their teachers.
- Both small learning communities that encompass all four grade levels and separate Freshman Academies followed by communities for upperclassmen can play a role in increasing attendance and reducing dropout rates.
- The separate Freshman Academy structure may play a key role in helping more ninth-graders succeed in the critical first year of high school.
- Faculty advisory systems can give students a sense that there is an adult in the school looking out for their well-being.
- School administrators and program operators report that scheduling classes to ensure that they contain only teachers and students within the same small learning community can present a major challenge.
- Implementing small learning communities is likely to improve the climate of schools but will not, in and of itself, increase student achievement. It may help to do so, but the studies do not provide conclusive evidence on this point.

Schools need strategies that maximize opportunities for students who exhibit behavior problems to continue their own learning and minimize their opportunities to impede the learning of classmates. But the responses that schools offer — expulsion or in-school or out-of-school suspension — typically address only the latter goal.[14] These actions isolate disruptive students from their peers but do not encourage them to progress academically.

The three initiatives that MDRC studied have all sought to make the environments of large comprehensive high schools more congenial places for learning to occur. This section discusses how these initiatives have responded to the problems of anonymity and disorder.

[14]In in-school suspension, students do not attend class but instead remain under adult supervision in the principal's office or in another location in the school; they are often given class assignments to complete. As its name suggests, out-of-school suspension entails exclusion from the school premises for a set period of time.

The Solutions

Solutions to the Problem of Anonymity

The high school initiatives that MDRC studied adopted three major approaches toward dealing with the problem of anonymity and helping students to avoid feeling "faceless in a crowd": small learning communities, staff advisors, and courses that help students develop social interaction skills.

Small Learning Communities

One strategy for creating more personalized learning environments that has gained prominence in recent years has been to change the structure of schools by downsizing large high schools into smaller units — either new small schools that are independent entities or "academies" or "small learning communities" within the original school. The Bill & Melinda Gates Foundation has been a strong advocate for the small-schools approach and to date has committed about $1 billion to support, indirectly or directly, the creation of new small schools and the restructuring of existing large schools into smaller units. In smaller settings, the argument goes, teachers and students will get to know each other better. Students will be more likely to feel that their teachers care about them, and they will be much less likely to "slip through the cracks," unnoticed by teachers and counselors. As a consequence, students will attend class more regularly and will put more effort into their schoolwork.

In all three initiatives discussed in this report, small learning communities are a fundamental structural element of the reform. Table 3 shows the principal forms that such communities have taken in the different initiatives: Career Academies serving students in grades 9 or 10 through 12; four-year small learning communities in First Things First; and a separate Ninth Grade Success Academy followed by Career Academies in the upper grades in Talent Development, along with Twilight Academies for students for whom participation in the regular school programs would present difficulties.

Staff Advisors

A key component of First Things First, the Family Advocate System is intended to enable teachers to get to know well not only the 12 to 17 students in their small learning communities for whom they serve as advisors but also the parents or guardians of these students. During a regularly scheduled Family Advocate Period, advocates meet in a group with the students to whom they are assigned; the advocates are also responsible for conducting weekly "check-in" meetings with each student and for meeting with students and their parents at least twice a year.

Table 3

Small Learning Communities in the Three Initiatives

Career Academies

- "Schools within schools" contain groups of students (usually 30 to 60 per grade) who take several classes per year with one group of teachers.
- Career Academies cover grades 9 or 10 through 12.
- Academies are focused on a career theme (for example, Health Care, Finance).
- Curricula consist of traditional academic classes combined with occupation-related classes.
- A high school may contain one or more Career Academies, or it may be composed of "wall-to-wall" Academies, so that every student belongs to one.

First Things First

- Groups consist of up to 350 students and their core-subject and key elective teachers.
- Groups remain together for all four years of high school.
- Small learning communities are organized around broad themes (such as Science and Technology or Performing Arts) that are meant to inform instruction and provide each community with a unique identity around which interdisciplinary units and field trips can be based.
- The teachers in a small learning community share a common planning period.

Talent Development

Three kinds of small learning communities are found in the Talent Development model:

- The Ninth Grade Success Academy is organized around interdisciplinary teacher teams whose members share the same students and have a common planning period. The Success Academy occupies a separate floor or wing of the school where ninth-graders take their classes. The Success Academy also uses incentives (such as prizes, pizza parties, and award ceremonies) to encourage and reward students who have high attendance and good grades.
- Career Academies are designed to enroll 250 to 350 students in grades 10 through 12.
- The Twilight Academy is an after-hours program for students who have serious attendance or discipline problems or who confront other situations that constitute barriers to enrollment in the regular school program.

In response to surveys, both students and staff have generally reacted favorably to the Family Advocate System. The majority of students said that they felt comfortable talking to their family advocate, and the system may serve an especially important function for the 43 percent of students who reported not having another adult in the school besides the family advocate whom they could contact when needed. The large majority of teachers who served as advocates felt that they had made progress in giving students a sounding board when they needed one, in helping them succeed academically, and in many other ways.

Although a faculty advisor component that was planned for Talent Development was never systematically implemented, "report card conferences" increased students' contact with their teachers. A small teacher team (sometimes supplemented by staff from CRESPAR) met with each student each time that report cards were issued to review the student's grades, assess progress toward promotion, and provide encouragement and support. The issuing of report cards also became an opportunity for students to meet with individual teachers in whose courses they were experiencing problems.

Special Courses

Along with the catch-up academic courses discussed in the next section (Challenge 2), Talent Development offered ninth-graders a special one-credit course, called Freshman Seminar, during the first semester of ninth grade. The broad objective of Freshman Seminar was to prepare students for the demands of high school. The curriculum was designed by CRESPAR and included lessons on study skills, personal management skills (with an emphasis on time management), and interpersonal skills — things useful for ninth-graders to know in negotiating the new academic and social world of high school.

In First Things First, the Family Advocate Period — a time in the weekly schedule for family advocates to meet in a group with the students to whom they are assigned — has evolved to accomplish some of the same objectives as Freshman Seminar. Teachers were initially uncertain about how to use the period and often converted it into a homeroom or a time to complete their own paperwork. In response, IRRE developed and distributed to all schools a guide to the Family Advocate System in general that contained a number of suggestions — for example, team-building, goal-setting, and journal-writing activities — for using the period effectively. At most schools, observers judged that teachers had learned to make good use of the period by the end of the evaluation.

Solutions to the Problem of Disruptive Behavior

The initiatives that were studied proposed two major approaches to creating more orderly environments: establishing uniform codes of conduct or otherwise establishing clear ex-

pectations for how students should behave (in First Things First) and providing a separate setting for students with persistent behavior problems (in Talent Development).

Establishing Clear Expectations

Behavior problems obviously range in seriousness, and conduct that one teacher considers to be a problem another may tolerate as an expression of restless adolescent energy. One early task that IRRE put to the small learning communities was to come up with specific policies, to which all teachers in the community would adhere, regarding which behaviors would be unacceptable and how misconduct would be treated. Although what they could do had to fall within the bounds of larger, schoolwide codes of conduct, a few small learning communities developed especially interesting responses; one, for example, instituted a "court" in which students who presented conduct problems were judged by their peers. Discussions about discipline often occupied a substantial amount of teachers' meeting time, uniting teachers around a widely shared concern (although subtracting time from discussions about improving instruction). Such discussions also made it apparent that the teachers who were most apt to report discipline problems were frequently deficient in classroom management skills.

Talent Development Twilight Academies

The Twilight Academies in the Talent Development schools in Philadelphia — which offered some students additional attention in an after-hours small learning community of their own — served multiple purposes. They enrolled students who were returning to school after dropping out, who might otherwise be embarrassed by being in classes with much younger students. They helped students who had daytime jobs or child care responsibilities to continue working toward a high school diploma after hours.

The Twilight Academies were also used for students who had demonstrated discipline problems in the regular high school, as well as for students who were exiting the juvenile justice system. As a setting for these last two groups of students, the Twilight Academies were valuable on two counts: They provided an alternative to suspension, expulsion, or placement in one of the district's disciplinary schools, and they served to "quarantine" potentially disruptive students away from the larger student body. Thus, while Twilight Academies were organized to provide extra supports for high-risk students, they had positive spillover effects for the rest of the school.

Along with these strategies that were planned, other aspects of the initiatives sometimes had the beneficial side effect of making schools safer. Thus, for example, teachers at the Talent Development schools noted that the schedule in the Ninth Grade Success Academies, which entailed having fewer but longer class periods each day, reduced the number of passing periods when students transferred from one class to the next. Since the noisy, crowded hallways were frequently the scene

of disputes and sometimes of fights, decreasing the amount of time that students spent in those halls made schools safer for both students and teachers who were called on to break up the fights.

The Evidence

The Career Academies and First Things First studies provide evidence that the interventions increased students' feelings of support from their teachers. Table 4 shows findings on this point from student surveys administered as part of the evaluations of the two initiatives. Stronger findings come from the Career Academy evaluation's experimental design, in which the survey responses of students selected at random to enroll in the Career Academies were compared with those of their peers who were selected instead for the control group. The First Things First student survey was administered only to students in the program schools, so no data from comparison schools are available. But in both studies, students in the program schools consistently reported

Table 4

Students' Increased Feelings of Support from Their Teachers in Career Academies and First Things First

Career Academies

Almost two-thirds of the students in the Academy group (66 percent) gave a high rating on an overall measure of personalized attention from their teachers, compared with 58 percent of students in the control group.

Similarly, 71 percent of students in the Academy group gave a high rating on an overall measure of teacher support, compared with 62 percent of students in the control group.

First Things First

The proportion of high school students reporting a high level of support from their teachers increased from 24 percent when the intervention began to 29 percent after First Things First had been in place for three years.

Over the same time period, the proportion of students reporting a low level of support from their teachers decreased from 35 percent to 31 percent.

NOTE: All differences reported here are statistically significant.

higher levels of support from their teachers than students in the control schools (in Career Academies) or than had been the case before the initiative began (in First Things First).

Because small learning communities, the Family Advocate System, and/or Freshman Seminar are components of larger interventions, it is impossible to be sure that these particular elements produced the positive results. But the express purpose of small learning communities and family advocacy was to enhance personalization, and no other program components had this specific aim in view.[15]

There is also a tantalizing tidbit of evidence from a report analyzing student survey data from the First Things First schools in Houston showing that strategies aimed at improving student conduct may have had an effect. Over the years of the study, students in Houston high schools were increasingly likely to report that expectations for student behavior in their school were clear to them.[16]

What about effects on students' actions as well as on their attitudes? Unfortunately, the studies did not report data on behavior infractions and disciplinary responses.[17] But attendance and student achievement were major outcomes examined in all the studies.

Good attendance is the result of many factors — including interesting, challenging classes — but students who feel cared about are more likely to want to come to school. And in a small, more personalized setting, teachers and administrators are better positioned to take note of, and follow up on, absenteeism.

The studies suggest that instituting small learning communities in large comprehensive high schools may promote better attendance but that this is not necessarily the case. All three initiatives produced positive effects on attendance in at least some settings and with some subgroups of students. These effects were especially strong in Talent Development. First-time ninth-graders in the Talent Development schools increased their attendance from a rate of 72.8 percent before the initiative was implemented to a rate of 77.4 percent afterward — a difference of 4.6 percentage points. In the comparison schools, attendance declined slightly over the same time period, from 76.6 percent to 76 percent. Thus, Talent Development's impact on attendance

[15]Freshman Seminar also seeks to enhance students' study skills and time management skills.

[16]See Akey (2006).

[17]In the case of First Things First, the decision not to report on discipline infractions and responses was a deliberate one. Reasoning that if teachers were unable to assign students to in-school suspension, they would have to be more thoughtful about disciplinary policies and practices, IRRE staff recommended that schools eliminate this penalty, and many schools did so (although some eventually restored it). A decline in in-school suspensions would therefore be a misleading indicator of improved student behavior.

was just over 5 percentage points.[18] While this impact may not sound particularly impressive, it corresponds to students' attending nearly two more weeks of school each year. Career Academies increased attendance rates for students who entered the program at high risk of dropping out, with an average attendance rate throughout high school of 82 percent for those in the program group who were at high risk, compared with a rate of 76 percent for their control group counterparts. Finally, attendance rates increased significantly more for high school students in First Things First's home site of Kansas City, Kansas, than for students in other low-performing schools in the state. Small learning communities do not guarantee better attendance, however. Impacts on attendance were not registered by the First Things First schools participating in the scaling-up demonstration, despite the presence of small learning communities at all schools.

Program features that are intended to increase personalization and reduce anonymity do not seem, in and of themselves, to have a direct and positive effect on student achievement. The evaluations of Career Academies and of First Things First at the expansion sites did not, by and large, register statistically significant impacts on students' reading and math test scores. Students may have felt better, but they did not do better (at least as measured by standardized tests). The experiences of Talent Development and of First Things First in Kansas City, Kansas, suggest that improving student achievement requires changing what is taught, not just the context in which it is taught. (The discussions below of Challenges 2 and 3 return to this issue.)

While small learning communities or similar structural changes may not be s*ufficient* to improve achievement, are they nonetheless a *necessary* step toward that end? One hypothesis is that as teachers in small learning communities come to know their students better, they will feel more responsible for them and will be more willing to change their instructional practice to meet students' needs. In this way, small learning communities or similar structural changes may affect student outcomes *indirectly,* rather than directly.

Unfortunately, the MDRC studies do not shed light on this question. That is because, in the projects MDRC examined, structural and instructional changes were both integral to the program model and intricately interwoven.

Implementation Successes, Challenges, and Open Issues

Small learning communities, faculty advisors, and special courses have been implemented with considerable success in most program locations. Indeed, it has generally proved

[18]Talent Development schools also did better than the comparison schools in increasing the percentage of students who had attendance rates of 90 percent or higher and in reducing the percentage who had attendance rates of 80 percent or lower.

easier to change the structure of schools than to change instruction and other aspects of school functioning.

Easier, but not easy. Students and teachers must be assigned to theme-based communities or Career Academies on the basis of their interests. Distributing the ablest teachers equitably is another consideration in assigning staff to the small learning communities. This proved especially problematic with respect to the Talent Development Success Academies, since experienced teachers often did not want to teach only ninth-graders. Achieving "purity" in setting up class schedules — that is, creating classes in which core-subject courses contain only teachers and students in the same Career Academy, small learning community, or team within a Freshman Academy — is important but can also be difficult, especially for schedulers who lack the requisite experience or training. For one thing, scheduling options are limited: A tenth-grader, for example, cannot be assigned to any tenth-grade English class but only to those classes taught by the English teachers in the student's small learning community or Academy. For another, drawing a sufficient number of students into upper-level science and social studies courses, which are frequently electives, or into Advanced Placement classes may mean opening these classes to students in different communities. Teachers may have to teach more course preparations within a small learning community structure than they would otherwise — for instance, American history *and* global studies *and* economics. While none of these matters need pose insurmountable implementation obstacles, all are potential issues for which administrators must plan in advance.

Another question with which policymakers and administrators must grapple is whether to implement Freshman Academies, followed by another form of small learning community for upper classmen (as was the case with Talent Development), or communities that include students in all four years of high school (as was true with First Things First). MDRC's research is agnostic on this score but suggests that there are trade-offs associated with either approach. A four-year small learning community model maximizes continuity over time for students and staff alike, but it offers no special structural supports to the ninth-graders who may need them the most. The Freshman Academy model helps ensure that ninth-graders get the attention they need to navigate through the first difficult year of high school. But unless Freshman Academies are backed up by other well-functioning communities for students in the upper grades, the ninth-grade transition problem may simply be postponed until tenth grade.[19]

[19]As noted above, the upper-level Career Academies were the most problematic element of the Talent Development model in Philadelphia. Interestingly, four of that city's seven Talent Development high schools created "Tenth Grade Academies," with the goal of extending the evident effectiveness of ninth-grade academies for another year. The Tenth Grade Academies were less structured than their ninth-grade counterparts but included special curricula developed by CRESPAR. As Talent Development continues to evolve, strengthening the program in the upper grades is a key CRESPAR priority.

Some aspects of the First Things First Family Advocate System also proved easier to implement than others. It was easy to assign a group of students to a family advocate, and, in the majority of cases, the relationship was a comfortable one for both parties. But the First Things First experience suggests that not all teachers should serve as advocates. Some teachers appreciated the component's usefulness; others did not want to assume the extra responsibilities that advocacy entails and felt that the role properly belonged to guidance counselors. And, as noted above, some teachers did not know what to do during the Family Advocate Period until IRRE provided a manual that suggested activities that would make productive use of the time. While the majority of teachers reported that it had been quite easy to develop close relationships with the students for whom they served as advocates, establishing relationships with students' families was harder. Almost two-thirds of the teachers said that it was "very difficult" or "fairly difficult" to reach students' parents by telephone (sometimes because a family's phone line had been disconnected) and that it was even harder to conduct two in-person meetings a year with students and their parents, as called for by First Things First guidelines. Teachers cited difficulties communicating with parents whose jobs made them unavailable during school hours, whose negative prior experiences with the school system made them reluctant to follow up with staff, or who did not speak English. Teachers also felt frustrated and disheartened by what they perceived as lack of parental involvement.

These difficulties notwithstanding, in a relatively brief period, schools in all the reform initiatives made substantial progress in implementing the structural elements aimed at improving the school environment. And in relatively short order, too, students came to perceive their schools as places where they felt better known and more cared about.

Challenge 2

Assisting Students Who Enter High School with Poor Academic Skills

Large numbers of students enter urban high schools poorly prepared for academic success. The National Assessment of Educational Progress (NAEP) — often referred to as "the nation's report card" — periodically assesses the performance of fourth-, eighth-, and twelfth-graders in reading, writing, geography, science, and U.S. history. Tabulations from the 2003 NAEP indicate that 43 percent of eighth-graders in large central-city schools read below even a basic level, with only "partial mastery" of the skills needed for proficient work at grade level.[20] Fully half of the eighth-graders performed below the basic level in math. Analyses conducted at MDRC with data sets from four large urban school districts show equally dismal results: In 1999, more than 75 percent of students entering the lowest-performing high schools in these districts had reading and math scores below grade level.

The developers of First Things First designed the initiative to be mounted in elementary and middle schools as well as in high schools so that students would acquire needed academic skills early on. As successive cohorts of students benefited from exposure to the reforms in the elementary grades, the developers reasoned, students would be increasingly prepared to take on — and demand — challenging work in high school. But during the study period, First Things First and Career Academies did not offer special courses to ninth-graders who had especially low academic skills.[21]

The Ninth Grade Success Academy Solution

Talent Development also includes a middle school model, but the high school initiative tackled the problem of low achievement among entering ninth-graders head-on. Its centerpiece, the Ninth Grade Success Academy, involved interconnected changes in scheduling and curriculum.[22]

Extended Block Schedules

Block scheduling — the lengthening of class periods from the standard 45 or 50 minutes to 80 or 90 minutes, in order to allow for in-depth coverage of the material and more engaging

[20]U.S. Department of Education (2005).

[21]After the MDRC study was completed, First Things First began to field-test a curriculum for struggling readers; it also began developing a pre-algebra curriculum.

[22]As noted above, CRESPAR also developed special curricula for use in tenth grade. This section focuses on the program for ninth-graders and its outcomes.

Take-Away Lessons on Assisting Students Who Enter High School with Poor Academic Skills

- A double-blocked schedule (with classes meeting daily for extended periods) is useful because it permits students to attempt and earn more credits per year than other scheduling arrangements.
- Semester-long, intensive "catch-up" courses that shore up ninth-grade students' skills in reading and mathematics appear to help students succeed in the regular curriculum, with gains in credits earned being sustained over time.
- The structured curriculum of catch-up courses, combined with longer class periods, may help ensure that students spend more time "on task" in these classes.
- Little is known about how best to assist and prevent dropping out among those students who struggle the most in ninth grade.

pedagogy — has become a common practice in high schools. Typically, these blocked classes are held every other day, meeting three times one week and twice the next (or vice versa). In Talent Development, academic classes were *double-blocked* — that is, students took four 90-minute classes that met daily — making it possible for students to cover what would normally be a year's worth of material in a semester. As a result, students in Talent Development schools could earn 4 full course credits each term, 8 credits each year, and 32 credits over four years of high school. In contrast, students in schools with traditional schedules could earn only 6 or sometimes 7 credits over the course of a year, or 24 to 28 credits over the four years.

Catch-Up Courses in Reading and Math

The extended block schedule made it possible for ninth-grade students to take intensive catch-up courses developed by CRESPAR during the first semester and to complete the regular curriculum during the second semester. Strategic Reading was designed to meet the needs of students reading two or more years below grade level. The course focused on listening skills, reading comprehension, and guided practice, along with a Student Team Literature program fostering cooperative learning in reading and language arts. Transition to Advanced Mathematics encouraged students to recognize connections between mathematics and the world beyond

the classroom. The curriculum included five units, each several weeks long, and combined whole-class lessons with differentiated individual and small-group instruction.

Students who took and passed the catch-up courses received one elective credit for each. The large majority of students in the MDRC study were deemed to need the courses, but those who did not could take other electives instead. Successful graduates of the catch-up courses then moved on to regular ninth-grade English and algebra courses. (In fact, ninth-graders were routinely scheduled to take algebra in Talent Development schools, whereas, in other schools, students with inadequate backgrounds in math might take a lower-level math course in ninth grade and then take algebra in a later grade.)

Freshman Seminar

As noted above in the discussion of Challenge 1, one goal of Freshman Seminar was to enhance students' interpersonal skills. Classes also covered various study skills that could strengthen students' prospects for academic success. Thus, students learned how to take notes in class and practiced strategies for managing their time effectively. Taking this course during their first semester of high school was intended to help new students negotiate the increased academic demands of high school.

The Evidence

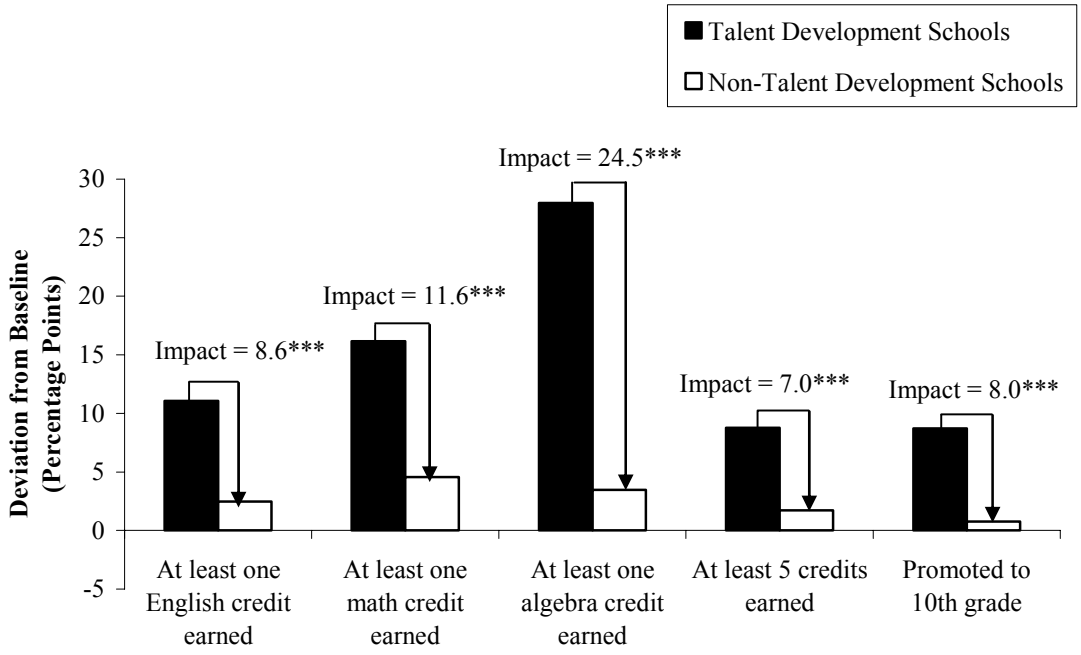
The Talent Development strategies appear to have succeeded in large measure. Figure 2 displays several indicators of that success. To begin with, the figure shows that first-time ninth-graders in Talent Development schools were significantly more likely than their counterparts in the comparison schools to earn at least one English credit and one math credit during their freshman year.[23] After Talent Development was implemented, the proportion of students in the program schools who earned at least one English credit rose by 11.1 percentage points over the baseline rate of 65.7 percent. Over the same time period, the proportion of students in the comparison schools who earned such a credit rose only 2.5 percentage points over the baseline proportion of 67.9 percent. The impact of Talent Development was, then, 11.1 minus 2.5, or 8.6 percentage points. Talent Development similarly increased the percentage of students earning at least one math credit by 11.6 percentage points above the percentage in the comparison schools.

Figure 2 also shows that Talent Development had an impact of 24.5 percentage points on the percentage of students earning a credit in algebra. First-year algebra is a "gatekeeper" course that students must take and pass — and whose concepts they must thoroughly understand — in

[23]These credits were awarded for completing the regular ninth-grade reading and math classes, not the catch-up courses, for which Talent Development students received only elective credits.

Figure 2

Impacts of the Talent Development High School Reform for First-Time Ninth-Graders



Baseline averages					
Talent Development schools (%):	65.7	56.1	33.1	53.3	59.0
Non-Talent Development schools (%):	67.9	65.0	45.2	57.7	60.9

SOURCE: MDRC calculations from individual students' school records from the School District of Philadelphia.

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

order to succeed in higher-level math courses in high school. And studies show that entering college and attaining a bachelor's degree are strongly correlated with taking upper-level high school math.[24] It is hard to know how much to attribute Talent Development's impact on algebra credits to the catch-up math course's helping them to pass algebra and how much the impact reflects instead the fact that ninth-graders in Talent Development schools were routinely scheduled to take algebra rather than being placed in lower-level math courses. Whatever the explanation, the results have positive implications for students' futures both in high school and beyond.

Finally, Figure 2 shows that ninth-graders in the Talent Development schools were also more likely to earn the five credits they needed for promotion to tenth grade than were their counterparts in the comparison schools. Across schools and groups of first-time ninth-graders, the average impact of Talent Development was an increase of about 7 to 8 percentage points in the percentage of students earning the credits required for promotion. Since, as noted earlier, being held back in ninth grade is a major predictor of dropping out, Talent Development's success in reducing the percentage of students required to repeat the grade is especially notable.

The gains that first-time ninth-graders in the Talent Development schools registered during their first year of high school gave them a head start that was sustained in subsequent years. By the end of what should have been their junior year of high school, a larger proportion of Talent Development students were, in fact, enrolled in the eleventh grade, and fewer had been held back than in the comparison schools. In terms of credit accumulation, too, Talent Development students were more likely to be on track toward graduation, and Talent Development had a significant impact on graduation for the earliest group of ninth-graders, whose progress could be followed long enough to ascertain whether or not they completed high school successfully. Finally, on the Pennsylvania System of Schools Assessment (PSSA), administered to all eleventh-graders in the state, the gains of students at the Talent Development schools surpassed those of students in the comparison schools in mathematics. These improvements were marginal among students in the early cohorts but were larger for students in later cohorts. (The differences in reading achievement are not statistically significant.)

It is impossible to be certain that, among the package of Talent Development components, it was the catch-up courses that account for these impacts, although it is reasonable to speculate that these classes provided students with the knowledge and skills they needed to succeed with the regular curriculum. One additional bit of evidence is suggestive, however. The First Things First model also called for double-blocked scheduling of English and math classes, and increased instructional time in English and math was put in place in most schools. But First

[24]This is true even when possible confounding variables relating to students' background characteristics and general academic performance are taken into account. See Adelman (1999); Horn and Bobbitt (2000); Rose and Betts (2001).

Things First students simply received more of the same — the regular English and math curricula — rather than special courses aimed at helping students acquire the skills that they had missed out on earlier. With one exception, there were no consistent positive impacts on achievement test scores at the First Things First expansion sites.[25] It seems logical to conclude that while double-block scheduling permitted extra time to be devoted to English and math instruction, use of the catch-up curricula in Talent Development helped ensure that that time would be used productively to fill learning gaps.

Despite these gains, two cautions are in order. First, by the end of the study, the majority of students in both the Talent Development and the comparison schools were still not where they needed to be to succeed in postsecondary education and employment. While Talent Development registered a statistically significant effect on math scores that grew over time, the large majority of students remained at the below-basic level in that subject and in English (where the program did not have an impact).

Second, the Talent Development impact story is quite different for students repeating ninth grade for a full year than for first-time students.[26] Program effects on the repeater group are not encouraging. Among repeating ninth-graders, Talent Development schools registered an increase in attendance of about 6 percentage points over the increase in the comparison schools. But repeating ninth-grade students in Talent Development schools were significantly less likely than their counterparts in the comparison schools to accumulate the credits needed for promotion to tenth grade, and, by the end of the third year of high school, they were significantly more likely to have exited the school system.

Implementation Successes, Challenges, and Open Issues

There was consensus that the catch-up courses were easy to implement and easy to teach. CRESPAR curriculum developers put considerable effort into creating these courses, and CRESPAR coaches helped teachers make effective use of the materials. And the courses appear to have helped first-time ninth-graders considerably. In summary, Talent Development's catch-up courses appear to constitute a viable and effective model for assisting many students who enter ninth grade with poor prior preparation.

[25]Unfortunately, the First Things First analysis did not examine impacts on credits earned.

[26]Not included in this group are students who were held back in ninth grade but earned enough credits to be promoted to tenth grade by the middle of their second year of high school.

At the same time, they are not a panacea. They help fortify weak basic skills, but only to a point; most students continued to register achievement test scores in the below-basic range. A full response to the problem involves not only instituting catch-up courses but also strengthening instruction at the elementary and middle school levels, so that the large majority of students entering high school will not need these courses at all.

In addition, neither the catch-up courses nor the intervention as a whole served particularly well those students who were required to repeat ninth grade for a full year. Although special settings and supports for repeating ninth-graders were planned, these were never consistently implemented in the Philadelphia schools. One open question, therefore, is how Talent Development — and, by extension, reform efforts more generally — can adapt curricula and structures to better meet the needs of students who do not succeed the first time around.

Challenge 3

Improving Instructional Content and Pedagogy

A central paradox of American education is that students from disadvantaged backgrounds, who arguably most need well-qualified and experienced teachers in order to remedy academic deficits and move forward, are least likely to get such teachers. An analysis of the 1999-2000 U.S. Department of Education Schools and Staffing Survey indicates that 29 percent of teachers in high-poverty high schools lacked a major in the field in which they were a teaching, compared with 21 percent of teachers in low-poverty high schools.[27] Twice as many students in high-poverty secondary schools as in low-poverty schools (26 percent versus 13 percent) were taught by a teacher who lacked certification in the subject.[28]

Teachers in high-poverty schools also have less experience than their counterparts in more affluent schools. A study of teachers in Philadelphia found that teachers at the highest-poverty high schools averaged 11 fewer years of teaching experience than those in lower-poverty schools.[29]

The Solutions

MDRC's studies of high school reforms do not speak to the issues of increasing the flow of well-qualified teachers into the labor market, nor of deploying skilled and experienced teachers to high-need schools. But they do address operational questions about how to improve the content and delivery of what is taught — through the use of new curricula and through professional development.

New Curricula

The catch-up courses for incoming ninth-graders that are integral to the Talent Development model offer the best example of the use of new curricula to improve teaching and learning. The discussion above of Challenge 2 views these from the perspective of the students.

It is important to emphasize, though, that the catch-up courses worked well for students in large part because they worked well for teachers. The curricula were designed for block scheduling, so that teachers had plenty of activities with which to fill lengthy class periods.

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[27] Jerald (2002).
[28] *Education Week* (2003).
[29] Neild and Useem (2002).

Take-Away Lessons on Making Instruction More Effective

- It may not be realistic to expect teachers to create their own curricula reflecting the themes of their small learning communities; instead, they are likely to benefit from well-designed curricula and lesson plans that have already been developed.
- Good advance training and ongoing coaching can help teachers make better use of even well-designed curricula.
- There is suggestive evidence that student achievement may be enhanced by professional development activities that involve teachers working together to align curricula with standards, review assignments for rigor, and discuss ways of making classroom activities more engaging.
- Both academic departments and small learning communities should be regarded as key venues for instructional improvement.
- If administrators want teachers' meetings to focus on instructional improvement, they must both provide guidance about how to do this and follow up to ensure that meeting time is used productively.

There were also ample printed materials and handouts available for teachers to use. In general, teachers found the classes easy to deliver. And teachers who wanted to could participate in summer training sessions and receive coaching assistance during the school year.

As noted above, First Things First is also developing catch-up courses for secondary school students who have low skills. IRRE has also worked to create an online resource of high-quality, standards-based curricular and assessment materials to which teachers at all schools participating in the initiative will have access.

Professional Development

Both Talent Development and First Things First placed considerable emphasis on professional development to improve instruction. In Talent Development, curricular coaches for literacy, math, and Freshman Seminar worked one-on-one with teachers, assisting them in making effective use of the block schedule and in using the special curricula successfully. The coaches modeled teaching approaches, sometimes team-teaching with individual teachers, sometimes working with small groups of teachers. Faculty members' use of coaching resources

was entirely voluntary, and because the special catch-up curricula were focused on the ninth grade (and in some schools the tenth grade), the coaches had only limited contact with upper-grade teachers. However, teachers at all grade levels who made use of the coaches' advice, knowledge, and training generally had high praise for their contributions.

IRRE's changing role in providing technical assistance in the area of instructional improvement offers an example of how the First Things First model and the thinking behind it have evolved over time. When First Things First was introduced into the Kansas City, Kansas, schools, the school district, with the encouragement of IRRE, launched several initiatives to improve instruction, including the announcement of a new literacy initiative and a new curriculum aligned with state standards. Central office staff and local representatives of the National Education Association also developed a guide identifying the characteristics of high-quality teaching and learning. The guide emphasized the importance of instruction that challenged students, connected with their experiences, and engaged them actively in learning. IRRE helped schools arrange double-blocked scheduling for language arts and math classes.

IRRE recognized a need to improve instruction at the expansion sites but, at the outset of the scaling-up demonstration, did not have a set of coordinated strategies for achieving this end. Instead, IRRE turned to consultants who had delivered professional development in the Kansas City, Kansas, school system. The consultants conducted a series of workshops on two related instructional strategies — the "read-aloud" and the "think-aloud"[30] — and supplied training in a set of cooperative learning strategies that involved paired or small-group learning and that sought to ensure that all students participated actively in learning. By design, these strategies emphasized learning structures rather than specific subject matter content; consequently, lessons that incorporated cooperative learning techniques were not necessarily intellectually challenging or aligned in content with state and local curriculum standards.

As the study period drew to a close, IRRE hired an experienced instructional coach to occupy a new position as Director of Instructional Supports. Under her guidance, professional development activities in First Things First shifted to a more comprehensive approach embodied by the acronym EAR: engagement, alignment, and rigor. Teachers were to: observe other teachers' classes for evidence of these attributes and discuss what they had seen; meet to examine student work to determine the rigor of the assignment and students' responses to it; and work to align course content with state and district standards. Finally, IRRE designed a set of

[30]In a read-aloud, the teacher models fluent reading of fiction or nonfiction passages as a way of engaging students with text, exposing students to the rhythms of the English language, and demonstrating enjoyment or learning from the act of reading. In a think-aloud, the teacher models the process of gathering meaning from text — for example, determining the main idea and the author's purpose, using prior knowledge to create new knowledge, and recognizing that reading creates new questions for the reader to answer.

instruments for measuring engagement, alignment, and rigor in classrooms; the instruments were pilot-tested by instructional leaders in Kansas City.

By the end of the scaling-up demonstration, then, the expansion sites were moving toward the same instructional improvement objectives that had guided Kansas City, Kansas: lessons that were challenging, engaging, and tied to state and local standards prescribing what students should know and be able to do.

The Evidence

None of the three evaluations measured classroom teaching in a way that would permit analysis of either the direct relationship between professional development and instructional quality or the direct relationship between instructional quality and student achievement.[31] But changing both the content and the quality of instruction, especially in reading and math, was a central objective of the two initiatives that had a notable impact on student achievement (Talent Development in Philadelphia and First Things First as implemented in Kansas City, Kansas, and one Houston high school). In contrast, Career Academies did not have instructional improvement in these core subjects as a goal and did not register effects on achievement.

The discussion above of Challenge 2 presents findings strongly suggesting that Talent Development's catch-up courses helped students accumulate needed course credits and advance toward graduation. Teachers reported that professional development offered by the program developers helped them deliver the catch-up courses more effectively.

Just how professional development activities contributed to student achievement in First Things First is harder to assess. But the fact that professional development efforts emphasized different aspects of instruction as the initiative unfolded — when considered together with the differences in impact findings between Kansas City and most of the expansion sites — provides suggestive clues. It is notable that the expansion-site high school that made the greatest progress in realizing IRRE's most mature vision of professional development, and at which "professional learning communities" of teachers were most fully developed, also had positive impacts on student reading achievement. Another conclusion that seems reasonable is that — as in Kansas City, Kansas — professional development that emphasizes alignment of the curriculum with standards, student engagement, and challenging, rigorous coursework is more likely to yield impacts than professional development that centers mostly on engagement, which was the case for two out of the three years at the expansion sites. In other words, it is not enough to have students involved in

[31] A classroom observational study was conducted as part of the First Things First research, but it was designed to produce aggregate, not school-specific, data. Moreover, observations did not continue into the final year of the study.

their work; they must be involved in work that stretches and expands their skills and knowledge. Data from the First Things First Classroom Observation Study indicate that, during the initiative's first years at the expansion sites, the large majority of lessons were not very intellectually challenging, and this was true even when teachers used cooperative learning structures.

Implementation Successes, Challenges, and Open Issues

A key question related to professional development for teachers is: Should professional development activities focus on content or on pedagogical strategies? The answer suggested by these studies is: Both. The two go hand in hand.

The Talent Development's catch-up courses entailed important content and suggested effective ways for teachers to deliver that content. The courses illustrate the benefits of providing teachers with a strong curriculum that can essentially be "dropped into place" as a means of improving instruction. It may simply not be realistic to expect most teachers to spend time conducting all the content research, activity-planning, field-testing, and revising required to create high-quality, standards-based instructional units.

In support of this conclusion, the Career Academies evaluation found that the instruction that students received in their core subjects was substantially similar in and out of the Academies; Academy teachers seldom altered the standard curriculum to reflect the Academy's themes. The situation was similar in First Things First. As the initiative's planners conceived of it, one advantage of having theme-based small learning communities was that teachers could relate the subjects they were teaching to these themes and thereby appeal to students' expressed interests. But although some teachers were able to link their lessons to such themes and some communities were able to develop interdisciplinary theme-based units, in general efforts at thematic instruction were sporadic and infrequent. Teachers explained that their meetings during common planning time were absorbed by other topics, and some could not find a way to relate their small learning community's theme to the subject matter they were teaching.

If introducing a good, ready-made curriculum into a school is considerably easier than having teachers create it, administrators must nonetheless be willing to make the investments in training and resources that are needed for the ready-made curriculum to be effective. Thus, the Talent Development catch-up courses were generally well-implemented not only because the curricula themselves were carefully designed but also because CRESPAR trained teachers on their use. Along with training, schools must also allocate funds to purchase the supplies that accompany the curriculum — workbooks, worksheets, supplemental readings, and so on — so that resources will be readily available when needed.

The First Things First experience further suggests that it is easier to mount professional development activities aimed at improving alignment than ones geared toward making instruction more engaging or more rigorous. At a time when schools are under intense pressure to improve outcomes and meet accountability standards, administrators and teachers have a vested interest in making sure that classes cover material that will be included on state tests. While some schools had begun to align the curriculum with standards before the inception of First Things First, IRRE's technical assistance spurred further work in this area.

Improving engagement and rigor is harder, because teachers must be willing to alter not just *what* they teach but *how* they teach — increasing the demands they place on students and themselves. There is some reason to believe that professional development on how to teach in a more engaging, more rigorous way is best received when teachers can readily see how the new instructional methods apply to their particular disciplines. The training on cooperative learning strategies that First Things First teachers received in the first two years of the demonstration placed relatively little emphasis on embedding these strategies in content areas; consequently, some teachers could not figure out how to use them in their own classes. After one school improvement facilitator modeled how the methods could be integrated into math classes, math teachers began to see how cooperative learning activities could enhance instruction.

First Things First planners had originally seen the small learning community, rather than the academic department, as the principal locus for working on instruction both across disciplines and among teachers of the same subjects within a community. This was, in part, because IRRE wanted teachers to identify with the small learning community — a student-focused entity — rather than with the subject-centered academic department. Moreover, IRRE planners were aware that small learning communities broke down walls of isolation for teachers as well as for students and that many teachers valued the experience of working with colleagues whom they had not previously known. Thus, small learning communities appeared to be a relatively safe environment for discussing sometimes-sensitive issues of instructional practice. Finally, IRRE reasoned that because small learning community members would share collective responsibility for their students' academic success, they would have a vested interest in helping each other improve as teachers.[32]

[32]This expectation may be unrealistic. Field research interviews suggest that teachers in the small learning communities were well aware that some of their colleagues were not very good teachers. Although other community members occasionally offered help to a colleague who appeared to be struggling in the classroom, teachers felt strongly that it was the responsibility of school administrators to assist and, if necessary, to dismiss teachers who were doing a poor job. While teachers sometimes resented the presence of weak colleagues, they resented even more that administrators seemed willing to tolerate bad teachers rather than do the hard work of helping them improve or getting rid of them.

Over time, however, IRRE came to see that departments, as the repository of content-related pedagogical expertise, have a critical role to play in instructional improvement efforts. (For example, because curricula are discipline-specific, discussions about alignment occurred mainly in the academic departments rather than in the small learning communities.) The issue is not which venue is more appropriate as *the* locus for instructional improvement but how professional development activities can capitalize on *both* kinds of organizational structures.

A final lesson from the First Things First experience is that, whether the department meeting or the small learning community meeting is the setting for discussions of instructional improvement, it is useful for program developers or school administrators to provide teachers with guidelines and instructions about how to spend their meeting time toward this end. Monitoring is also important. The principal of one high school assigned each assistant principal oversight responsibility for two of the school's small learning communities. The assistant principals regularly chaired the community meetings and, by all accounts, kept members on task and using their time together productively. By the end of the demonstration, researchers judged that this school had developed a true professional learning community, an ethos of ongoing collegial consultation, and what might be called "a culture of continuous improvement."

Challenge 4

Preparing Students for the World Beyond High School

In the days when graduating from high school ensured a decently paying job, high school principals and teachers could consider their work done if they succeeded in shepherding students through to graduation. Those days are past, and a postsecondary credential is now virtually indispensable for jobs paying middle-class wages. In the third quarter of 2005, the median weekly earnings of full-time workers with a bachelor's degree or higher were $1,014, while median earnings for workers with only a high school education were $583; graduating form college or attaining an advanced degree thus yielded a wage premium of 74 percent.[33] Moreover, nearly 76 percent of those with a four-year college education hold jobs, compared with only 60 percent of high school graduates.[34] There is widespread acknowledgment that high schools need to produce graduates who have the knowledge, experience, and skills needed to gain admission to college or, if students opt not to attend college, to find good jobs.

Teens attending large urban high schools face many disadvantages when it comes to getting into college. Aside from low incomes and marginal academic skills, they often do not know the courses they need to take to meet college entrance requirements, and overstretched guidance counselors do not ensure that students enroll in the required classes. Students also need to know how to go about researching and pursuing financial aid options available to them but may not receive the individual attention and "handholding" that they need to complete the college and scholarship application process.

When it comes to securing good jobs, teens in poor neighborhoods are also at a disadvantage. Many lack the social networks that would help them connect with higher-paying employers. And the problem-solving and teamwork skills employers increasingly demand are often not taught in the large comprehensive high schools that such students typically attend. According to the Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS), in 1991 fewer than half the youth in the United States had acquired the skills and knowledge required for meaningful and productive work in the labor market.[35]

A further problem is that, despite pressures to improve student achievement and to make all students ready for college, many high schools continue to offer two separate courses of

[33]U.S. Department of Labor, Bureau of Labor Statistics (2005b).
[34]U.S. Department of Labor, Bureau of Labor Statistics (2005a).
[35]U.S. Department of Labor, Secretary's Commission on Achieving Necessary Skills (1991).

Take-Away Lessons on Preparing Students for the World Beyond High School

- Earnings impacts for young men in Career Academies appear to be linked to career awareness activities and work internships during high school.
- The potential benefits of partnerships between high schools and employers can be more fully realized when these partnerships are more structured and when schools can designate a full-time, nonteaching staff person to serve as a liaison with employers.
- It may be necessary to improve the academic component of Career Academies in order to raise students' achievement on standardized tests and help them secure admission to college.

study: one featuring higher-level academic classes for students who are college-bound and another offering lower-level academic classes and vocational classes to those who are presumed not to be college-bound. This arrangement parallels and perpetuates class, racial, and ethnic differences in education and employment outcomes for students and in the larger society.

The Solutions

Among the initiatives considered in this report, Career Academies are most clearly oriented toward the goal of helping students prepare for a productive future after they leave high school.[36]

[36]Although the other program models were more immediately geared toward ensuring students' success in and graduation from high school than in helping them plan their post-high school future, it is worth recalling that ninth-graders in Talent Development schools were routinely scheduled for algebra — an important prerequisite for upper-level high school math classes and, ultimately, for college admission. The principal of one First Things First high school also helped ensure that students took courses needed for graduation and beyond by linking course counseling to the Family Advocate System: He made family advocates responsible for reviewing students' transcripts and helping them plan their future course-taking. This system relieved an overburdened guidance office. More important, perhaps, is that it required all those serving as family advocates — almost all the teachers in the school — to become thoroughly conversant with the requirements for high school graduation and for college admission, a topic about which many teachers had previously known little. The teachers were sometimes surprised to discover that students who believed that they were due to graduate on time were missing required courses or had an insufficient number of credits; the teachers' intervention helped ensure that students got back on track.

Consequently, the Career Academies program strategies and evaluation findings are the focus of this section.[37] Two such strategies are especially important: creating an integrated academic and occupational curriculum and establishing partnerships between high schools and local employers.

Creating an Integrated Academic and Occupational Curriculum

In keeping with their goal of offering high-quality preparation both for college and for entry into the workforce directly after high school, Career Academies require students to take a combination of academic and vocational courses. The curriculum each year typically consists of three or more academic courses and at least one occupation-related course that focuses on the academy's career theme. The occupational courses are broadly structured around whole industries: Health Academies, for example, try to expose students to diverse medical occupations in the areas of direct care, technology, and administration. Thus, enrollment in a Health Academy is intended to be as appropriate for a student who has ambitions of becoming a doctor as it is for someone who is interested in being an X-ray technician or an office assistant in a hospital.

Core academic courses (English, mathematics, and so on) are intended to reflect the theme of the Academy. In the schools participating in the evaluation, however, researchers found that academic courses in the Academies were virtually indistinguishable from courses in the rest of the school, in either content or mode of presentation.

Establishing Employer Partnerships

The partnerships that Career Academies forge with local businesses constitute a major program feature. The goal of these partnerships is to involve employers in sponsoring career awareness and work-based learning activities for students and, more generally, to ensure that the employers' perspective informs Academy decision-making.

Each Academy in the MDRC evaluation offered a variety of activities designed to enhance students' understanding of the world of work in general and their knowledge of occupations within the academy's broad career themes. Some career awareness activities — field trips and opportunities to "job-shadow" adults at work for a day — took place outside of school. Other activities typically occurred in school: researching jobs and their requirements as a class assignment or receiving instruction or counseling about how to find a job or act on the job. Academies also sponsored events at which adults came to the schools to talk about their work.

[37]The Talent Development model calls for students in grades 10 through 12 to be enrolled in Career Academies. The Career Academies in the Philadelphia high schools where Talent Development was evaluated were highly variable, however, and did not necessarily adhere closely to the Career Academies model evaluated by MDRC. Thus, for example, some Philadelphia Career Academies were designated for higher-achieving, college-bound students, while others were not very different from traditional vocational education programs.

The businesses provided students with work experiences — summer internships and jobs during the school year — that were intended to teach practical skills, inculcate proper workplace behavior, and point out pathways to careers within the Academy's theme occupation. The broader goal of these work experience positions was to show students how their education fit into the world of work. Local employers also served, along with representatives from the Career Academy and the school district, on an advisory board that guided policy and created strategies for combining classroom- and work-based learning.

The Evidence

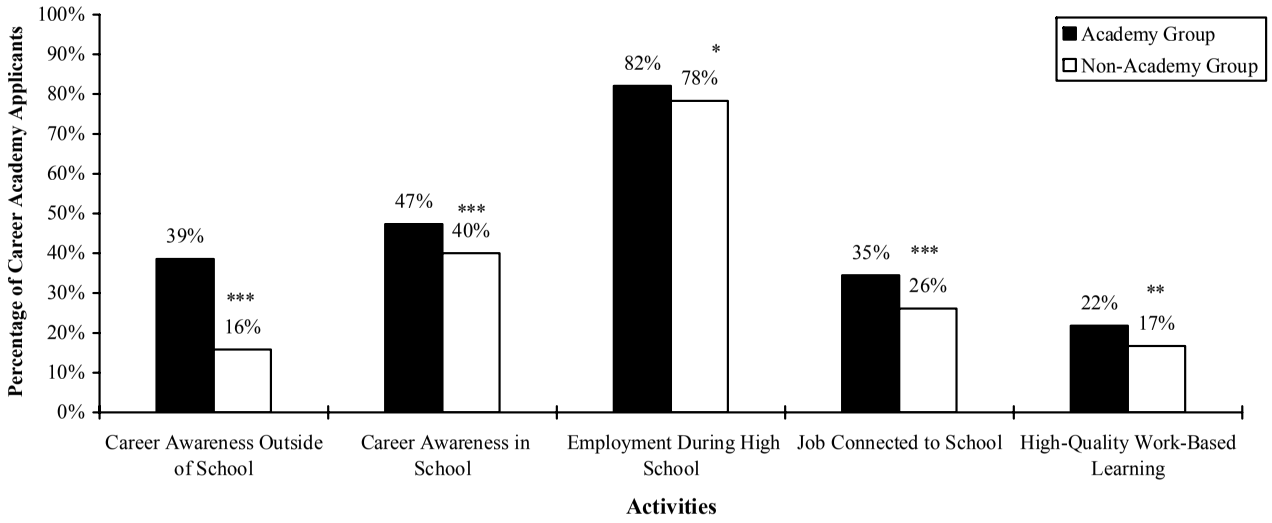
The Career Academies study provides powerful evidence from a random assignment evaluation that being in a Career Academy positively affected students' work-related experiences both in high school and beyond. Students who applied for admission to the Career Academy were randomly assigned to either the Career Academy group or a control group. Both groups completed surveys during their twelfth-grade year and four years after their scheduled graduation and were asked about a broad range of school- and work-related experiences during high school and afterwards. Because of the random assignment process, the comparison between Academy and non-Academy groups provides a reliable estimate of the extent to which the Career Academies increased participation in career awareness and work-based learning while students were in high school, as well as college attendance and labor force participation after high school. In interpreting the data, it is important to recognize, however, that students in the Academy group had varying degrees of exposure to the Career Academy programs: Some remained in these programs throughout high school; others enrolled for one or more semesters and then left; and some never enrolled at all.

Figure 3 presents the findings. The results indicate, first, that the Academies increased rates of enrollment in career-related courses but did not reduce students' academic course-taking. Furthermore, although some non-Academy students also participated in career awareness and work-based learning activities, the students who had an opportunity to attend an Academy participated more frequently and more intensively than non-Academy students.[38] Finally, and importantly, relative to students in the non-Academy group, students in the Academy group were also more likely to work while they were in high school, and they were more likely to work in jobs that were connected to school and that offered opportunities to learn new skills. The sobering flip side of these encouraging data is that over half the students who were selected

[38]In fact, Career Academy students were engaged in these activities at levels that were equivalent to or higher than participation rates found in other school-to-work initiatives.

Figure 3

Impacts of Career Academies on Participation in Career Awareness and Work-Based Learning Activities for the Career Academy Applicant Sample, by Research Group



SOURCE: MDRC calculations from the Career Academies Evaluation 12th-Grade Survey.

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

to enroll in an Academy never participated at all, left quickly, or did not take part in career awareness or work-based learning activities for some other reason.

The Career Academies study clearly illustrates the benefits of long-term follow-up in program evaluation. The research has continued to track the educational and employment experiences of members of the Academy and control groups after they left high school. During the first four years after their scheduled graduation, young men in the Academy group registered positive and sustained impacts on a range of labor market outcomes. Figure 4 shows that the Career Academies increased earnings for young men by an average of $212 per month, or more than $10,000 over the 48-month period — an 18 percent increase over control group members' average earnings. The higher earnings resulted from the combined impacts that the programs had on the number of months employed, hours worked per week, and better wages. In other words, Career Academies helped the young men obtain better-paying jobs and jobs at which they worked for more hours. The Career Academies' impact on earnings for young men is substantially larger than the roughly $100-150 difference in monthly earnings that has been found in other research comparing the earnings of young workers with one or two years of postsecondary education with those of their counterparts who have only a high school diploma or a General Educational Development (GED) certificate.[39]

Employment impacts were greater for students who entered the programs at high or medium risk of dropping out than for those at low risk. (Members of the low-risk group, in contrast, made a greater investment in postsecondary education during the follow-up period.) The Career Academies had no impacts on labor market outcomes for young women, perhaps because, relative to the young men, young women were also more focused on postsecondary education or on taking care of children.

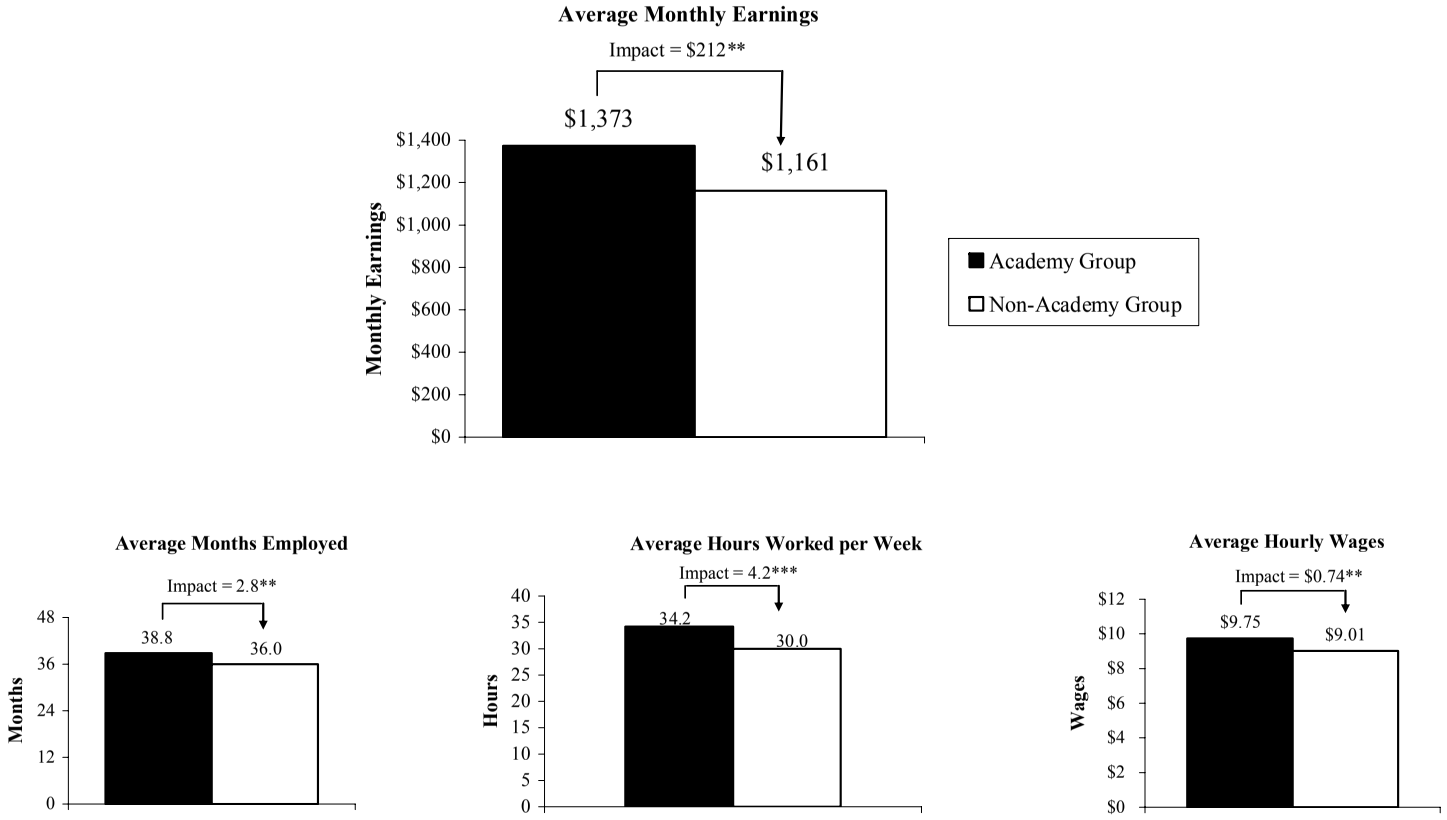
While there is strong evidence that the Career Academies improved work-related outcomes for many students, there is no evidence that they improved educational outcomes. They did not boost scores on achievement tests, nor did they have an impact on students' rates of graduation from high school or entry into postsecondary education. It should be noted, however, that, relative to similar students nationally, students in both the Academy and the non-Academy groups graduated at high rates. It may well be that, having voluntarily sought admission to the Career Academies, students in the study sample made up a relatively high-performing and motivated group, even though the schools they attended were relatively low-performing.

The data showing that Career Academies affected work-related outcomes but not educational ones — combined with the finding that academic courses in the Academies were very similar to courses outside the Academies — suggest that the program's academic courses did

[39]Pond, Sum, Mykhaylo, and Meredith (2002).

Figure 4

Impacts of Career Academies on Average Monthly Earnings and Components of Earnings for Men



SOURCE: MDRC calculations from the Career Academies Evaluation Four-Year Post-High School Follow-Up Survey.

NOTES: Measures reflect averages over the 48-month period following scheduled high school graduation for each sample member. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; and * = 10 percent.

not contribute much to program impacts. The Career Academies experience corroborates the conclusion that unless reform initiatives improve instruction, it is unlikely that they will register increases in student achievement. Rather, it appears that the vocational courses and employer partnerships were the critical contributors to the program's positive effects on employment. A reasonable speculation is that Academy students were able to parlay the job knowledge and additional work experience that they had gained in high school into better jobs after they left school.

Implementation Successes, Challenges, and Open Issues

Each Career Academy participating in the study was able to engage a group of local employers in an ongoing effort to support the Academy programs and to sponsor diverse work-related activities for students. To do so, the Academies used a wide range of strategies. Analyses indicate that, in combination, three broad sets of strategies were particularly important for generating student participation in a wide range of career awareness and work-based learning activities.

First, student participation was greater in those Academies with highly structured approaches to sustaining employer partnerships. Each of the Academy partners in these sites was required to make a concrete investment in the program by providing financial or in-kind support; the sites also established formal advisory boards that met regularly to focus and coordinate employer support for the programs. At sites that did not establish such structured relationships, the level of employer involvement was more likely to fluctuate from year to year.

Second, participation was also greater at sites that were able to support a full-time, non-teaching coordinator to be the liaison between the Academy and the employer partners and to manage the employer-sponsored activities. With no teaching responsibilities, the coordinator had a flexible schedule and could accommodate meetings with members of the employer advisory group, budget meetings, and fund-raising activities, along with other administrative work in the field. In contrast, at sites that relied on Career Academy teachers to serve as the primary liaisons with the employer partners, classroom and other responsibilities sometimes prevented the liaisons from engaging employer partners on multiple levels and from developing a wide range of high-quality activities.

Finally, students reported benefiting more from their work internships when their Academies provided more preparation to both employers and students both before and during these work-based learning activities. Employers were encouraged to expose students to as many aspects of their industry as possible, while students were instructed on general expectations in the workplace, including dress codes, decision-making and accountability norms, and "unwritten" rules for advancement. In contrast, at Academies where employers and students received less formal preparation, there was more variation in the learning value that students and employers attached to these activities.

In short, one challenge confronting Career Academies was to allocate resources — time and personnel — for the planning and ongoing monitoring needed to make the Academies maximally effective.

A second challenge that the Career Academies faced was to build connections between learning in the classroom and at work and to strengthen instruction in the core courses more generally. Some students reported using math, reading, or computer skills in their work experiences, but these applications were seldom related to academic courses that students were taking. Several Academies developed school-based projects that asked students to solve work-related problems, but these problems were often theoretical rather than related to students' actual work experiences.

Encouragingly, the National Academy Foundation, which represents and provides technical assistance and support to a large number of Career Academies across the nation, has taken heed of these research findings and has used them to bolster its efforts to strengthen the academic component of the program model. The Foundation has provided support to Academies to increase the academic rigor of courses, so that students will be able to pass state assessments and high school exit examinations as well as to gain admission to college. The National Academy Foundation's work provides a powerful example of how evaluation can guide and improve practice.

Challenge 5

Stimulating Change

The previous sections suggest that both promoting personalization and improving instruction are critical to fostering success among students who would otherwise be disaffected from high school. Small learning communities and faculty advisories give students a sense that their teachers care about their learning and their lives. New instructional content and pedagogy help students learn. Putting in place the structural and instructional changes that lead to more personalized, academically challenging environments represents a new endeavor for many schools. While raising the quality of instruction appears to be the most demanding of these new changes, all the reforms are hard to implement and to sustain.

This section moves beyond the *contents* of high school reform to consider the *process* of reform. It addresses a challenge that encompasses and transcends the challenges examined in the four previous sections: how to introduce change into high schools and make it stick. The discussion below draws on the experiences of the comprehensive reforms considered throughout this document. But the implementation lessons that these ambitious initiatives offer to policymakers and administrators are likely to apply as well to less far-reaching efforts to reform overstressed high schools.

One such lesson is that substantial investments of time, energy, and know-how are required on the part of those charged with designing change and putting it in place. This fact gives rise to a crucial question: Should districts and schools join forces with a reform model — a Talent Development or a First Things First — and rely on the expertise of model developers, or should they create reforms on their own? While this report can give no authoritative advice on the issue, it presents a list of questions that administrators might ask themselves to decide which strategy is more appropriate for their districts or schools.

The section then considers other implementation lessons arising from the histories of the three reform initiatives discussed here. One lesson is that reform efforts that receive the formal endorsement of the district are more likely to be sustained over time. It is also important to give the interventions time to work and to have both high aspirations and realistic expectations concerning the magnitude of impacts that can be expected.

The Reform Model: Buy It or Build It?

Should schools and districts change by buying into one of the comprehensive reform models described in this report? Or should they assemble their own distinctive reform initiatives

Take-Away Lessons on Stimulating and Sustaining Change

- Creating effective change demands an investment of personnel resources.
- In deciding whether to adopt a comprehensive reform model or add new components to existing programs, school and district administrators should consider the adequacy of what is already in place and the capacity of local personnel to envision and implement change.
- Strong support of the initiative by the school district helps to ensure effective implementation and the reform's continuing existence.
- It is important for policymakers and administrators to avoid jumping from one reform to the next; instead, they should stay the course until initiatives have been put in place long enough and well enough for their effectiveness to receive a fair test.
- It is important to have high ambitions but also reasonable expectations about the size of impacts that reforms can produce.

that combine structural changes to create more personalized environments with instructional changes to improve achievement?

The MDRC studies of whole-school reforms cannot directly answer this question, since they evaluated models, not assemblages of components. This distinction is important. In signing on to be part of a reform like Talent Development or First Things First, schools bought not just consultants with technical expertise but also people steeped in a philosophy of school reform, with a vision of how elements of that reform were intended to fit together and complement one another. Such a vision lent coherence and unity to what otherwise might have functioned as a set of disparate components.

Thus, schools that put together their own reform packages would not necessarily achieve impacts similar to those of Talent Development in Philadelphia or First Things First in Kansas City, Kansas. They might, or they might not.

Moreover, strong outside technical assistance and professional development services were unquestionably important to the success of Talent Development and of First Things First in Kan-

sas City, Kansas.[40] Indeed, some key figures in the Philadelphia and Kansas City, Kansas, schools maintain that the program developers' involvement was indispensable. In Talent Development, CRESPAR curriculum developers and school reform experts supported the work of a small implementation team at each school. The involvement of a local intermediary — the Philadelphia Education Fund, a not-for-profit organization that had worked collaboratively with the district and with individual schools for many years — also strengthened the implementation effort.

The First Things First districts and schools that were most successful in implementing the reform and in boosting student achievement were the ones that drew most heavily on IRRE's assistance. IRRE's president and founder was on the scene in Kansas City, Kansas, through the planning period and early implementation years in the district. Visiting the district approximately every six weeks and available by phone between visits, he provided ongoing support and advice to the superintendent, other district administrators, principals, school-based reformers, and teachers. The First Things First expansion-site high school that registered notable increases in student achievement had a principal who turned regularly to IRRE for encouragement, assistance, and a sounding board.

All this notwithstanding, some low-performing schools may decide that they do not need to adopt a comprehensive model because they already have some of the pieces in place. Some may not want to turn to an outside developer, for political or other reasons. And some may not be able to afford a comprehensive reform model.[41] Instead, these schools may opt to institute specific structural or instructional components to fill in what they are missing.

In order to choose the course of action that is most appropriate for their districts or schools, district and school administrators may want to ask themselves a series of tough questions, enumerated and discussed below.[42]

1. In tackling what has to be done, are we starting from scratch?

Putting in place even one of the structural and instructional changes discussed in the previous sections (small learning communities, family advocacy, catch-up curricula, thematic instruction, business partnerships) would be a new and major undertaking for many schools and

[40]Some Career Academies participating in the MDRC evaluation also received modest technical assistance (typically in the form of summer institutes or new curricula) from the Career Academy networks to which they belonged.

[41]In this regard, it is useful to know that CRESPAR estimates the per student cost of implementing Talent Development (including technical assistance costs and the costs of its math and reading curricula and materials) at $250-300 per year. IRRE estimates the per student cost of First Things First at approximately $100 for the first year and less thereafter. These figures exclude the cost of school improvement facilitators, coaches, or other personnel employed by the district and working to implement the reform initiatives in district schools.

[42]It should be noted that these questions are rooted in researchers' insights and in "practical wisdom" but have not been field-tested.

districts — one requiring expertise, inventiveness, and interpersonal skills on the part of the designated change agents. Putting in place the range of reforms needed for many disadvantaged students to succeed would be even more challenging.

If school districts or individual schools have not implemented any of these structural or instructional changes, their best course of action might well be to turn to the developers of comprehensive reforms like Talent Development or First Things First. Such sites could benefit from the developers' accumulated experience and expertise in putting in place interventions involving multiple components with maximum efficiency. Without the involvement of an outside party, change across so many areas is likely to create formidable challenges and delays for sites seeking to go it alone.

2. If we've put some structural or instructional reforms in place, are we satisfied with how they are operating?

If there is general dissatisfaction with the progress of the new reforms, then leaders might well consider starting all over again and turning to one of the comprehensive school reform models. In other instances, however, schools and districts may have successfully implemented some important reform elements, while other changes remain on the drawing board. Under such circumstances, the principle "If it ain't broke, don't fix it" might well obtain. For example, a school with well-functioning small learning communities but a weak instructional program might want to concentrate on instructional improvement rather than implement a whole-school reform that requires reconfiguring its small learning communities.[43] Alternatively, a school with new and apparently successful mathematics and reading curricula might want to focus on strategies for creating closer teacher-student relationships.

3. Is there internal capacity in the district or school to design and implement a new reform?

Leaders must take an unflinching look at the capacity of district- and/or school-level staff members to put a reform — even a limited one — in place. Do these individuals have, or can they develop, a vision of what needs to be done? Can they design, put in place, and monitor a set of concrete actions for realizing that vision?

In some districts (especially smaller ones that have only a modest cadre of central office staff), an honest answer to that question is "Probably not." In these settings, staff members may

[43]In the Enhanced Reading Opportunities study, MDRC is examining just such an initiative: Catch-up reading curricula for ninth-graders are being implemented in high schools that have already established small learning communities. MDRC is assessing the impacts of these curricula on reading scores and on academic achievement more generally.

have so many day-to-day responsibilities that they cannot step back to see the full picture. They may recognize that problems exist but not see potential solutions. Or they may not be effective change leaders. In such cases, it makes sense to turn to outside experts — to developers of model curricula or to consultants who can design and implement structural changes.

Other districts have the resources to employ staff members with a wider field of vision, who can diagnose what needs to change and can identify workable approaches, along with instructional coaches and other skilled change facilitators. If these capacities exist, then relying on district personnel to create and implement change may help to ensure that the reform fits local needs. Home-grown reforms may also encounter less resistance than reforms introduced from "the outside."

4. Even if we have the capacity to change, do we have the time?

Developing a vision of the changes that need to take place and how they fit together — as well as a plan detailing how these changes should be implemented, in what order, and within what time frame — takes time. In schools feeling the pressure to make immediate improvements, time is a scarce resource. Looking to the expertise of outside developers may help to ensure that reform gets off the ground more quickly.

Whether districts and schools turn to external or internal developers, they should not underestimate the number of "extra" people required to implement the reforms effectively. Each Talent Development and First Things First school, for example, had a full-time staff member responsible for guiding the reform's implementation at that school; in Talent Development, part-time coaches also helped ensure that the catch-up curricula for reading and math and the new curriculum for Freshman Seminar were put in place effectively. Similarly, the Career Academies that were most successful in securing strong employer involvement had full-time nonteaching coordinators who served as liaisons with local businesses. These new staff positions add to the cost of implementing reform; but attempting to save money by not hiring additional staff members is almost certain to make implementation less effective.

District Support

Whether district personnel or outside experts create the reforms, the evidence of these three studies suggests the importance of district support for strengthening and sustaining reform efforts. Again, the Kansas City, Kansas, story is instructive. From the outset, the school district viewed First Things First as its major school reform initiative, and key district leaders took thorough ownership of the reform. This meant that central office policies were consistently developed or modified to support successful program implementation. The central office leadership also exerted pressure on the schools to operate in conformity with First Things First's prin-

ciples. It reorganized the central office hierarchy to create two Executive Directors of Instruction, each responsible for overseeing two high schools and their feeder middle schools and elementary schools. The two executive directors spent a considerable amount of time in the schools under their supervision, conferring with school administrators, visiting classrooms, and acting in other ways to identify issues, propose solutions, and generally monitor goings-on at the school level. This combination of supports and pressures has remained in place for nearly a decade, with First Things First commanding the allegiance of four different superintendents.

District endorsement is not a guarantee of support. In one First Things First expansion site, the superintendent's endorsement was not always backed up by the actions of key central office staff. In another, First Things First was officially the district's reform of choice, but the central office essentially ignored it for over a year.

But the Talent Development experience exemplifies ways in which lack of either formal endorsement or direct institutional support from the school district can undercut a reform. While the School District of Philadelphia had responded positively to CRESPAR's proposal to introduce Talent Development into high schools in the city, no formal agreement was ever signed, nor did the initiative receive clear support from the district. This informality was beneficial in the short run, as it afforded the developers considerable latitude in working with schools. In the longer term, however, lack of district recognition of Talent Development as a "model of choice" may have impeded the thoroughness and consistency of the initiative's implementation. For one thing, the district adopted a new standardized curriculum that drew attention and resources away from efforts to align the schools more fully with the Talent Development model. For another, Talent Development had to justify its existence all over again every time a new principal was appointed. Finally, as of this writing, the developer's continued role in the School District of Philadelphia remains unclear, although the district has pledged to incorporate some of the best practices of Talent Development in its own high school reform initiative.

Time

Another critical resource is time — time to put reforms in place, allow them to work, and detect their effects.

Planning time is a key consideration in instituting reform. Both First Things First and Talent Development schools benefited from a planning year during which the schools worked closely with the program developers to lay the groundwork for the structural and instructional changes that were rolled out with actual implementation. The planning year was crucial for building understanding of and support for the initiatives among school staff members and preparing them to do things in a new and different way.

Reforms also need time to reach a state where they are functioning more or less as planned and for them to register effects. Sometimes such effects appear relatively quickly: One First Things First expansion-site school, for example, had a positive effect on achievement in reading at the two-year point. And sometimes reforms can produce impacts without being fully operational. Talent Development registered impacts on the rate of promotion to tenth grade in its first year of operation in Philadelphia, although schools had not yet developed well-functioning Career Academies in the upper grades. But positive early effects cannot necessarily be expected.[44] In this regard, it is notable that — in a review of the effectiveness of comprehensive school reforms in improving student achievement — experts concluded that schools implementing such models for five years or more had stronger effects than those with briefer periods of implementation.[45]

Here, the results of the Career Academies evaluation are worth recalling. Career Academies produced positive impacts on students' school attendance, exposure to career awareness activities, and employment while in high school. Those looking for effects on the standard measures of educational success would be disappointed: There were no effects on achievement test scores and rates of high school graduation and entry into postsecondary education. But when the study participants were followed up four years after their scheduled graduation from high school, participation in the Career Academies was found to markedly improve the earnings of young men, a group that has experienced a severe decline in real earnings in recent years. An early judgment about the effectiveness of the approach would have missed this critical finding.

Giving a reform the time needed to become effective is especially important in districts and schools that change their leadership with some frequency. It is tempting for new leaders to dispense with initiatives instituted before they took charge and to introduce instead a reform on which they can put their own imprint — tempting, but not necessarily wise. For a period in Riverview Gardens, Missouri, new administrators turned away from First Things First, and implementation largely ground to a halt in the district's schools. Unless there is concrete evidence that a reform is *not* working, it may be better to stay the course than to introduce a new, untested initiative that requires starting all over again.

[44]Unfortunately, the impact evaluation that was conducted in Kansas City, Kansas, provides little guidance on just how long a period is needed to produce program impacts. Because Kansas introduced a new state test after First Things First began operations in Kansas City, there is no way of knowing whether impacts would have been detected had it been possible to measure results after just one year.

[45]See Borman, Hewes, Overman, and Brown (2003).

High Aspirations and Reasonable Expectations

The three initiatives under study here share an ambitious goal: to ensure that all students graduate from high school and are prepared to succeed in postsecondary education or the labor market. The results presented above make it obvious that none of the initiatives has yet succeeded in achieving this goal.

Policymakers, program administrators, and funders have sometimes been discouraged by what they perceive as effects of school reform that are so small as to be negligible. It is important to understand that the impacts of reform efforts are seldom large and dramatic. Talent Development's 24.5 percentage point impact on the proportion of students earning algebra course credits is a notable but rare exception. The rule of modest- to moderate-sized effects is especially true when these effects are measured using a strong research design with a believable counterfactual.

One thing to remember is that impacts that appear to be trivial can nonetheless be important. For example, Talent Development improved attendance rates by some 5 percentage points. This sounds small, but (as noted earlier) it means that, on average, students attended nearly two more weeks of school each year. The initiative's 8 percentage point effect on the rate of promotion from ninth to tenth grade means that, across all the entering groups of ninth-graders, hundreds of freshmen in the Talent Development schools were spared having to repeat the year and, consequently, were at much lower risk of dropping out of school altogether.

Even notably large impacts may nonetheless seem discouraging when the absolute level of student need remains so great. For example, in Kansas City, Kansas, First Things First produced an 11.1 percentage point net increase in the percentage of eleventh-grade students scoring at the "proficient" level on the state reading test in 2004, and an impact of -15.5 percentage points on the percentage of students scoring at the "unsatisfactory" level. Nonetheless, fewer than half the students (41 percent) had scores indicating proficiency, and almost one-third (31 percent) continued to have scores in the unsatisfactory range. Similarly, while Talent Development had a positive impact of 8 percentage points on graduation rates for an early group of students, graduation rates for students in the Talent Development and comparison schools did not exceed 42 percent. These data emphatically do not mean that Kansas City, Kansas, should abandon First Things First or that Philadelphia should get rid of Talent Development. These initiatives incorporate many of the best existing ideas about school reform; no other high school reform initiatives that have been carefully evaluated with convincing counterfactuals have produced better results.

The findings about absolute levels of student outcomes do have two implications. First, while reform initiatives should not quickly be replaced, they should be improved. Program developers need to identify weaknesses both in concept and in practice and move to strengthen them quickly. School personnel need to work toward more effective and consistent implementation. It is

encouraging in this respect that the National Academy Foundation, IRRE, and CRESPAR have all had a clear vision, informed by the evaluations, of how Career Academies, First Things First, and Talent Development could be improved and have moved forward to put this vision into practice. Over time, one could hope to see better and better outcomes — not through great leaps forward but as the cumulative effect of many small steps in the right direction.

Second, it is not reasonable to expect high schools to remedy all the educational deficits that are a legacy of students' experiences in grades K-8. High school reforms must be a building block of an overall effort to improve the nation's schools, but they cannot be the cornerstone.

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MDRC is a nonprofit, nonpartisan social and education policy research organization dedicated to learning what works to improve the well-being of low-income people. Through its research and the active communication of its findings, MDRC seeks to enhance the effectiveness of social and education policies and programs.

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

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

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

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