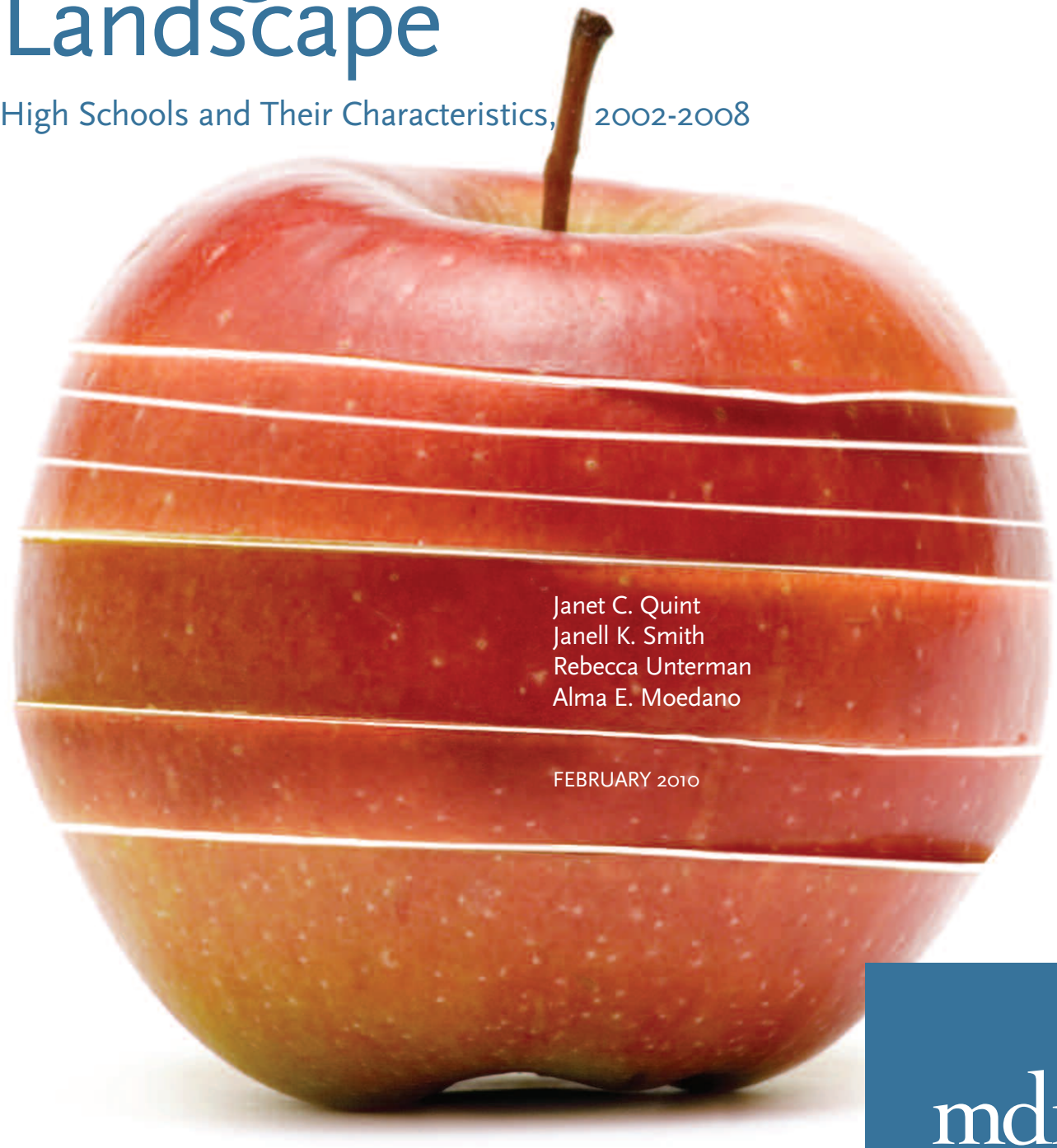
New York City's Changing High School Landscape

High Schools and Their Characteristics, 2002-2008



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BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY

New York City's Changing High School Landscape:

High Schools and Their Characteristics, 2002-2008

by

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Overview

New York City's public high school system — the nation's largest — underwent a sweeping transformation during the first decade of the twenty-first century. At the start of the decade, students were routinely assigned to their zoned high schools, which often had thousands of students and were overcrowded and low-performing. By the 2007-2008 school year, some 23 large and midsize schools with graduation rates below 45 percent were closed or on their way to closing. Simultaneously, many new schools that were intended to serve high school-age students came into being, including almost 200 new small schools. In a break with past practices, the majority of the new small schools accepted students at all levels of academic proficiency and thus were open to those who would likely have attended the closed schools. School choice was extended to all students — another notable departure from prior policies — by giving them an opportunity to indicate up to 12 schools that they wanted to attend. A computerized process was then used to assign each student to his or her top-ranked school where a space was available and where admissions priorities (for example, academic standing or geographic residence, depending on the school) were met. While the introduction of choice affected all public high school students, most of the school closings and openings were concentrated in low-income, nonwhite areas of the Bronx and Brooklyn. The scale and rapidity of the changes were grounded in the conviction of key New York City Department of Education officials, staff at the Bill & Melinda Gates Foundation, and others committed to school reform that small schools could more effectively meet the academic and socioemotional needs of disadvantaged students. This report is one of four Gates-sponsored inquiries into the implementation and impacts of the City's small school reforms. The report considers the historical backdrop for the reforms, charting changes in the number of schools that are categorized as large, midsize, or small, and as academically selective or nonselective, depending on whether they consider prior academic performance in their admissions decisions. It also describes the characteristics of schools that fall into the various categories, as well as the characteristics of their students.

Key Findings

- By September 2007, the new small schools collectively served almost as many students as the closing schools had served in September 2002. In general, student enrollment patterns largely reflect the changes sought by the planners of the reforms, with enrollment declining in large schools as increasing proportions of students enrolled in small schools.
- Students at the small, nonselective high schools across the five boroughs of New York City tended to be more disadvantaged than students attending other kinds of schools along a number of socioeconomic and academic indicators.
- On average, the students who were entering the large, academically nonselective schools that were still open in September 2007 were no longer at exceptionally high risk of academic failure.

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Preface

In 2009, the U.S. Department of Education announced the creation of Race to the Top — a $4.35 billion initiative to raise student performance and accelerate achievement gains by stimulating innovation and instilling accountability in the nation's public schools. One of the goals of the initiative was to turn around the country's lowest-performing schools, which the *New York Times* has described as "the most critical issue in American education." But what is the best way to do that?

Among the approaches that have been put forward is the creation of small schools, whose proponents observe that the largest schools in urban centers tend to have the lowest graduation rates and the highest incidence of violence. When New York City's "Children First" school reform agenda was developed in 2002, small schools and other forms of smaller learning environments were being championed by school reformers and professional organizations and were being put in place by urban school districts nationwide. Department of Education officials in New York City believed that small schools could more effectively meet the needs of low-income, disadvantaged students in particular, and, with support from the Bill & Melinda Gates Foundation, Carnegie Corporation, The Wallace Foundation, Michael & Susan Dell Foundation, Open Society Institute, and other philanthropies, they put a plan into action.

Since 2002, dramatic changes have occurred in the city's public high school system: many new schools were created, including some 200 new, small schools that were largely supported by the Gates Foundation; more than 20 larger, underperforming schools were shuttered; and school choice was expanded to all students. While New York City's new small schools have various themes and educational philosophies, they share three objectives: to prepare their students for college; to ensure strong student-teacher relationships; and to combine learning with real-world examples both inside and outside the classroom. This report, commissioned by the Gates Foundation, looks at the ways in which New York City's reform effort transformed the public high school landscape from 2002 to the beginning of 2008, including changes in high school options and student enrollment over time, and describes the characteristics of the schools and students involved. The Gates Foundation also commissioned MDRC and its partners, Policy Studies Associates (PSA) and the Academy for Educational Development (AED), to undertake three additional studies: one by PSA on the role of intermediary organizations in the creation of new small schools; a group of case studies, from AED; and a second MDRC report, which will analyze the impact of New York City's school reform effort on student achievement.

Race to the Top lends added weight to the question of how best to reform our nation's schools. By any measure, the structural changes made in New York City high schools are unprecedented — including the rapid pace with which large, failing schools were closed and new smaller schools opened; the bet on school size as the instrument of change; and the systemwide introduction of choice. Increasingly, others are looking to these changes as a blueprint for reform. It is our hope that this report and its companion studies will provide valuable insights for all reformers.

Gordon Berlin
President

Acknowledgments

This report was funded by the Bill & Melinda Gates Foundation as one of a set of interrelated studies of New York City's high school reform efforts. The authors would like to acknowledge Jana Carlisle, Kendall Guthrie, Adam Tucker, and Lance Potter, current staff members at the Gates Foundation, and Constancia Warren, formerly affiliated with the Foundation, whose ongoing commitment and thoughtful input contributed to the report.

In her role as Special Advisor to the Chancellor of the New York City Department of Education, Michele Cahill provided early guidance and support for this series of studies, providing the access and information that seeded the past three years of research. In her current position as a senior official at the Carnegie Corporation of New York, she generously shared her time and illuminated the authors' understanding of the changing high school landscape in New York City.

We owe a great debt to staff at the New York City Department of Education, who from the outset of this study have been eager to learn about the effects of their reforms and have spent a great deal of time building our understanding. We especially want to recognize DOE Chancellor Joel Klein, Lori Mei, Garth Harries, Jennifer Bell-Ellwanger, and Thomas Gold. We also thank those in the Office of Student Enrollment, including Elizabeth Sciabarra, Jesse Margolis, Evaristo Jimenez, and Hussham Khan, who helped us interpret student application data so that the information could be used for research purposes.

We would also like to thank our research partners in the larger Gates-funded set of studies — Eileen Foley at Policy Studies Associates, Inc., as well as Cheri Fancsali and Vernay Mitchell-McKnight at the Academy for Educational Development — for their comments on an earlier draft and for their support throughout the research enterprise.

We would like to express gratitude to our colleagues at MDRC who have contributed to this report. In his former role at MDRC and currently at the Research Alliance for New York City Schools, James Kemple has helped to define the overall scope of the report. Gordon Berlin, Howard Bloom, William Corrin, Fred Doolittle, John Hutchins, and Pei Zhu reviewed the report and provided detailed comments. Jon Heffley assisted with geo-coding. Mario Flecha provided production assistance. Alice Tufel edited the report, and Stephanie Cowell prepared it for publication.

The Authors

Executive Summary

New York City's high school system — the nation's largest — underwent a sweeping transformation during the first decade of the twenty-first century. While the changes — the subject of this report — affected all public high school students, they were most directly intended to benefit academically and socioeconomically disadvantaged students, especially those living in low-income, largely nonwhite areas of Brooklyn and the Bronx.

At the start of the decade, students in these neighborhoods were routinely assigned to locally zoned high schools. These schools were required to accept all students in their attendance zone; often enrolled 2,000 or more students; and were likely to be the most overcrowded, violent, and low-performing schools in the city. By the end of the decade, at least 23 large and midsize schools with graduation rates below 45 percent were closed or on their way to closing. As these failing schools were eliminated, many new schools — including almost 200 small schools — were created to serve high school-age students.[1] The majority of the new, small schools accepted students at all levels of academic proficiency and thus were open to those who would likely have attended the schools that closed.

Moreover, a new school admissions policy called for *all s*tudents who were entering the system to choose the school that appealed to them. In the past, choice had been largely limited to students who were high-performing and motivated, and/or whose parents knew that alternatives to the zoned schools were available. Under the new procedures, all eighth-graders submitted a list of up to 12 schools that they wanted to attend — ranked in order of preference — to the New York City Department of Education (DOE), which used a computerized process for assigning students to their highest-ranked school whose admissions criteria they met and where spaces were available. The introduction of universal student choice in America's largest school district marks a major break from previous policy and practice.

This report considers the historical backdrop for the changes. It then focuses on the period between the 2002-2003 school year, when a new chancellor took over the DOE and made high school reform a prominent part of the agency's school reform agenda — known as "Children First" — and the 2007-2008 school year, the last school year for which data were readily available. The report charts changes in the supply of schools serving high school students and in the process by which students gain access to schools. In so doing, it categorizes schools by their size (large, midsize, and small) and by the extent to which they select students on the basis of

[1]In this report, small schools are defined as those that enrolled 550 or fewer students, with a maximum of 175 ninth-graders.

prior academic performance (academically selective and nonselective).[2] Finally, it describes the characteristics of schools that fall into the various categories, as well as the characteristics of their students.

Though descriptive in nature, the report rests primarily on quantitative data that come from large databases maintained by the DOE, the New York State Education Department, and the U.S. Department of Education, along with other sources. MDRC has compiled this information into a database that includes each high school in the system. The quantitative data are complemented by information from interviews with key actors in and observers of the reform process, and from various published and unpublished documents.

Key Findings

- By 2008, the new small schools collectively served almost as many students as the closing schools had served in 2002. In general, student enrollment patterns largely reflect the changes sought by the planners of the reforms, with enrollment declining in large schools as increasing proportions of students enrolled in small schools.
- Students appear to take many factors into account — not just size and degree of academic selectivity — in choosing the schools to which they apply.
- Students at the small, nonselective high schools across the five boroughs of New York City tended to be more disadvantaged than students attending other kinds of schools along a number of socioeconomic and academic indicators.
- On average, the students who were entering the large, academically nonselective schools that were still open in September 2007 were no longer at exceptionally high risk of academic failure.
- Teachers in small, academically nonselective schools were, on average, less experienced and had fewer credentials than their counterparts at other schools.

The Context for Change

The creation of new small schools reflected the shared commitments of key DOE officials, the Bill & Melinda Gates Foundation — which invested more than $150 million to support the development of these schools — and other key foundations. Small public schools, often designed to serve students who had not done well in traditional high school settings, had been

[2]In this report, midsize schools are defined as those that enrolled 551 to 1,400 students, and large schools are defined as those that enrolled more than 1,400 students.

successfully implemented in New York City since the 1960s. The immediate predecessor to and model for new small school creation in the city was the New Century High Schools initiative, launched in 2001 with funding from the Gates Foundation, the Carnegie Corporation, and the Open Society Institute. The initiative called for groups of educators to establish "theme-based" small high schools (schools whose course offerings are guided by specific themes — for example, technology, the arts, business, law, or hospitality) that would draw on the expertise and resources of community partner organizations.

By the time that the DOE chancellor announced the department's intention to create some 200 new schools as part of Children First, small schools and others forms of smaller learning environments were being championed by school reformers and professional organizations and were being put in place by urban school districts across the country. What made small school creation under Children First unique, perhaps, was the scale and rapidity of change, grounded in the conviction of key DOE officials that small schools could more effectively meet the needs of disadvantaged students than could the large low-performing schools that DOE leaders were determined to close.

The rapid growth of the new schools would not have been possible without the vision and support provided by a group of committed foundations, led by the Gates Foundation. (The Gates Foundation also sponsored a series of studies about the implementation and impacts of the small schools; this report is one of those studies.) Gates Foundation officers saw the creation of more small high schools and the transformation of large high schools into smaller learning environments as a key step toward the goal of increasing the number of students who would graduate from high school and be ready for college.

Gates provided financial support for New York City's new small schools through its grants to 18 nonprofit intermediary organizations that were charged with starting the new schools and providing them with ongoing technical assistance, largely in the areas of leadership development, instructional support, and college-readiness services. Most of these intermediary organizations focused primarily on education; the large majority had started new schools before receiving Gates funding to do so in New York City. They varied widely, however, in the number of new schools they developed: while one intermediary had created 79 schools by the 2006-2007 school year and another had established 17 schools, half of the intermediary organizations had four or fewer schools in their networks.

By the 2006-2007 school year, Gates Foundation funding had supported nearly two-thirds of *all* small high schools in New York City, along with 85 percent of the *new* small high schools.

Changing School Options and Enrollment Patterns

Options for high school-age students have proliferated since the implementation of Children First. These include not only regular DOE-operated general high schools that serve students in grades 9 through 12, but also charter schools operating independently of the DOE, middle/high schools that are primarily serving students in grades 6 through 12 or grades 7 through 12, specialized high schools serving students admitted on the basis of academic and/or artistic merit, and transfer schools for students who have too few credits to graduate with their age cohort.

Moreover, New York City's eighth-graders now play an active and direct role in choosing among this array of schools, which are listed in the DOE publication, *Directory of the New York City Public High Schools*. Students and their parents can also attend high school fairs, where they can get more information about the schools in which they are interested before submitting up to 12 choices to DOE. In the past, low-performing students, who often did not meet the academic criteria of the small schools that then existed and/or were unaware of the alternatives, tended to enroll in their zoned high school. By 2007-2008, low-performing students had a number of high school options from which to choose, among them more than 100 new small schools open to students at all levels of academic ability. This approach marks an impressive departure from the system that was in place before Children First was implemented.

The increase in the total number of schools was largely driven by the increase in the number of small schools. In the 2002-2003 school year, there were 58 small high schools (including "veteran" small schools remaining from previous rounds of small school creation); six years later, that number had climbed to 161. The number of midsize schools remained relatively stable (some were closed but some new ones were created), while the number of large schools declined as the DOE began to close the lowest-performing schools. Some large and midsize schools were downsized, usually in preparation for being closed entirely.

Some of the new small schools were strategically established at the sites of large and midsize high schools that were downsizing. Large and midsize high schools that have become the sites of new small schools are known in DOE parlance as "educational campuses." Four new small schools, on average, were located on each of the 21 educational campuses where large or midsize schools were closed or designated for closure between 2002 and 2008. New small high schools were also opened in available spaces across the city, including vacant floors of existing elementary or middle schools. Schools located on educational campuses or in other school buildings usually share building facilities, such as the auditorium, gymnasium, cafeteria, library, and science laboratories. Each school has its own principal and faculty, however, and maintains a distinct identity.

The changes in enrollment patterns of students across types of schools mirror the changes in school options. The most salient changes involve shifts in the proportions of students attending large and small high schools. At the beginning of the study period, in 2002, more than two-thirds (69 percent) of all high school students were enrolled in large high schools, while by its end, in 2008, the proportion of students enrolled in such schools had dropped to a little over half (52 percent), a decline of about 17 percentage points. Small high schools filled much of the slack: The proportion of students enrolled in small schools more than tripled during the six-year period, from a little over 5 percent to about 19 percent. The percentages of students in charter schools, middle/high schools, specialized schools, and transfer schools also grew as these options expanded.

Although it would be simplistic to regard the new small schools as direct replacements for the large schools, it is notable that by the end of the six-year period, the new small schools collectively served almost as many students as the closing schools had served at the beginning of the period. The majority of these students enrolled in small schools that were not academically selective — that is, they did not take prior school performance into consideration in setting admissions preferences. In general, the data suggest that student enrollment patterns largely reflect the changes sought by Children First planners. As large dysfunctional schools that formerly served low-performing students were closed, these students increasingly were placed in small, nonselective schools that, it was hoped, could better meet both their academic and socioemotional needs. Notably, these enrollment shifts took place as the total number of students who were enrolled in New York City high schools increased from approximately 280,000 to approximately 312,000 students.

While all students now had a great number of schools from which they could — and indeed, were required to — choose, one point of interest that emerges from the analysis is that students did not consistently choose schools on the basis of overall size and degree of selectivity. Of students who listed a small, nonselective school as their top choice, 30 percent listed the same type of school as their second choice, while 70 percent opted for another kind of school. Only 11 percent listed three small, nonselective schools as their first, second, and third choices. Size and selectivity appear to be just two among many factors that students take into account in choosing the schools to which they apply.

Comparing School Characteristics

Data for the 2007-2008 school year were used to compare various characteristics of schools in categories defined by school size and selectivity.

While it was fully expected that small schools would have smaller enrollments than schools in the midsize and large categories, the degree of disparity was striking. On average,

small, nonselective schools each enrolled just under 400 students, while large, nonselective schools each enrolled some 3,100 students. Smaller schools also had lower enrollments in tenth-grade English and math classes than did large (selective and nonselective) and midsize selective schools.

The data also make it clear that the large, nonselective schools that remained in the 2007-2008 school year were very different from those that were in place at the beginning of the decade. For one thing, more than half of the large, nonselective schools that remained in operation were located in Queens and Staten Island. Perhaps because of their location in these areas, they were more likely to serve white and Asian students and less likely to serve low-income students than were schools in the other categories.

In contrast, most of the small schools were located in Brooklyn and the Bronx, and the students at these small, nonselective schools tended to be exceptionally disadvantaged along a number of indicators: more than 80 percent came from low-income families; more than one-fourth were overage for grade in eighth grade; and more than half scored low on eighth-grade proficiency tests in both reading and mathematics. In addition, more than 90 percent of the students in these schools were black or Hispanic. While the DOE permitted these schools to exclude special education students and English language learners (that is, students whose native language is not English) during the schools' first two years of operation, by the 2007-2008 academic year, the small nonselective schools served students in these categories at rates similar to the averages across all school types.

Teacher Experience

On average, more than one-third of the teachers in the small, nonselective schools were novice teachers with less than three years of classroom experience. This was true of only about one-fourth of teachers in schools across the various categories, with the large schools having the lowest proportions of new teachers, and midsize (both selective and nonselective) and small, selective schools occupying an intermediate position. This disparity may reflect the newness of many small, nonselective schools, some of which had not been in existence long enough for those new to teaching to have taught in them for three years. It may also reflect different hiring practices — a greater willingness on the part of principals to hire bright and enthusiastic but inexperienced teachers — as well as higher teacher turnover in these schools. Teachers in small nonselective schools were only half as likely as their large-school counterparts to hold advanced credentials like a doctorate or a master's degree plus additional credit hours. While the teachers' inexperience may have placed their students at a disadvantage, the research literature does not

point to strong links between advanced credentials and teacher effectiveness for teachers in most disciplines.[3]

School Evaluations

The DOE evaluates schools using three accountability measures. Only schools in existence for four years or more receive an overall score on the *New York City Progress Report*, which is intended to inform parents, teachers, and others about how well a particular school is doing, especially when compared with other schools serving similar students. Small schools, both selective and nonselective, received higher marks on this measure than did schools in the other categories that were analyzed.

A second measure, the *School Quality Review*, focuses on schools' use of data to set goals and improve learning. Small, nonselective schools scored somewhat lower than the average on most composite measures, although differences were small, and, on average, schools in all categories had scores that placed them between "proficient" and "well developed."

Finally, the *Learning Environment Survey* is administered to students, teachers, and parents at all schools and taps respondents' opinions about the school's functioning with respect to four domains: Safety and Respect, Academic Expectations, Engagement, and Communication. This report analyzes the student survey responses for schools where the response rate was 70 percent or higher. (Response rates for the teacher and parent surveys — 61 and 24 percent, respectively — were too low to support generalizable conclusions.) On all four dimensions, students in small, nonselective schools rated their schools more positively than did students in large and midsize schools, and these differences were statistically significant — that is, it is highly unlikely that the differences arose by chance alone.

In Summary

The evidence in this report indicates that by the 2007-2008 school year, eighth-graders at the greatest risk of academic failure faced a very different set of high school options than they had six years earlier. Dysfunctional large schools (which such students had often attended) had largely been phased out, while new, much smaller, theme-focused schools had been opened, and school choice had been extended to all students in the city. Changes of this magnitude and rapidity were accomplished because key DOE officials had a clear vision of what they wanted to achieve; they pursued that vision in a focused, determined way; and they had the full support of the Mayor. The changes also took place because the Bill & Melinda Gates Foundation was

[3]See, for example, Jason Snipes and Amanda Horwitz, *Recruiting and Retaining Effective Teachers in Urban Schools* (Washington, DC: Council of Great City Schools, 2007).

committed to making an extraordinary investment in the educational success of New York City's least advantaged students.

To describe these changes and the characteristics of the schools existing at the end of the study period, researchers assembled a rich database that can readily be updated and used to answer additional questions. Of particular interest for future research is the question of how students select schools — how, for example, school theme and geography shape students' choices.

This report sets the context for three additional Gates-funded studies about New York City's small school reforms. Two companion reports investigate the questions of how intermediary organizations have fostered change and how schools are organized to promote personalization, high-quality instruction, and college-going. A subsequent impact report will provide rigorous evidence about how well the investment in the new small schools is paying off in terms of student attendance, progress, and achievement.

New York City's Changing High School Landscape:

High Schools and Their Characteristics, 2002-2008

Introduction

Angela and her younger brother Richard lived with their mother, a hard-working single parent, in Brooklyn's low-income Bushwick neighborhood. An eighth-grade student during the 2000-2001 school year, Angela attended her local middle school with many neighborhood friends and earned mostly Cs and a few Bs. In the fall, Angela and her classmates began thinking about high school. Angela was most familiar with Bushwick High School, her neighborhood zoned high school, since she lived within walking distance and her mother had graduated from the school. Angela knew that the school did not have a very good reputation — many students skipped classes and eventually dropped out, and she'd heard that the school had installed metal detectors to cut down on violence.

Over lunch one day, Angela's best friend, Stephanie, mentioned that the school's guidance counselor had suggested that she apply to several other high schools. Angela figured that the counselor had given Stephanie this advice because Stephanie got almost all As. While it saddened her to think of attending a different school from the one her best friend would be attending, Angela had no idea how to go about applying to other schools, and she quickly decided that there would be no point in doing that. When Angela received a notice that she was assigned to Bushwick High, she decided to try to push aside her reservations about the school and make the best of it.

Five years later, it was Richard's turn to think about high school. Like Angela, he was an average student, and he attended the same middle school as his sister. But attending his mother's alma mater was not an option for him. The school was due to be phased out completely after graduating a group of seniors in 2006, and it had not admitted new ninth-grade students for three years by the time Richard was ready to consider possible choices.

Early in the school year, Richard and his classmates attended a school assembly in which guidance counselors talked to them about choosing high schools and explained how to use a New York City Department of Education (DOE) publication called the *Directory of the New York City Public High Schools*. Out of curiosity, Richard searched the directory for Bushwick High School, but he couldn't find it listed. Instead, several new schools were listed at its old address.

Richard was thinking about becoming a police officer and was excited to learn that some schools focused on the theme of public service. There were at least 10 such schools in Brooklyn alone. Richard and his mother decided to attend the citywide high school fair held that year in a Brooklyn high school. The two visited the information tables of the schools that most interested him, maneuvering among the crowds of soon-to-be high school students and their parents, who, like Richard and his mother, hoped to learn more about high school options.

There was a loud buzz of conversation as students signed up on school lists and spoke to school personnel. Richard was impressed that at some tables, he could even talk with current high school students, who were there to represent their schools.

Like all his classmates, Richard filled out a school application form on which he could list up to 12 high school choices. Although Richard was a little concerned that he might have to make all new friends in high school, he was glad to be able to go to a school that interested him. In the spring, Richard was assigned to the Urban Assembly School for Law and Justice, his top choice, and he enrolled there the following September.

Angela's and Richard's names never appear on the attendance rosters of their respective high schools, because they are fictional characters, not real students. But their experiences, as described in this vignette, typify the choices that were available to thousands of their real-life counterparts who were entering high school in New York City in 2001 and 2006. And the contrast between the limited and unsatisfying choice that Angela faced and the much wider variety of options open to her younger brother speaks to the sweeping changes that have occurred during the first decade of the twenty-first century in the nation's largest school district, which counted close to 400 high schools and more than 300,000 high school students during the 2007-2008 school year.

These changes are summarized in Box 1. In brief, in 2000, students who, like Angela, lived in low-income neighborhoods and earned only average grades in middle school were routinely assigned to their neighborhood zoned high schools, which accepted all students who lived in their attendance areas. These schools were likely to be among the most overcrowded and the most violent in the city, with disproportionate numbers of bilingual, special education, and chronically truant students. They tended to have the lowest scores on standardized tests and the highest dropout rates, and they were historically under-resourced compared with those public high schools in New York City that were more selective in the students they admitted.[1]

Eight years later, the worst of these schools were closed or on their way to closing. They were replaced by a range of options, including new small schools — with maximum enrollments of 550 students — that are located in high-need areas and open to all students regardless of their level of academic proficiency. All eighth-grade students were expected to apply to up to 12 schools that interested them. These changes in the supply of schools were overlaid by a new centralized process for matching students with schools of their choice whose admissions criteria they met. That process, known as the High School Application Processing

[1]Samuel G. Freedman, a former education reporter for the *New York Times,* found that in 1985, zoned high schools in New York City received $1,631 per student, compared with $1,795 per student for the selective schools. See Freedman (1989).

New York City Small Schools of Choice

Box 1

Overview of Changes in the New York City High School Landscape

Prior to the 2002-2003 School Year		By the 2007-2008 School Year
Zoned high schools, some enrolling thousands of students, are the standard option for low-performing students.	→	Low-performing students have many high school options from which to choose, including more than 100 new small schools.
A substantial number of larger schools are "dropout factories," with graduation rates well under 50 percent.	→	The worst "dropout factories" have been closed or are slated to close.
Small schools often screen students on the basis of academic ability.	→	The new small schools are generally open to students at all levels of academic ability.
Low-performing students are not asked to choose which high school to attend.	→	All students are expected to designate a set of schools they are interested in attending, and a lottery-like process is used to assign students to the new small schools.

NOTE: In this report, small schools have no more than 550 students; midsize schools have 551 to 1,400 students; and large schools have more than 1,400 students. "Larger schools" include both large and midsize schools. For more details, see Box 2.

System (HSAPS), was introduced in the 2003-2004 school year, and was modified and made more responsive over time.[2]

These changes in New York City's public high school system are the subject of this report. The transformation was largely the result of the combined efforts and collaboration of two organizations with a common interest in high school improvement. The first is the New York City Department of Education under the administration of Mayor Michael Bloomberg, who

[2]HSAPS is discussed in greater detail in the third section of this report, "School and Student Choice in a Transformed System."

assumed control of the city's schools in 2002, and DOE Chancellor Joel Klein, who made high school reform a prominent part of the agency's larger school reform agenda, known as "Children First." While the closing of failing schools and the opening of new small schools did not begin with Mayor Bloomberg and Chancellor Klein, these processes moved forward at unprecedented scale and speed under their watch. The second organization is the Bill & Melinda Gates Foundation, which provided funding for the majority of the new small high schools that have opened since 2002, and which commissioned this study.

In citing the special role of the Gates Foundation, the authors are mindful of the importance and contributions of other foundations in supporting the City's overall reform efforts as well as those directed toward small schools. Thus, for example, the Wallace Foundation provided funding to the Leadership Academy, which was established to prepare new principals to lead the school reforms, and the Michael & Susan Dell Foundation, along with the Gates Foundation, supported the establishment of new schools. The roles of the Carnegie Corporation of New York and the Open Society Institute in promoting small schools are discussed below. More recently, The Eli and Edythe Broad Foundation has pledged $2.5 million to expand charter schools in New York City. Nonetheless, without the involvement and investment of the Gates Foundation, it is unlikely that New York City's high school landscape would have changed as dramatically and as rapidly as it did.

This Report and Its Related Studies

This report, the first of two MDRC publications from the New York City Small Schools of Choice Evaluation, relies principally on quantitative data and is essentially descriptive in nature. Its three main purposes are:

- To review the changes that have taken place in the *supply* of high school choices for students
- To examine changes in the high school assignment process and begin to consider changes in the *demand* for different kinds of high schools
- To compare the characteristics of the "academically nonselective" small schools (that is, small schools that do not take prior academic performance into consideration when admitting students) that are a central part of the reform strategy with those of the midsize and large schools that remained after the worst of these schools were closed

Thus, after this introductory section, the second section of the report — "The Changing Supply of High School Options" — briefly reviews the history and background of high school reform under Children First. It discusses the roles of the Department of Education and the Gates

Foundation as leaders of change and presents statistics illuminating the extent of change in the options available to all high school students, with a particular focus on the changing counts of large, midsize, and small schools.[3] The third section, "School and Student Choice in a Transformed System," considers choice from the perspectives of both students and schools. It describes the way that HSAPS operates and introduces the distinction between schools that select students on the basis of their prior school performance and those that do not, examining school options and enrollment patterns for incoming freshmen from this standpoint. The fourth section, "Comparing School Characteristics," examines the characteristics of different kinds of schools in the 2007-2008 school year, testing the assumption that school size and selectivity are associated with other school traits. It also compares the characteristics of older and newer schools within the small, academically nonselective category that was a major focus of the Gates Foundation's high school reform investment. The fifth and final section includes reflections on the findings and on directions for further investigation.

This school characteristics study, one of several interrelated studies of New York City's high school reforms supported by the Gates Foundation, has been conducted by MDRC, a private, not-for-profit research organization based in New York City that studies efforts to improve the educational, employment, and other life outcomes of disadvantaged populations. A second MDRC-led study takes advantage of the fact that the lottery-like aspects of HSAPS make it possible to find "natural experiments" in many of the new small and academically nonselective schools. The study involves a rigorous analysis of the impacts of enrolling in these schools on students' attendance and achievement-related outcomes.

Two other organizations have partnered with MDRC and are investigating selected aspects of the small schools and their operation. Policy Studies Associates, Inc. (PSA), has under-

[3]The study pays relatively little attention to small learning communities (SLCs) within larger high schools. SLCs are groups of 250 to 450 students who take their core classes together with the same group of core-subject teachers. The latter often have a common planning period in which they can meet to discuss their students' progress and problems. Many large schools across the country have been restructured into SLCs as a means of fostering a more personalized environment and stronger bonds between students and their teachers.

The role that small learning communities have played in New York City's high school reform efforts under Children First has changed over time but has been secondary to new school creation. Early efforts to implement a whole-school reform involving small learning communities in two large failing high schools suggested that leadership in these schools was too weak and staff too demoralized to put the reform in place. DOE officials determined that restructuring was not a viable course of action in the lowest-performing schools; closing them was the only option. Officials did come to see small learning communities as a potentially effective reform strategy for schools that were underperforming — especially those designated as Schools In Need of Improvement (SINI) under the No Child Left Behind Act — but not necessarily so dysfunctional as to necessitate closure. (Gates funding has supported some of the efforts to restructure schools into SLCs; other expenditures for this purpose have been defrayed by SINI moneys.) As of the 2007-2008 school year, 17 high schools had been restructured into SLC schools; of these, 12 were classified as large and five as midsize by the standards used in this report.

taken a study of the intermediary organizations that received Gates funding for the express purpose of starting new small schools.[4] The Academy for Educational Development (AED) has conducted case studies that examine similarities and differences in school processes and classroom instruction in six small schools affiliated with three of these intermediary organizations.[5]

Scope of the Report, Methodology, and Data Sources

It is important to understand what this report does and does not seek to do. The report examines the structural reforms that have taken place in New York City's public high school system. It briefly describes the context and rationale for changes in school options and in the process by which students select among these options. But it is not meant to provide an exhaustive account of systemwide changes that have affected New York City's high schools (as well as elementary and middle schools) over the past decade. One of the most important developments, for example, has been the creation of a new, multi-part accountability system. Findings related to accountability measures are included in the report, but the accountability system itself is not described in depth, nor is the creation of the Leadership Academy. Similarly, the process and challenges involved in closing down large schools and establishing small ones are not covered. Finally, while Children First has been associated with important instructional reforms at the high school level, those reforms are not discussed in the report. The studies by PSA and AED will fill in important pieces of the instruction story.

Rather, this report uses primarily quantitative data that come from large databases maintained by the DOE, the New York State Education Department (NYSED), and the U.S. Department of Education, along with other data provided by the DOE and the Gates Foundation, to describe the options available to students, their choices among these options, and the characteristics of their choices. MDRC has compiled all these data into one database containing information about each high school in the system. Data on intermediary organizations are drawn from the PSA study of these organizations and their operations. Finally, in order to place the

[4]Education intermediaries are typically nonprofit organizations that operate between policymakers and funders and entities (for example, schools and school districts) charged with implementing new programs and practices. In the Bill & Melinda Gates Foundation's efforts to create small high schools, intermediaries have often served both as fiscal agents for distributing grant funds to schools and as central sources of experience and advisory support related to the creation and operation of small schools. Their areas of involvement have included leadership development, instructional support, and college-readiness services. To varying degrees, intermediaries have also advocated for their schools with local educational authorities, helped identify and procure facilities, connected schools with other organizations and grantee networks, assisted with operations and staff selection, and facilitated program planning, development, and implementation.

[5]The Gates Foundation is also supporting two additional internal studies of its New York City grantmaking: a historical analysis by Kronley & Associates of the Gates Foundation's role in school reform and a fiscal analysis of the small schools initiative by The Parthenon Group.

quantitative data in context, they are complemented by qualitative information from interviews and from various published and unpublished documents.

Table 1 shows the key data sources and data elements on which the report is based. These quantitative data cover a six-year period, beginning with the 2002-2003 school year (Joel Klein's first year as DOE Chancellor) through the 2007-2008 school year, the most recent year for which data were available for the report. For various parts of the analysis, a narrower time frame is adopted. Thus, for example, the discussion of student choice is grounded in HSAPS data from the 2004-2005, 2005-2006, and 2006-2007 school years. And the statistics on school characteristics are from the 2007-2008 school year, the most recent year for which most data were available and for which the maximum amount of data on these characteristics was at hand when the report was written. Just as the time frame shifts, so do the kinds of schools included in the analysis — from all kinds of schools serving high school-age students to all schools enrolling new ninth-graders to the small, academically nonselective schools that correspond in large measure to the schools that are the focus of MDRC's impact study. Thus, at its broadest, the discussion covers all kinds of schools in all the study years, while at its narrowest, it focuses on a single kind of school in a single year. While each choice of schools and time frames inevitably involves trade-offs, the objective throughout is to use the data that best speak to each set of issues.

A few preliminary words are in order about the data that appear in the report's tables: Because of the way they were tabulated, the counts of schools that appear in this report are likely to differ from those found in other documents. A school was included in the total for any given year if it appeared in the New York State database and served students in any of grades 9 through 12.[6] School founding date and means of student selection were not considered in determining which schools to include.[7]

Furthermore, the procedures used to create categories into which schools are placed for analytic purposes make for minor fluctuations in year-to-year counts of the number of schools in each category. The definitions used to categorize schools as "large," "midsize," and "small" are based on actual enrollment figures, so that the size category into which a given school is placed can vary from year to year (although, as noted below, these fluctuations were infrequent). Similarly, the definitions used to distinguish "academically selective" and "academically

[6]District 75 schools for special needs students were excluded, however. So were a small number of middle schools that were listed as serving ninth-graders but, upon further inquiry, were found to serve only ninth-graders with special education status. In a few instances, a school was not included in the databases in one year but was listed in both the preceding and following years. In these cases, it was assumed that the school's absence from the databases during the year in question reflected missing data, not the nonexistence of the school.

[7]In contrast, the forthcoming MDRC report on program impacts focuses on small schools established between 2002 and 2007 that select students based on where they live and their familiarity with the school, rather than on academic performance.

New York City Small Schools of Choice

Table 1

Quantitative Data Used in the Study

Data Source	Sample	School Years Used	Description of Data
New York State Report Card	Data collected from the New York State Education Department (NYSED) for all New York City high schools.	2002-2003 to 2007-2008	Data include characteristics of the school, such as student body demographics, school location, student enrollment, and teacher experience and tenure.
Common Core of Data (CCD)	Data collected from the U.S. Department of Education for all New York City high schools.	2002-2003 to 2006-2007	Data include characteristics of the school, such as the school setting and student body demographics.
New York City Department of Education (DOE) October enrollment data	Data for public school students enrolled in sixth through twelfth grades as of October of each school year.	2005-2006 to 2007-2008	The October enrollment files contain demographic and identification data for each student in sixth through twelfth grades, as of October of the school year. These data are used to determine where each student enrolled at the beginning of the school year and are used to describe both students and schools.
High School Application Processing System (HSAPS) data	Data for public school eighth-grade students who completed their application to the High School Application Processing System.	2004-2005 to 2006-2007	These files contain information on each student's school choices in rank order, as well as on a student's geographic priority and "known" status for each school. These data are used to describe both students and schools.
DOE list of new small schools	Data on small schools provided by the DOE for schools opening as new small schools beginning in the 2002-2003 school year.	2002-2003 to 2007-2008	Data include new small school characteristics, such as school names, school location, expected grade configuration, and school opening year.
Student Learning Environment Survey	Student survey data gathered from the DOE. Analysis included only schools with a student response rate of at least 70 percent.	2007-2008	Student survey administered by the DOE. Data include measures of Safety and Respect, Engagement, Communication, and Academic Expectations.

(continued)

Table 1 (continued)

Data Source	Sample	School Years Used	Description of Data
School Quality Review	Data gathered from the DOE for schools participating in the School Quality Review.	2007-2008	Quality Reviews are conducted by an independent organization and based on site visits to gauge school proficiency in using data to accelerate student learning and set goals for improvement.
New York City Progress Report	Data gathered from the DOE for schools that participated in the Progress Report. Only high schools serving four full grades of students are given a Progress Report overall score and corresponding grade.	2007-2008	Schools receive a Progress Report overall score and corresponding letter grade from A to F as an overall assessment of the school's contribution to student learning based on three areas of measurement: school environment, student performance, and student progress.
New York City High School Directory	Printed directories that include all DOE schools open to ninth-grade students in a given year.	2002-2003 to 2007-2008	The annual high school directory is available in print and online and provides detailed information on nearly 400 New York City public high schools, school programs, eligibility criteria, and services.
Data on intermediary organizations	Data on Gates-funded intermediary organizations provided by Policy Studies Associates, Inc.	2002-2003 to 2007-2008	Data are reported on the founding year, focus, prior experience, and other characteristics of the intermediary organizations.
Gates funding records	Data are available for all new small schools started after the 2002-2003 school year.	2002-2003 to 2006-2007	These school-level data are used to determine whether a new small school was started with funding from the Bill & Melinda Gates Foundation.

nonselective" schools are grounded in the HSAPS and enrollment data for a given year, and a school's status can also change in this regard (although, again, this was uncommon).

Finally, different sample sizes for the same category of schools in a given year also appear in different tables of the report. These disparities are a result of missing data. Some schools did not report data on all required items to the DOE and the NYSED each year, and each year a few schools did not report at all. Some DOE accountability measures are also missing for some schools in any year.

The Changing Supply of High School Options

High school reform in New York City during the first two terms of the Bloomberg administration was marked most notably by three broad and interrelated changes in school structures and facilities:

- The closing of the most dysfunctional high schools (those that graduated less than 45 percent of their students), which were largely located in low-income areas of Brooklyn and the Bronx
- The creation of new options for students who have been unsuccessful in regular high school settings
- The establishment of new small schools that were open to students of all levels of academic ability, but especially geared to serve low-performing students who would otherwise have attended the large schools that were closed

This section briefly describes the rationale for these developments from the perspectives of the New York City Department of Education and the Gates Foundation. It then presents data on the supply of schools and how it has changed over time.

The Context for Change

Key officials in the DOE, including Chancellor Klein and his senior advisor Michele Cahill, were determined to tackle high school reform directly, rather than to focus primarily on elementary and middle school improvement and hope that the effects would "trickle up," as they believed other large urban districts had done. They were persuaded, moreover, that some of the worst high schools did not have the skill or the will to change from within; these schools lacked strong leadership and a sufficiently large cadre of teachers who were committed to trying new ways of teaching and interacting with students. The DOE decided to close schools that graduated less than 45 percent of their students — generally, zoned high schools that enrolled thousands of students and were concentrated in low-income, nonwhite areas of the Bronx and

Brooklyn, along with some in Manhattan and Queens. In all, 23 schools were designated for closure — that is, they ceased enrolling first-time freshmen — at some point between the 2002-2003 and 2007-2008 school years.[8]

DOE planned to close dysfunctional schools by phasing them out — that is, ending enrollment of new groups of freshmen while letting the remaining cohorts of sophomores, juniors, and seniors remain until they graduated. This would allow new schools to grow gradually, adding a grade each year, while preventing existing larger schools from being inundated by a flood of students from schools that had been closed. Carrying out this plan as intended, however, was complicated by the finding that in the schools that were slated for closure, large numbers of students had been enrolled for several years but had not accumulated enough credits to be promoted from ninth grade. This discovery prompted new attention to the "overage and undercredited" student population, as did subsequent research showing that the vast majority of dropouts had at one time had this status.[9] To better serve this population, the DOE created its Multiple Pathways initiative, which involved the creation of educational options for students who had failed to make sufficient progress in regular high school settings and who needed more supportive environments and more flexible schedules to earn the credits required to graduate.[10]

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[8]The decision to close three of these schools was made before Joel Klein was appointed chancellor. Another school ceased to admit freshmen in the 2001-2002 school year, and is excluded from the count of schools closed during the "Children First years" altogether.

Of the 23 schools that were designated for closure, 15 were classified as "large" (that is, serving more than 1,400 students) and 8 as "midsize" (with between 551 and 1,400 students) on the basis of their enrollments during the 2002-2003 "baseline" year. Of the three schools that stopped admitting freshmen in 2002-2003, two were midsize but would likely have been categorized as "large" schools on the basis of their enrollments in 2001-2002, when the schools were still admitting ninth-graders.

Interestingly, three other midsize schools that were closed were schools created in the mid-1990s with the subdivision of Erasmus Hall High School in Brooklyn, a very large high school with a distinguished alumni roster and a troubled history during the last decades of the twentieth century. During the 2002-2003 school year, when the initial decision was taken to close these midsize schools, they housed between 775 and 957 students. Clearly, downsizing to this scale had not worked to turn around academic performance.

[9]"Overage and undercredited" can be defined in various ways. According to DOE's definition, overage and undercredited students are at least two years off-track relative to expected age and accumulation of credits toward a high school diploma. More specifically, at age 16, such students have earned fewer than 11 credits, at 17 fewer than 22 credits, at 18 fewer than 33 credits, and at ages 19-21 fewer than 44 credits. See Parthenon Group (n.d.).

[10]Three kinds of Multiple Pathways programs have been initiated or expanded. First, Young Adult Borough Centers (YABCs) are evening programs for students who are 17.5 years of age or older, have been in high school for four years or more, and are short on credits needed for graduation; when they complete their studies at the YABC, their high school diploma is conferred by the home school. Second are transfer schools, which are small schools with personalized learning environments for students who have dropped out or are behind in credits; they confer high school diplomas and aim to prepare students for college. Finally, full-time and part-time programs for students who are at least 18 years old prepare them to pass the General Educational

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Finally, and central to this discussion, the DOE planned to replace the schools that were closing with small schools that, like the zoned schools, would be open to students regardless of ability. The chancellor and other key officials reasoned that small schools offered the most powerful model for engaging and supporting low-performing students, who would especially benefit from interacting with teachers and other caring adults in a more personalized environment. Their intention was to establish 200 small high schools, a number that was grounded in the recognition that 20 large schools, each enrolling some 1,000 freshmen, might have to be shuttered.

The DOE's commitment to small schools as a reform strategy reflected both national attention to the small-schools phenomenon and local history. By the time the Bloomberg administration took office, small schools and scaled-down learning environments were being championed by the developers of whole-school reform models (such as the Coalition of Essential Schools, the Center for Research on the Education of Students Placed at Risk, and the Institute for Research and Reform in Education) and by professional organizations (such as the National Association of Secondary School Principals). Along with New York City, other major urban districts (including Chicago and Philadelphia) were also putting small schools into place.

Small schools likewise found strong advocates in the philanthropic community, and the Bill & Melinda Gates Foundation has been at the forefront in its support for these institutions. The express goal of the Gates Foundation's earlier grant-making strategy was to increase the number of students — especially low-income students and nonwhite students — graduating from high school and ready for college, and foundation officers saw the creation of more small high schools and the transformation of large high schools into smaller learning environments as a key means toward that end. While they acknowledged that small schools were not inherently better than large ones, their guiding theory of action was predicated on the belief that the "new three Rs" that were the hallmarks of a good school — rigor, relevance, and relationships — could best flourish in small environments. The Gates Foundation came to support not only the development and replication of specific small-school models but also the large-scale implementation of small schools within school districts to promote systemic change. Between 2000 and 2008, the Gates Foundation committed about $4 billion to improving high schools and providing college scholarships to students across the country; through its grants, it sponsored some 2,600 new and redesigned high schools.[11] In New York City, the Gates Foundation has granted

Development (GED) exam. Many programs of all three kinds include a component called Learning to Work that is designed to be integrated with the academic component and includes job-readiness and career exploration activities along with academic and personal support. As of the 2009-2010 school year, the Department of Education operated 23 YABCs and 10 Learning to Work GED programs, and it listed 40 transfer schools. See Parthenon Group (n.d.); NYC Department of Education (2009a, 2009d, 2009e, 2009g, n.d.).

[11] See Bill & Melinda Gates Foundation (2008).

more than $150 million to the district and to intermediary organizations charged with the creation of the new schools.

Earlier Efforts

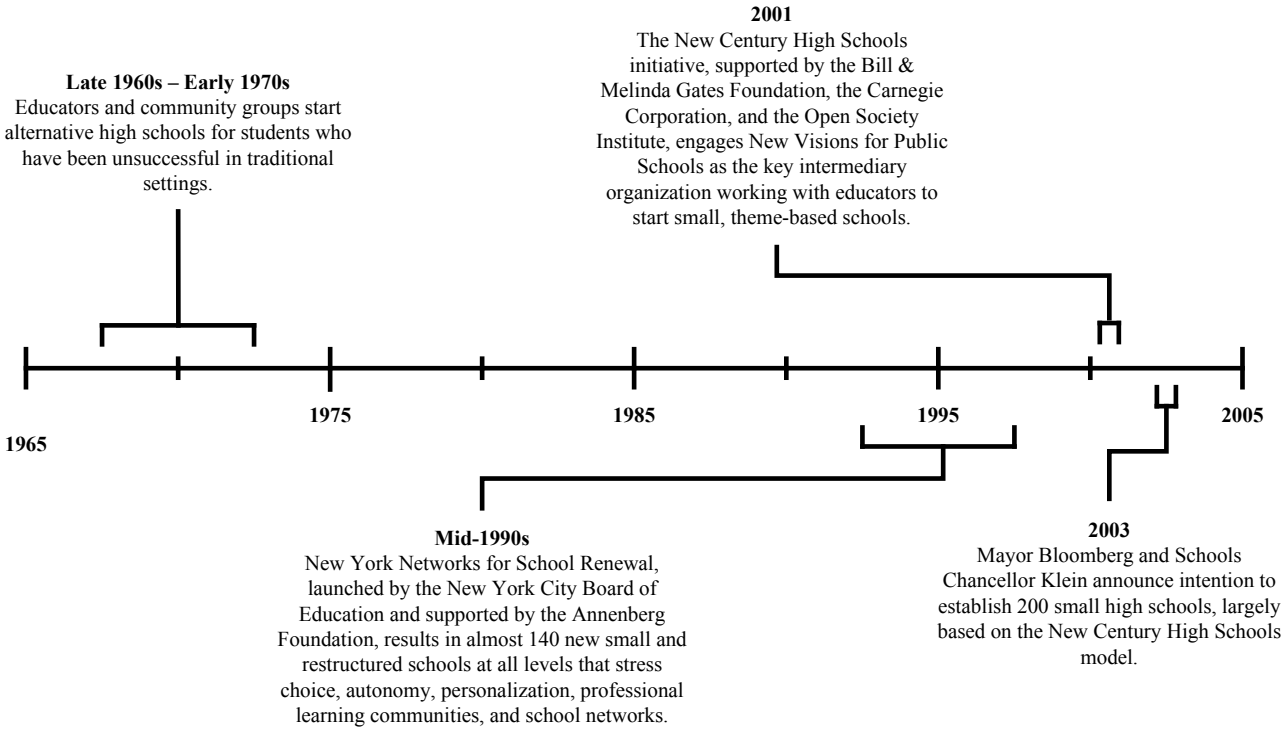
Small school creation under Children First did not represent the first effort to put such schools into place, as Figure 1 makes clear. The successful implementation of many small schools in the city over a 30-year period before Children First was instituted made for familiarity with and promoted support for the concept. The first round of small school creation, which started in the late 1960s and early 1970s, involved educators and community organizations in establishing alternative and experimental schools serving students who had not succeeded in traditional high school settings. A second wave of small school creation took place in the mid-1990s. In 1992, then-Chancellor Joseph Fernandez launched an initiative that would yield almost 50 new small high schools in collaboration with the Center for Collaborative Education (a network of alternative school directors) and the Fund for New York City Public Education (subsequently known as New Visions for Public Schools, an organization that raises funds from foundations and private individuals to develop and support public school initiatives to improve teaching and learning). The new schools creation effort got a considerable boost when, in 1994, the Annenberg Foundation, as part of its effort to improve urban school systems, awarded $25 million to these two organizations, along with two others, the Center for Educational Innovation and the New York Association of Community Organizations for Reform Now (known as ACORN).

Coming together as the New York Networks for School Renewal (NYNSR), the groups jointly proposed to form more than 100 small public schools at all levels that would stress choice, small size, autonomy, personalization, the formation of professional learning communities of teachers and other staff members to improve teaching and learning within schools, and the creation of networks across schools for mutual support and accountability among administrators and teachers. The effort also included the restructuring of large schools into smaller units. NYNSR reached an agreement with the United Federation of Teachers (the New York City teachers' union) to allow schools to select teachers without regard to seniority. While many of the NYNSR schools (like many other New York City high schools, but unlike the zoned high schools) selected their students, the NYNSR schools served a higher percentage of black and Hispanic students than did the city system as a whole.[12] By the end of the grant period, the grantees counted almost 140 schools — including elementary, middle, and high schools — as participating in their school networks.

[12]Lockwood (2001). The proportion of English language learners and special education students in the NYNSR schools was somewhat lower than the citywide average.

Figure 1

Waves of Small School Creation in New York City



Small School Creation in the Bloomberg Administration

The immediate antecedent to and model for new small school creation under Children First was the New Century High Schools (NCHS) initiative. Launched by New Visions in 2001 with the cooperation of the New York City Department of Education, the United Federation of Teachers, and the Council of School Supervisors and Administrators, the objective of NCHS was to establish new small high schools. Three philanthropies — the Gates Foundation, the Carnegie Corporation, and the Open Society Institute — together agreed to provide $70 million to the initiative. Groups of educators could propose to start new schools under NCHS and were selected through a competitive process. New Visions was the key intermediary organization for the new NCHS schools. Each new school, however, was also required to have a lead community partner organization — for instance, a law firm might partner with a school that had a law and justice theme — that would, depending on the partner's expertise and the school's needs, contribute to the school's planning processes, governance, and operations by infusing additional resources, expertise, and supports for staff and students. Many schools also established a roster of collaborating partnerships along with the lead partner.

A notable feature of many of the New Visions small schools (and subsequently of other small schools as well) was, and remains, their thematic focus. For example, the themes of technology, the visual and performing arts, business, law, and hospitality each guide course offerings in several new schools.[13] Themed schools were intended to generate involvement on the part of students, increasing their opportunity to choose among options reflective of their current interests and future career goals. A greater sense of agency on the students' part, it was thought, would lead to their greater academic engagement. The school's theme also provides a rallying point for *adults* associated with the school — both faculty members attracted by a particular thematic focus and personnel connected with the school's partnership organizations. For example, attorneys at a law firm associated with a law-and-justice-themed school could provide role models for students and judge moot court competitions in which students participated; the firm itself could potentially supply summer work internships as well. In these ways, personnel from the partnership organization could expand students' interpersonal and intellectual worlds and enrich their social capital. Because, at the time, Mayor Bloomberg's reelection to a second term and the continuation of the policies initiated under his administration were uncertain, DOE planners also hoped that once staff from the partnership organizations were connected to a new school and its students, these adults would act as powerful political advocates both for the particular school and for new small schools in general.

[13]While these themes can merge in both core and elective courses, the core curriculum is guided by the subject matter tested on the Regents exams, New York State end-of-course tests that students must pass to earn a high school diploma.

The New Century High Schools initiative set the stage for new high school development under Children First. Under Joel Klein's chancellorship, the DOE created a central office dedicated to the creation and support of the new schools, assumed responsibility for the school planning and approval process, and developed coaching programs for small school leaders. The new schools were to be based on three core principles (that are, not coincidentally, aligned with the Gates Foundation's emphasis on rigor, relationships, and relevance):

- **Academic rigor:** Coursework to ensure that all students would be held to high standards and graduate prepared for college and life
- **Personalization:** The assurance that each student would be known by at least one adult in the school, so that teachers and administrators would be better able to support the student and meet his or her needs
- **Community partnerships:** Linkages with outside organizations (including community-based organizations, cultural institutions, universities, youth development agencies, educational organizations, and businesses) to bring additional resources to schools[14]

While from the outset New Visions was slated to play the leading role in new school creation under Children First, it became apparent that the organization lacked sufficient capacity to set up all the new schools that would be needed. DOE and the Gates Foundation reached an agreement that the foundation would fund other intermediary organizations to establish new schools, and staff from both DOE and the foundation worked together to select additional grantees. Some of these grantees had been partner organizations under NCHS; others were established community agencies; and still others were organizations with an education or youth development focus.

Selected characteristics of the 18 intermediaries that received Gates funding as of the 2006-2007 school year are shown in Table 2. The table shows, first, that New Visions has been responsible for creating more schools than any other intermediary organization (79), far outstripping the second-largest school developer (Urban Assembly, with 17 schools). In fact, only 4 of the 18 intermediaries were responsible for establishing almost three-fourths (72 percent) of the new schools. Half of the intermediary organizations had four or fewer schools in their networks. The table also shows that while the majority of organizations had a national or regional sphere of operations, the work of several organizations was confined to New York

[14]NYC Department of Education (2009b). While this description comes from the current DOE Web site, it is an accurate statement of the intended design principles for new schools from the inception of Children First until the present.

Table 2

Characteristics of Intermediary Organizations Receiving Gates Funding

Intermediary Organization	Number of Gates Schools Established in NYC[a]	Geographic Focus	Organizational Focus	Started New Schools Before Gates NYC Funding
Asia Society	2	Regional/national	Cultural	No
Big Picture Learning	1	Regional/national	Education	Yes
City University of New York	6	New York City	Education	Yes
Coalition of Essential Schools	1	Regional/national	Education	Yes
The College Board	10	Regional/national	Education	No
Commonwealth Corporation Diploma Plus[b]	5	Regional/national	Workforce/youth development	Yes
Good Shepherd Services	1	New York City	Social service	Yes
Institute for Student Achievement	12	Regional/national	Education	Yes
Internationals Network for Public Schools	4	Regional/national	Education	Yes
Johns Hopkins University	3	Regional/national	Education	Yes
National Academy Foundation	3	Regional/national	Education	Yes
National Council of La Raza	3	Regional/national	Civil rights	No
New Visions for Public Schools	79	New York City	Education	Yes
NYC Outward Bound	6	New York City	Education	Yes
Replications, Inc.	8	Regional/national	Education	Yes
Urban Assembly	17	New York City	Education	Yes
Woodrow Wilson School National Fellowship Foundation	2	Regional/national	Education	No
Young Women's Leadership Network	2	Regional/national	Education	Yes
	165			

SOURCE: Gates funding records and intermediary characteristics from Policy Studies Associates, Inc.

[a]Indicates the number of schools that had ever received funding from the Bill & Melinda Gates Foundation as of the 2006-2007 school year.

[b]Diploma Plus is no longer part of Commonwealth Corporation. It became a separate organization in July 2009.

City. All but four of the organizations had education as a major focus; workforce and youth development, civil rights, and social services were the concerns of three others; and the fourth was a cultural institution. Finally, 14 of the 18 organizations had started new schools before receiving funding from Gates to do so in New York City.

The Gates Foundation's support has been essential to the DOE's school reform efforts. As Figure 2 shows, by the 2006-2007 school year, Gates Foundation funding had supported nearly two-thirds of all small high schools in New York City (along with 85 percent of the *new* small high schools, not shown in the figure). The figure also makes clear that Gates funding has extended beyond high schools to include schools that cover both the middle school and high school grades, a number of the new transfer schools established by the DOE, one charter school, and several large schools and two midsize schools that made the structural conversion into small learning communities.

Changes in School Options: A Statistical and Geographical Portrait

Tables 3 and 4 present school counts and enrollment figures associated with these general trends. The tables cover the period between 2002-2003, when the Children First initiative began, and 2007-2008, the most recent year for which data were available for this report.

Changing School Structures

Table 3 presents annual counts of the number of public schools serving high school students in New York City.[15] The table makes it clear that options for high school-age students have proliferated since the implementation of Children First, with the number of schools serving students in these grades increasing from 239 to 396 over the six-year period. This expansion was especially marked in the first two years, as the new small schools established as part of the New Century High Schools initiative came into being.

The table distinguishes among several kinds of public schools that serve high school students but that vary in their governance, grade configurations, course offerings, and targeted student populations:

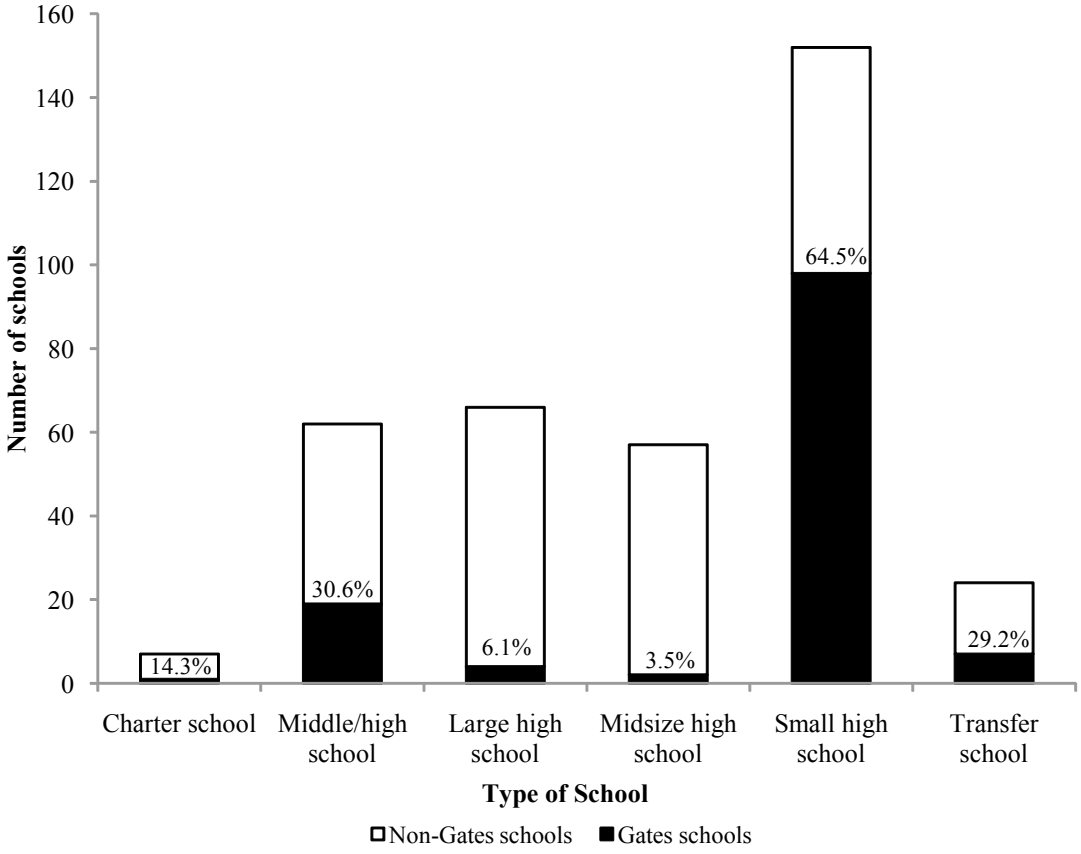
- **Charter schools** are publicly funded schools that operate independently of the DOE. Each charter school is governed individually by a board of trustees and must meet educational standards set by New York State.

[15]District 75 schools serving high school-age students are excluded from the count because they serve only students with mild to severe mental, language, and physical disabilities. While the table includes transfer schools, it also excludes the two other kinds of Multiple Pathways initiatives: YABCs and GED programs. These are considered to be programs, not schools, and statistics comparable to those for schools were not readily accessible from city or state databases.

New York City Small Schools of Choice

Figure 2

Percentage of Schools in Each Category That Had Ever Received Gates Funding by the 2006-2007 School Year



SOURCES: MDRC calculations from the New York State Report Card, Common Core of Data, data on new small schools provided by the NYC Department of Education (DOE), and Gates funding records for school years 2002-2003 through 2006-2007.

NOTES: "Gates schools" are defined as schools that had ever received funding from the Bill & Melinda Gates Foundation as of the 2006-2007 school year. Percentages are shown for Gates schools only.

Charter schools are public schools that operate independently of the DOE and are governed by their own not-for-profit boards of trustees. The counts of charter schools include schools with various grade configurations. The middle/high school category includes schools intended to serve grades 5-12, 6-12, or 7-12 that served a cohort of ninth-grade students in the 2006-2007 school year. Large schools include high schools with a total student enrollment greater than 1,400 students. Midsize schools include high schools with a total student enrollment between 551 and 1,400 students. Small schools are high schools with a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students. Transfer schools are small, full-time high schools designed to re-engage students who are overage for grade and undercredited or have dropped out of high school.

New York City Small Schools of Choice

Table 3

Number of Public Schools Serving High School Students, by Governance, School Type, and School Year

Governance and School Type	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
Charter schools[a]						
Total charter schools	2	3	4	4	7	7
NYC Department of Education (DOE) schools[b]						
Middle/high schools[c]	33	37	48	55	62	72
High schools	190	218	260	282	286	288
Specialized high schools[d]	7	7	7	8	9	9
Large schools[e]	71	75	74	75	67	62
Midsize schools[f]	54	55	57	58	58	56
Small schools[g]	58	81	122	141	152	161
Transfer schools[h]	14	19	24	24	25	29
Total DOE schools	237	274	332	361	373	389
Total charter and DOE schools	239	277	336	365	380	396

SOURCES: MDRC calculations from the New York State Report Card, Common Core of Data, and data on new small schools provided by the DOE for school years 2002-2003 through 2007-2008.

NOTES: The size classification of a given school can vary based on fluctuation in its annual student enrollment. However, large and midsize schools that were downsizing because they had been ordered to close retained their size designation as of the 2002-2003 school year.

[a]Charter schools are public schools that operate independently of the DOE and are governed by their own not-for-profit boards of trustees. The counts of charter schools include schools with various grade configurations.

[b]DOE schools are schools that are directly operated and managed by the NYC Department of Education.

[c]The middle/high school category includes schools intended to serve grades 5-12, 6-12, or 7-12 that served a cohort of ninth-grade students in the given school year.

[d]Specialized high schools admit students based on their score on the Specialized High School Admissions Test, or, in the case of one school, on the basis of an audition and review of the student's academic record.

[e]Large schools include high schools with a total student enrollment greater than 1,400 students.

[f]Midsize schools include high schools with a total student enrollment between 551 and 1,400 students.

[g]Small schools are high schools with a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[h]Transfer schools are small, full-time high schools designed to re-engage students who are overage and undercredited or have dropped out of high school.

- **Middle/high schools,** which typically serve grades 6-12 or 7-12, are intended to support students' transition from middle to high school by enabling them to maintain relationships with familiar staff members and stay within familiar surroundings.

- **Specialized high schools** serve students who are high-performing academically and/or artistically. At eight of these schools, admission depends on a student's score on the Specialized High Schools Admissions Test (SHSAT), which is taken during a student's eighth-grade year.[16] At the ninth school, the Fiorello H. LaGuardia High School of Music & Art and Performing Arts, admission is by student audition and a review of academic records.

- **General high schools** offer a standard core curriculum in addition to elective courses and serve students at various levels of academic ability in grades 9-12.

- **Transfer schools** — some of them former alternative high schools created as early as the 1970s — are small, personalized, full-time schools designed to help overage and undercredited students overcome obstacles to graduation.

The table further distinguishes among large, midsize, and small general high schools. Box 2 explains how these terms are defined.[17]

In terms of absolute numbers, the nearly threefold increase in the number of small high schools shown in the table, from 58 at the beginning of the period (including "veteran" small schools remaining from previous rounds of small school creation) to 161 at its end, is especially striking. There were also substantial increases in the numbers of middle/high schools and transfer schools. The number of midsize schools remained relatively stable, while the number of

[16]The eight specialized high schools that base admission on SHSAT scores are Bronx High School of Science; The Brooklyn Latin School; Brooklyn Technical School; High School for Mathematics, Science, and Engineering at City College; High School of American Studies at Lehman College; Queens High School for the Sciences at York College; Staten Island Technical High School; and Stuyvesant High School.

[17]Changes in the year-to-year count of schools of various sizes reflect school openings and closings. Since a school's size designation is based on *actual* enrollment in a given year rather than *intended* enrollment, changes in the school counts also reflect the fact that a school's designation could change from year to year as its enrollment rose or fell. Thus, for example, a school classified as midsize one year could be reclassified as large the next year if its total enrollment grew from 1,375 to 1,425 students, and reclassified as midsize the year after that if its enrollment dropped to 1,390. These kinds of fluctuations are inevitable in any kind of classification scheme that uses cut-points to establish fixed categories in a situation that is inherently fluid. Fortunately, the number of school size reclassifications attributable to enrollment changes is small. Out of 1,477 possible opportunities for schools to change size, they did so only 56 times. These changes involved 32 schools.

New York City Small Schools of Choice

Box 2

Defining School Size Categories

The school size categories used to describe New York City Department of Education (DOE) high schools intended to serve grades 9 through 12 are defined in this report on the basis of student enrollment data obtained from the New York State Education Department School Report Card. A school's total student enrollment was calculated by adding the number of students in each of grades 9 through 12, plus the school's ungraded secondary students (high school-age students with disabilities, who are not considered to be placed in a specific grade).

The three school size categories are defined as follows:

- **Small schools:** Schools with a maximum enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.
- **Midsize schools:** Schools with a total student enrollment greater than 550 students but less than or equal to 1,400 students. Ninth-grade enrollment was not taken into consideration.
- **Large schools:** Schools with a total student enrollment greater than 1,400. Ninth-grade enrollment was not taken into consideration.

There is no universally accepted definition of what size makes a school "small." The definition used in this report is based on a DOE list of new, small schools started since 2002 as part of Children First. Because these new schools were just starting up, it seemed important to take into account not just the total school enrollment but also the number of ninth-graders in a school. (The Report Card data include both first-time and repeating ninth-grade students in their counts of ninth-grade students). All the schools on the DOE "small schools" list, with one exception, had a maximum total enrollment of 550 students and a maximum of 175 ninth-grade students in any given year between 2002-2003 and 2007-2008. Therefore, these two numbers were used to set cut-points by which to define the small school category. These criteria were also used to determine which "veteran" schools (schools that existed before 2002) fell into the small school category.

Schools that were in the process of being closed down by eliminating new ninth-grade classes remain coded according to their size designation in the 2002-2003 school year, no matter how many students were enrolled in the school.

NOTE: The distinction between midsize and large schools follows the categorization used in Clara Hemphill and Kim Nauer, *The New Marketplace: How Small-School Reforms and School Choice Have Reshaped New York City's High Schools* (New York: The New School, Center for New York City Affairs, 2009).

large schools declined over time as the DOE began to close the lowest performers; by 2007-2008, most of the "big bad schools" of yore were on the way out or no longer existed.[18]

Some of the new small schools were strategically established at the sites of large and midsize high schools that were downsizing (usually in preparation for being closed entirely). Large and midsize high schools that have become the site of new small schools are known, in DOE parlance, as "educational campuses."[19] (Thus, for example, Bushwick High School and the four small schools established on its premises became known as the Bushwick Educational Campus.) Four new schools, on average, were located on each of the 21 educational campuses where large and midsize schools were closed or designated for closure between 2002 and 2008. New small high schools were also opened in available spaces across the city, including floors of existing elementary or middle schools. Schools located on educational campuses or in other school buildings usually share building facilities, such as the auditorium, gymnasium, cafeteria, library, and science laboratories. Each school has its own principal and faculty, however, and maintains a distinct identity.

Figure 3 shows an outline map of New York City's five boroughs on which the locations of the schools that had closed by or were in the process of closing in 2007-2008, along with the small schools that opened between 2002-2003 and 2007-2008, are plotted. The figure highlights the fact that most of the closed schools and the new small schools that replaced them have been located in low-income areas of central Brooklyn and the Bronx, those with median household incomes of less than $40,000. All of the closed schools have been converted into educational campuses.

Changing Enrollment Patterns

The changes in enrollment patterns of students across types of schools between the 2002-2003 and 2007-2008 school years mirror the changes in school options. Table 4 presents the proportion of all New York City high school students in grades 9 through 12 enrolled in each type of school setting in each school year.[20]

The most salient changes that are evident in the table involve shifts in the proportions of students attending large and small high schools. At the beginning of the period, more than two-thirds (68.6 percent) of all high school students were enrolled in large high schools, while by its end, the proportion of students enrolled in such schools had dropped to a little over half (51.8

[18]During the 2008-2009 school year, the DOE announced that two more large, underperforming schools would begin phasing out in 2009-2010 and would no longer enroll new freshmen.

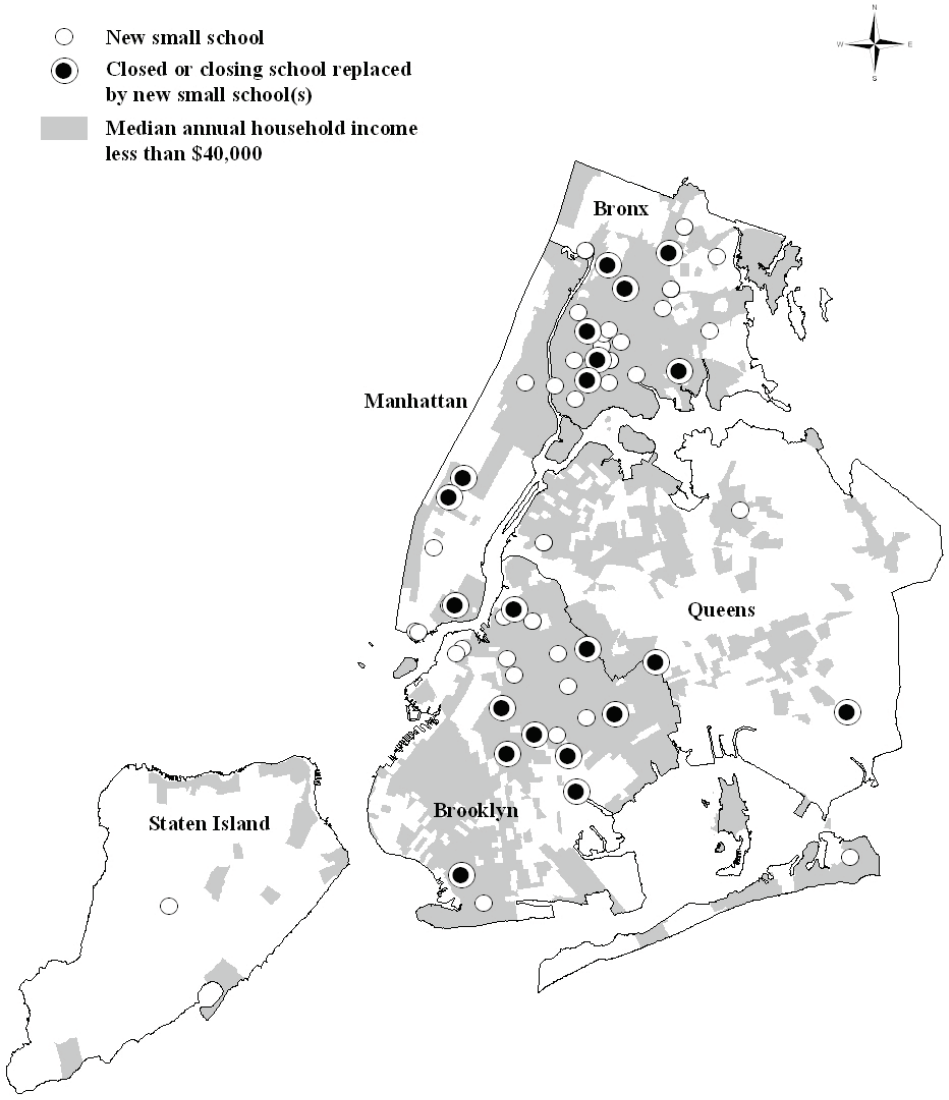
[19]In the majority of cases, the "host" large or midsize school has closed or is on the way to closing.

[20]Enrollment data are based on calculations from NYSED enrollment data. Middle/high school enrollment figures include students in grades 9 to 12 only.

New York City Small Schools of Choice

Figure 3

Locations of Closed or Closing Schools and New Small Schools, 2007-2008 School Year



SOURCE: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, and U.S. Census Bureau Summary File 3 2000 data.

NOTES: The map shows locations of the 23 large and midsize schools that ceased admitting new ninth-grade students between the 2002-2003 and 2007-2008 school years as well as the 115 schools that were designated as new small schools by the DOE and served their first cohort of ninth-grade students during the same period. (More than one school could be at a location, with an average of four small schools at the former site of each closed school.) Three midsize schools that were closed were colocated within a single building. Median annual household income is shown at the census track level.

New York City Small Schools of Choice

Table 4

Percentage of Students Enrolled in Public Schools Serving High School Students, by Governance, School Type, and School Year

Governance and School Type	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
Charter schools[a]						
Total charter schools	0.2	0.2	0.3	0.3	0.5	0.6
NYC Department of Education (DOE) schools[b]						
Middle/high schools[c]	3.6	4.0	4.7	5.6	6.4	7.4
High schools	94.4	93.2	92.4	91.7	90.6	89.5
Specialized high schools[d]	4.4	4.3	4.2	4.6	4.7	4.8
Large schools[e]	68.6	68.3	64.6	60.6	56.3	51.8
Midsize schools[f]	15.9	13.7	14.0	14.1	13.8	14.4
Small schools[g]	5.4	7.0	9.6	12.3	15.8	18.5
Transfer schools[h]	1.8	2.6	2.6	2.4	2.5	2.6
Total DOE schools	99.8	99.8	99.7	99.7	99.5	99.4
Total number of students	279,685	295,084	307,254	303,663	310,166	311,652

SOURCES: MDRC calculations from the New York State Report Card, Common Core of Data, and data on new small schools provided by the DOE for school years 2002-2003 through 2007-2008.

NOTES: Rounding may cause slight discrepancies in calculating sums and differences.

The size classification of a given school can vary based on fluctuation in its annual student enrollment. However, large and midsize schools that were downsizing because they had been ordered to close retained their size designation as of the 2002-2003 school year.

[a]Charter schools are public schools that operate independently of the DOE and are governed by their own not-for-profit boards of trustees. The counts of charter schools include schools with various grade configurations.

[b]DOE schools are schools that are directly operated and managed by the NYC Department of Education.

[c]The middle/high school category includes schools intended to serve grades 5-12, 6-12, or 7-12 that served a cohort of ninth-grade students in the given school year. Middle/high school enrollment figures include students in grades 9 to 12 only.

[d]Specialized high schools admit students based on their score on the Specialized High School Admissions Test, or, in the case of one school, on the basis of an audition and review of the student's academic record.

[e]Large schools include high schools with a total student enrollment greater than 1,400 students.

[f]Midsize schools include high schools with a total student enrollment between 551 and 1,400 students.

[g]Small schools are high schools with a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[h]Transfer schools are small, full-time high schools designed to re-engage students who are overage and undercredited or have dropped out of high school.

percent), a decline of about 17 percentage points. Small high schools filled much of the slack: The proportion of students enrolled in small schools more than tripled during the six-year period, from 5.4 percent to 18.5 percent. The proportion of students enrolled in other types of schools — including charter schools, middle/high schools, specialized schools, and transfer schools — also grew as these options expanded.[21]

Figure 4 offers an alternative perspective on enrollment. It compares the number of students enrolled in the 23 schools that began to phase out between the 2002-2003 and the 2007-2008 school years with the number of students who enrolled in the 115 DOE-designated "new small schools" that first opened their doors to freshmen during these same years. While it would be overly simplistic to regard the new small schools as direct replacements for the large schools, it is notable that by the end of the six-year period, the small schools collectively served almost as many students as the closing schools had served at the beginning of the period.

The total number of students enrolled in New York City high schools increased over time from approximately 280,000 to approximately 312,000 students. (See Table 4.) There are several possible reasons for this increase. It is probably attributable in part to an increase in the size of the school-age population. Toward the end of the 1980s, the number of births to women in New York City rose steadily, from 127,386 in 1987 to 139,630 in 1990, after which births declined in number again.[22] This bulge in the birth cohort would partially account for an increase in the high school-age population some 14 years later. Some of the change may simply reflect more accurate record-keeping, as schools were subject to new accountability measures. And some of the change may be a result of the availability of new, more appealing school options — small schools for students who might otherwise have attended private or parochial schools, and transfer schools for students who might otherwise have dropped out altogether.

All these changes notwithstanding, it is important to recognize that in the 2007-2008 school year, large high schools still served more than half of all New York City high school students.

School and Student Choice in a Transformed System

As the DOE embarked on a mission to increase the number of high school options for students, it simultaneously centralized and overhauled the high school admissions process to make a growing number of high schools accessible to all students. Before the 2003-2004 school

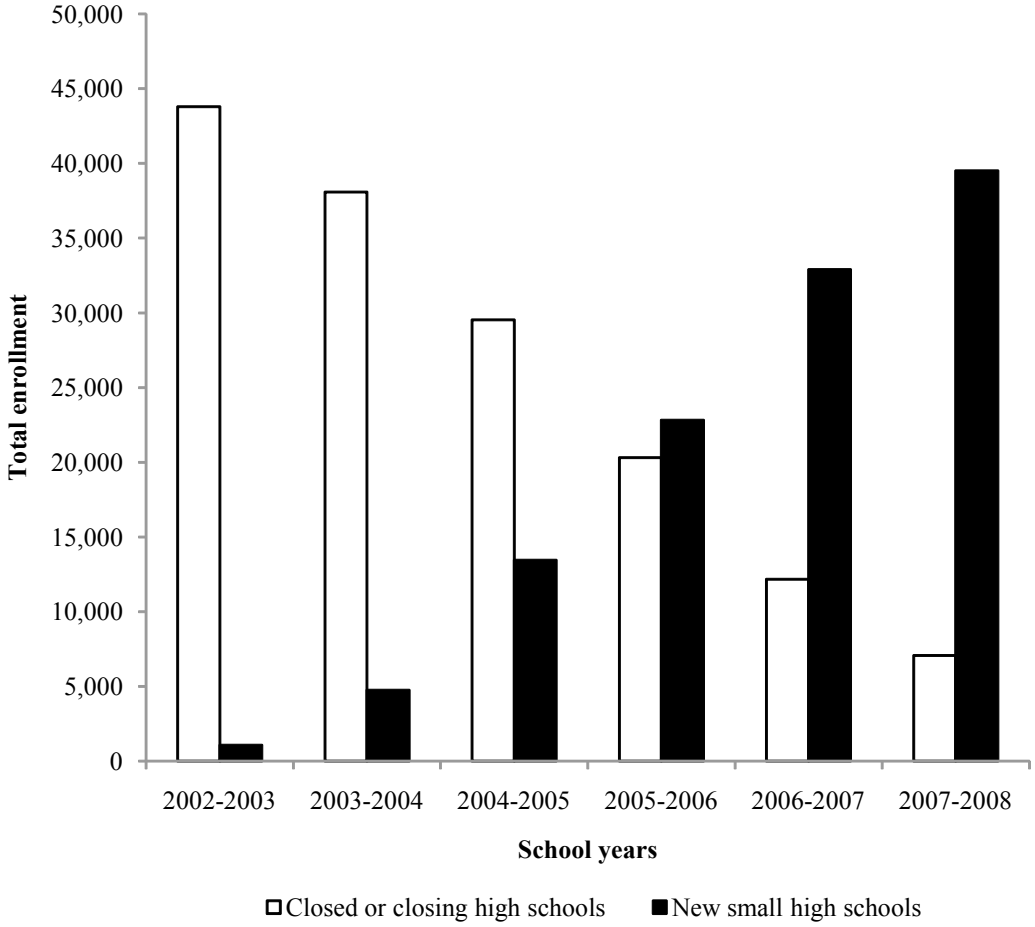
[21]While the addition of two new specialized high schools brought a slight increase in the proportion of students enrolled in these elite schools, such schools served less than 5 percent (4.8 percent) of all high school students in the 2007-2008 school year.

[22]NYC Department of Health, Office of Vital Statistics and Epidemiology (n.d.).

New York City Small Schools of Choice

Figure 4

Student Enrollment in Closing High Schools and New Small High Schools



SOURCE: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008.

NOTES: The figure shows the shift in student enrollments at the 23 large and midsize schools that ceased admitting new ninth-grade students between the 2002-2003 and 2007-2008 school years as well as the 115 schools that were designated as new small schools by the DOE and served their first cohort of ninth-grade students during the same period.

year, eighth-graders living in low-income areas were typically assigned to their neighborhood zoned high schools. Those students who did apply to non-zoned schools during the pre-Children First era completed an application on which they listed up to five schools that they were interested in attending, other than their zoned school, and turned the form in to their middle school. The DOE then catalogued each student's application and informed high schools of their applicants. In turn, high schools embarked on their own selection processes and sent their acceptances and waitlists back to the district, which informed students of the results. Some students received multiple acceptances, others none. (In the latter case, students were assigned to their zoned high school.) The final phase of the process was iterative and often chaotic. As students informed high schools of their choices, the schools then moved other students off their waitlists, and the cycle continued. At this point, principals often had complete control over the movement of students on and off the waitlist. The system was susceptible to parental pressure, as especially driven parents took to lobbying individual principals to get their children into schools from which they had been excluded.[23]

Choice in New York City under Children First remains a two-way street: students choose the schools they are interested in attending, and most schools establish priorities for the students they want to have attend them. But both processes have changed: schools no longer have the final say about their student rosters, and the expectation is that all students, not just the most motivated or best connected, will choose.

This section first considers the way in which the process now works, describing how students choose schools, then how schools prioritize students, and finally how HSAPS links the two sets of choices. It then discusses two analytic categories — *academically selective* and *academically nonselective* — that are derived from the HSAPS and enrollment data and are subsequently used to classify and describe schools. The section concludes by reexamining changes in school options and enrollment patterns in light of these new categories.

How Choice Works for Students

Upon enrolling in eighth grade, students are encouraged to begin thinking about which high school they would like to attend. At this time, students learn how to use the *New York City High School Directory*.[24] The directory is organized by borough, and it devotes about two pages to each high school. Here, the high school describes its mission, how it ranks students based on school preferences, and the intended size of its ninth-grade class. Schools that are midsize or large generally contain multiple *programs*, each of a certain size and with its own eligibility

[23]Hemphill and Nauer (2009).

[24]A copy of the *New York City High School Directory* for the current school year can be found online. See NYC Department of Education (2009c).

requirements. For such schools, the directory lists admissions information separately for each program within the school. (Small schools, in contrast, with only a few exceptions, contain just one program.) The directory also provides available information about the school's most recent graduating class. A sample page from the directory appears in Appendix A.

During the fall, students are urged by their middle school to explore their high school options and create connections with particular high schools. They can do this by visiting a citywide or boroughwide high school fair, or attending a particular school's open house. Many high schools encourage students to seek them out by giving preference, or in some cases restricting eligibility, to those students who have attended certain school events.

In the winter of their eighth-grade school year, students fill out a selection form and submit it to their middle school. On this form, students list, in order of preference, up to 12 programs they would like to attend the following fall.

How Choice Works for Schools

Students who consult the *New York City High School Directory* can readily see that different schools and/or programs have different eligibility criteria, which vary along a spectrum of selectivity:

- At one end of the spectrum, the *specialized high schools* are the most selective. As noted previously, admission to these schools is limited to students with high scores on the Specialized High School Admissions Test or to students who display significant talent in the visual and/or performing arts.[25]

- At the other end of the spectrum, *unscreened* and *zoned* programs are the least selective; the former set no admissions criteria at all, while the latter require only that students live in the attendance area of the school within which a program is located (or they give preference to such students). Moreover, while other kinds of programs have a limited number of slots to accommodate students, zoned programs do not.

Four other kinds of programs fall between these extremes.

- *Screened* programs select students according to whether or not they meet specific criteria. In the large majority of instances, these criteria are academic: programs generally select students on the basis of their having scores that

[25]Students apply to separate "studies" at LaGuardia High School of Music & Art and Performing Arts (for example, drama, dance, and instrumental music), depending on their area of interest.

meet a certain threshold on district tests administered in seventh grade, and they rank students in order of preference.[26]

- *Audition* programs admit students on the basis of an audition or portfolio.
- *Educational option* programs admit applicants through a combination of ranking and random selection by computer, in order to include students at all levels of academic performance — 16 percent each in the highest and lowest categories, and 68 percent from the middle tier of achievement.
- Finally, with the advent of the new small schools came a new selection method — *limited unscreened* programs, which, like the large failing zoned schools they replaced, do not impose academic requirements but instead give preference to students who (1) live within a certain geographic area, and (2) have attended a school's open house or the school's booth at a school fair, or who are otherwise "known" to the school.[27] The limited unscreened schools are thus intended to be true "small schools of choice" for students at all levels of academic performance.

Limited unscreened programs submit to DOE a list of students who should receive priority because they are known to the school. Screened and educational option programs send DOE a rank-ordered list of students whom they want to admit.

These eligibility criteria capture the way that admissions are *intended* to work. But programs can only select among students who actually apply to the program. Thus, a screened program may, in theory, accept only students whose eighth-grade test scores are above a certain level. If it does not receive enough qualified applicants to fill the available slots, however, personnel at the school may review the eighth-grade attendance records of lower-scoring students to look for evidence of commitment and motivation, if not performance. Similarly, administrators at a limited unscreened school may want to give preference to students who are "known" to school personnel — but if the school gets an insufficient number of such applicants, it will also admit students who are "unknown" in order to fill its seats.

Moreover, a substantial proportion of students — about 12.7 percent of first-time freshmen — are assigned to a school after the HSAPS process has concluded. These "over-the-counter" students (as the DOE refers to them) may be new transfers into the district, or they may have moved to a neighborhood unreasonably far from the school to which they were first

[26]These thresholds vary from program to program. Screened programs may also have other requirements; for example, students may be asked to attend an interview or to submit a portfolio of work.

[27]Almost all of the new small schools are single-program schools; for this reason, they are referred to interchangeably here as "limited unscreened programs" and "limited unscreened schools."

assigned, or their families may have decided to remove them from private schools and enroll them in public ones. These students are likely to be placed in any school near their home that has an opening. A large influx of over-the-counter students can undercut administrators' efforts to mold and shape the population of students who meet a certain set of specifications.

How HSAPS Combines Student Choice and School Priorities

Once students and schools have submitted their lists, a computer-based assignment algorithm takes over the process. This algorithm is designed to match students to schools while simultaneously taking into account students' preferences for the school they would like to attend and schools' priorities for the students they would like to enroll.

The algorithm brings together many pieces of information — student academic records, the number of seats schools have available for first-time ninth-graders, student choices, place of residence, and school rankings and priorities — and uses them all to assign students to schools. The algorithm works in an iterative way, provisionally placing a student in a school until a better fit is found, then provisionally placing the student somewhere else. It repeats this process over and over again, until all students' choices have been exhausted and almost all schools have been filled.[28] In the spring, students are notified of their school assignments.

Since HSAPS was first implemented in the 2003-2004 school year, the algorithm has been adjusted to make it work better. By the 2007-2008 school year, the process successfully placed almost 50 percent of its students in their first-choice school and 80 percent in one of their first three choices.[29] An even greater success may be the increased equity of the system in allowing all students, not just those who are academically proficient or whose parents know how to work the system, access to an array of schools that interest them.

Re-Sorting Schools

On the basis of their admissions criteria, HSAPS student assignment data, and subsequent enrollment data, programs — and ultimately schools — can be classified as *academically selective* or *academically nonselective.* Thus, screened and educational option programs fall into the academically selective category.[30] For purposes of this analysis, programs that admit

[28]This process works differently for students who have chosen to apply to a specialized high school. These students apply to the school earlier in the school year and participate in an earlier round of the high school admissions process. If accepted to a specialized high school, they are informed of this and of the regular, non-specialized school to which they have been admitted. The student must then choose whether or not to accept the specialized high school offer.

[29]Hemphill and Nauer (2009).

[30]Schools developed by the Internationals Network for Public Schools, one of the Gates-funded intermediary organizations, along with a few other schools, screen in order to meet their objective of serving students (continued)

students by audition are also considered to be academically selective. Unscreened, zoned, and limited unscreened programs are categorized as academically nonselective.

City, state, and federal databases contain data at the level of the school, not the program. So to link other characteristics reported in these databases to academic selectivity, it is necessary to aggregate programs to the school level. For most small schools, which contain a single program, the selection method for that program is used to describe the school. But a few small schools and most larger ones have multiple programs. The process used to look across programs within a school and characterize the school in its entirety as academically selective or nonselective is described in Box 3.[31]

Patterns of Enrollment and Student Choice in the HSAPS Years

With these considerations in mind, it is possible to see enrollment in a school as representing the intersection of student choice and school priorities. How choice among school types and selectivity categories played out for first-time ninth-graders between 2005-2006 and 2007-2008 — the years for which HSAPS data from the previous spring were available for this report — is considered in this section. At the same time, the analysis represents only a very preliminary inquiry into the topic of student demand for schools.

Table 5, like Table 3, contains a count of schools (in the three columns under "Number of Schools"). It differs from Table 3 in several respects, however. First, it displays only DOE-operated schools, not charter schools. It includes only schools that are available as options to first-time ninth-graders and therefore excludes both transfer schools (because only students who have started high school but have been retained in a grade are eligible to attend these schools) and schools that were closed or in the process of being closed (and therefore did not accept new ninth-graders). It introduces the categories of academically selective and nonselective schools. And, because these categories are grounded in HSAPS data that are available only for the 2005-2006 school year and thereafter, it covers a shorter time period.

The table shows that eighth-grade students in New York City can choose from hundreds of public high schools that vary in school size and admission requirements. It indicates a notable decrease in the number of large high schools available to freshmen as dysfunctional

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from non-English-speaking countries who have been in the United States for four years or less. These schools, along with others that screen students, are counted here as academically selective, although properly speaking, the Internationals Schools do not select students on academic grounds.

[31] School selectivity, like size, is a fluid category, at least in concept. That is, a school categorized as selective one year could be categorized as nonselective the next year, or vice versa. The former change could occur, if, for example, the school experienced an unusually large influx of over-the-counter students. Such changes were rare, however.

New York City Small Schools of Choice

Box 3

Categorizing Schools as "Academically Selective" or "Academically Nonselective"

For this study, schools were categorized differently depending on whether they were single-program schools or multi-program schools.

Single-program schools. The categorization of single-program schools as "academically selective" or "academically nonselective" is straightforward — the school is categorized by the selectivity of its program.

Multi-program schools. Multi-program schools are categorized as "academically selective" or "academically nonselective" based on both the number of eighth-grade students *assigned* to various programs within a given school and the number of students *enrolled* in that school the following fall. Specifically, for each multi-program school in each year for which High School Application Processing System (HSAPS) data were available:

1. The number of eighth-grade students assigned in the spring to all selective programs within a school was tallied.

2. The tally was modified using the following fall's enrollment data, so that students who did not enroll in the school to which they were assigned were dropped from the tally.

   - The fall enrollment data do not identify the particular *program* in which a student enrolls, just the *school.* For the analysis, all students who appeared in the HSAPS data as assigned to a particular selective or nonselective program within the school, and who were subsequently found to have enrolled in the school, were assumed to have enrolled in the program to which they were assigned.

3. The number of enrolled students assigned to selective programs as a proportion of the school's total number of enrolled first-time ninth-graders was then calculated.

   - In this analysis, all "over-the-counter" students (those enrolled in a school but not assigned through HSAPS) were treated as if they had applied to and been admitted to a nonselective program within the school.

4. If the proportion of all first-time students in the school who were enrolled in academically selective programs was greater than or equal to 50 percent, the school as a whole was considered to be academically selective. If the proportion of first-time students who were enrolled in such programs was less than 50 percent, the school as a whole was considered to be nonselective.

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Table 5

Number of DOE Public Schools Serving First-Time Ninth-Grade Students, and Percentage of First-Time Ninth-Grade Students Enrolled, by School Type, Selection Method, and School Year

	Number of Schools			Percentage of Students Enrolled		
School Type and Selection Method	2005-2006	2006-2007	2007-2008	2005-2006	2006-2007	2007-2008
NYC Department of Education (DOE) schools[a]						
Middle/high schools[b]	55	61	72	7.1	7.8	9.0
High schools	266	280	282	92.9	92.2	91.0
Specialized high schools[c]	8	9	9	4.8	5.2	5.1
Large schools[d]	67	65	59	56.1	52.1	49.6
Academically selective[e]	38	43	36	30.4	36.1	29.7
Academically nonselective[f]	29	22	23	25.7	16.0	20.0
Midsize schools[g]	53	54	55	13.9	14.5	14.9
Academically selective	51	53	51	13.5	14.2	14.3
Academically nonselective	2	1	4	0.3	0.3	0.6
Small schools[h]	138	152	159	18.2	20.4	21.4
Academically selective	47	49	51	6.3	6.7	7.0
Academically nonselective	91	103	108	11.9	13.7	14.4
Total DOE schools or students	321	341	354	78,936	78,056	76,529

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the DOE for school years 2002-2003 through 2007-2008, DOE October enrollment data for school years 2005-2006 through 2007-2008, and High School Application Processing System data for eighth-grade students in 2004-2005 through 2006-2007.

NOTES: Rounding may cause discrepancies in sums and differences.

The size classification of a given school can vary based on fluctuation in its annual student enrollment. However, large and midsize schools that were downsizing because they had been ordered to close retained their size designation as of the 2002-2003 school year.

[a]DOE schools are schools that are directly operated and managed by the NYC Department of Education.

[b]The middle/high school category includes schools intended to serve grades 5-12, 6-12, or 7-12 that served a cohort of ninth-grade students in the given school year.

[c]Specialized high schools admit students based on their score on the Specialized High School Admissions Test, or, in the case of one school, on the basis of an audition and review of the student's academic record.

[d]Large schools include high schools with a total student enrollment greater than 1,400 students.

[e]Academically selective schools are schools that admit the majority of students on the basis of their prior academic performance.

[f]Academically nonselective schools are schools that admit the majority of students on the basis grounds other than prior academic performance, such as place of residence.

[g]Midsize schools include high schools with a total student enrollment between 551 and 1,400 students.

[h]Small schools are high schools with a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

schools were phased out under Children First.[32] The table also suggests that the growth in the number of small schools evident in Table 3 is driven by the increase in academically nonselective small schools.

Finally, midsize schools are overwhelmingly academically selective. In fact, only four of the 55 midsize schools fell into the academically nonselective category in the 2007-2008 school year. Because this group of schools is so small, it is not shown in subsequent tables that compare groups of schools defined by size and selectivity.

The three rightmost columns of Table 5 show the percentages of first-time ninth grade students in each year enrolled in each type of DOE-operated school. The data indicate that most of the change over time took place in the nonselective schools, large and small. Thus, the largest change that is evident is the drop in the proportion of first-time freshmen enrolled in large, academically nonselective schools — from 25.7 percent to 20.0 percent. Correspondingly, the increase in the proportion of first-time freshmen enrolled in small schools is accounted for primarily by students' increased enrollment in small, nonselective schools.

In general, the data suggest that student enrollment patterns largely reflect the changes sought by Children First planners. As large dysfunctional schools that formerly served low-performing students were closed, these students were increasingly placed in small, nonselective schools that, it was hoped, could better meet both their academic and socioemotional needs. By the end of the period, large schools (both selective and nonselective) enrolled just under half of all new ninth-graders.

Table 6 shows the percentages of eighth-grade students choosing each type of school as their first choice and as one of their top three choices in the 2004-2005, 2005-2006, and 2006-2007 HSAPS processes.[33] While students' interest in large schools waned over the three years under consideration, these schools — especially large, academically selective schools — remained students' most popular choices throughout.[34] Midsize, academically selective schools

[32]Along with large and midsize schools, three schools that were classified as small in the 2002-2003 school year were also subsequently phased out. One of the small schools had previously been much larger but had been downsized on the way to being closed; the two remaining small schools were academically nonselective schools established in the mid-1990s. These closings partially account for minor differences between the 2007-2008 school year counts of the midsize and small schools presented in Tables 3 and 5.

[33]Because HSAPS is run during the spring of the eighth-grade year, the data in the table for the 2004-2005, 2005-2006, and 2006-2007 academic years can also be seen as representing the eighth-grade choices of students who became first-time ninth-graders during the 2005-2006, 2006-2007, and 2007-2008 academic years.

[34]A noticeable decrease in the proportion of students choosing large, academically nonselective schools and a concomitant increase in the proportion choosing large, academically selective schools between the 2004-2005 and 2005-2006 school years is probably attributable in part to the fact that some schools that were classified as nonselective one year were reclassified as selective the next year.

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Table 6

Percentage of Eighth-Grade Students Indicating a Specific Type of School as Their First Choice and as One of Their Top Three Choices, by School Year

	Percentage of Eighth-Grade Students					
	First Choice[a]			First, Second, or Third Choice[b]		
School Type and Selection Method	2004-2005	2005-2006	2006-2007	2004-2005	2005-2006	2006-2007
NYC Department of Education (DOE) schools[c]						
Middle/high schools[d]	8.7	10.6	11.4	18.5	21.5	22.9
High schools						
Large schools[e]						
Academically selective[f]	30.8	35.8	28.4	53.0	55.5	49.2
Academically nonselective[g]	22.8	14.1	21.0	40.6	24.4	35.2
Midsize schools[h]						
Academically selective	19.2	20.4	19.5	36.2	37.9	36.6
Academically nonselective	0.2	0.0	0.2	0.4	0.0	0.6
Small schools[i]						
Academically selective	7.1	7.9	9.0	17.0	18.1	19.6
Academically nonselective	9.6	10.9	10.2	19.9	22.1	22.0

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the DOE for school years 2002-2003 through 2007-2008, DOE October enrollment data for school years 2005-2006 through 2007-2008, and High School Application Processing System (HSAPS) data for eighth-grade students in 2004-2005 through 2006-2007.

NOTES: Data are presented for students who participated in the main round of HSAPS and who were eligible for their first three choices of schools. These include 70,077 students in 2004-2005, 67,283 students in 2005-2006, and 76,318 students in 2006-2007.

The size classification of a given school can vary based on fluctuation in its annual student enrollment. However, large and midsize schools that were downsizing because they had been ordered to close retained their size designation as of the 2002-2003 school year.

[a]The percentages in each column under "First Choice" do not add to 100 percent because students who incorrectly selected a specialized high school as their first choice are not shown in the table.

[b]The percentages in each column under "First, Second, or Third Choice" present the proportion of students who made three valid choices and chose a school within the category at least once as one of their top three choices. Percentages are independent of each other and do not add to 100 percent.

[c]DOE schools are schools that are directly operated and managed by the NYC Department of Education.

[d]The middle/high school category includes schools intended to serve grades 5-12, 6-12, or 7-12 that served a cohort of ninth-grade students in the given school year.

[e]Large schools include high schools with a total student enrollment greater than 1,400 students.

[f]Academically selective schools are schools that admit the majority of students on the basis of their prior academic performance.

[g]Academically nonselective schools are schools that admit the majority of students based on grounds other than prior academic performance, such as place of residence.

[h]Midsize schools include high schools with a total student enrollment between 551 and 1,400 students.

[i]Small schools are high schools with a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

were also attractive to many students. And as middle/high schools grew in number, a larger proportion of eighth-graders (presumably including those already enrolled in the schools, who were given preference in the admissions process for entry into the schools' higher grades) listed these as their first choice. Meanwhile, 9.6 percent of eighth-graders listed small, nonselective schools as their first choice at the beginning of the period, as did 10.2 percent at its end — only a slight increase. It may well be that these schools generated considerable student interest when they first came into being, but after this period, their popularity did not increase dramatically.

The right-hand panel of Table 6 shows the proportion of students who listed a school in a given category at least once among their top three choices. While the levels of the percentages in this panel are higher than those seen in the left-hand panel, the pattern persists. In all three years, large and midsize selective schools were chosen more than schools in the small, nonselective category. The percentage of students designating a small, nonselective school as one of their top three choices increased by 2.1 percentage points over the period to 22.0 percent in the last year studied.

As noted previously, data analysis beyond the scope of this report would be needed to determine whether common threads are woven through students' school choices — whether students consistently list schools (or programs within schools) with certain themes, or schools that are located within a certain distance of their homes, or schools that offer more athletic opportunities, for example.[35] It is clear, however, that students did not consistently choose schools on the basis of overall size and degree of selectivity. Data not presented in the tables indicate that, of students who listed a small, nonselective school as their top choice, 30 percent also listed such a school as their second choice, and only 11 percent listed small, nonselective schools as their first, second, and third choices. Size appears to be just one among many factors that students take into account in choosing the schools to which they apply.[36]

Comparing School Characteristics

An underlying premise of the small schools movement is that such schools will provide a different, better, and more personalized academic experience than will larger schools. And it is

[35]It would also be of interest to know how consistently students applied to the "right" schools (that is, schools whose geographic and academic eligibility criteria they met).

[36]It is also possible that when students apply to large schools, they are actually applying to special programs lodged in small learning communities within these schools. This analysis does not take separate account of students' choices of small learning communities within large schools.

A paper by Aaron Pallas and Carolyn Riehl of Teachers College, Columbia University, explores factors that lead some high school programs to be in greater demand than others. It is not surprising that the single best predictor of a program's popularity one year was its popularity the previous year, regardless of the program's other features. See Pallas and Riehl (2007).

reasonable to hypothesize that schools serving more able students will differ in other ways from schools serving students who are more educationally disadvantaged.

This section of the report first uses the criteria developed in the previous two sections to examine the ways in which schools that fall into five distinct categories defined by size and academic selectivity are similar or different along an array of characteristics reported in city, state, and federal databases. All characteristics are reported for 2007-2008, the most recent year for which data were available when this report was written.[37]

The five categories employed in this analysis include:

- Large, academically selective schools (36 schools)
- Large, academically nonselective schools (23 schools)
- Midsize, academically selective schools (51 schools)
- Small, academically selective schools (51 schools)
- Small, academically nonselective schools (108 schools)[38]

Because schools in the last category above were the centerpiece of the Gates Foundation's investment strategy in small schools, the discussion largely centers on how these schools resemble or differ from schools in the other categories.

Attention then turns to distinctions among schools that fall within the small, academically nonselective group to address questions about the extent to which the number of years that the school has been in existence("school age") is associated with differences in school characteristics.

Differences in Characteristics Among Schools in the Five Categories

Tables 7 through 9 examine the characteristics of schools, students, and teachers in high schools categorized by size and academic selectivity. Box 4 summarizes the main findings.

Basic Characteristics

Table 7 compares basic characteristics — years in existence (age), size, and geographical setting — of high schools in the five categories. As seen in the table's first two rows, newer

[37]Although beyond the scope of this study, in a subsequent phase of the research it would be interesting to examine how differences among categories of schools have evolved over time.

[38]As noted previously, the sixth category, comprising midsize, academically nonselective schools, is omitted from consideration in the text, since only four schools fell into this group. In tables, the column reporting results for "All schools" does include these schools.

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Box 4

A Summary of Key Findings: Characteristics of Different Types of Schools Compared, 2007-2008 School Year

School Size

- Large schools were *much* larger than small ones, with total enrollments that were six to seven-and-a-half times larger than those of the small schools.

School Location

- Over three-fourths of the small, academically nonselective schools were located in the Bronx and Brooklyn, while over half of the large, nonselective schools were located in Queens and Staten Island.

Student Characteristics

- Small, academically nonselective schools served higher proportions of black and Hispanic students, students who were poor, and students with weak educational backgrounds than did midsize, academically selective schools and large schools, selective and nonselective.
- The large, academically nonselective schools that had not closed by the 2007-2008 school year no longer served students at exceptionally high risk of educational failure.

Teacher Experience

- Teachers in small, academically nonselective schools were, on average, less experienced and less credentialed than their counterparts at other schools.

Average Class Size

- Average class size in tenth-grade English and math classes was lower in small schools than in midsize, academically selective schools and large schools.

New York City Progress Report and Learning Environment Survey School Ratings

- Small schools, especially if academically selective, received higher grades on the New York City Progress Report than did midsize, academically selective schools and large schools.
- Students in small, academically nonselective schools gave their schools higher ratings on the Learning Environment Survey than did students attending midsize, academically selective schools and large schools.

NOTE: Because there were only four midsize, academically nonselective schools, and generalizing from such a small number could be misleading, these schools are excluded from consideration.

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Table 7

Basic Characteristics of DOE High Schools, by School Type, 2007-2008 School Year

Characteristic	Large Academically Selective[a]	Large Academically Nonselective[b]	Midsize Academically Selective[c]	Small Academically Selective[d]	Small Academically Nonselective[e]	All Schools
School in existence[f] (%)						
Four years or more	100.0	100.0	98.0	98.0	65.7	85.3
Less than four years	0.0	0.0	2.0	2.0	34.3	14.7
Average total enrollment (for schools serving all four grades)	2,466	3,098	819	410	394	1,080
Average ninth-grade enrollment	812	841	257	118	109	294
Distribution of schools by borough (%)						
Bronx	19.4	4.3	11.8	25.5	47.2	29.3
Brooklyn	22.2	39.1	33.3	17.6	30.6	28.2
Manhattan	30.6	0.0	27.5	47.1	14.8	23.8
Queens	25.0	39.1	25.5	9.8	6.5	16.1
Staten Island	2.8	17.4	2.0	0.0	0.9	2.6
Total number of schools	36	23	51	51	108	273

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, DOE October enrollment data for 2007-2008 school year, and High School Application Processing System data for eighth-grade students in 2006-2007.

NOTES: Rounding may cause discrepancies in sums and differences.

Midsize academically nonselective schools are not shown as a separate column in the table because of the small number of schools in this category (n = 4). These schools are, however, included in the "All Schools" column.

Data are presented for schools that enrolled first-time ninth-grade students in the 2007-2008 school year.

[a]Large academically selective schools include high schools that admit the majority of students on the basis of their prior academic performance and have a total student enrollment greater than 1,400 students.

[b]Large academically nonselective schools include high schools that admit the majority of students based on grounds other than prior academic performance, such as place of residence, and have a total student enrollment greater than 1,400 students.

[c]Midsize academically selective schools include high schools that admit the majority of students on the basis of their prior academic performance and have a total student enrollment between 551 and 1,400 students.

[d]Small academically selective schools are high schools that admit the majority of students on the basis of their prior academic performance and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[e]Small academically nonselective schools are high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[f]A school's number of years in existence is calculated starting with the year in which the school began accepting its first cohort of ninth-grade students.

schools fell almost exclusively into the small, academically nonselective category. Just over a third of the schools in this group (37 of 108) had not been in operation long enough to include students in all four grades of high school.

Total enrollment figures are presented for schools that had existed long enough to have enrolled students in all grades. It is a tautology that schools classified as large had higher enrollments than schools classified as midsize or small. What is striking, though, is the magnitude of the difference. While schools in the midsize group had average enrollments that were double those in the small schools (whether academically selective or not), large, selective schools had roughly six times as many students as did small schools, and large, nonselective schools had more than seven and a half times as many.

The marked differences in the average total enrollments of large, midsize, and small schools are also apparent in their average ninth-grade enrollments. Large, academically nonselective schools, with an average of 841 ninth-graders, registered the highest freshman enrollments, while small, academically nonselective schools, with an average of 109 ninth-grade students, had the lowest.

Finally, the table shows that, as expected, in the 2007-2008 school year, the large majority (78 percent) of the small, nonselective schools were located in the Bronx and Brooklyn. More surprising, perhaps, is that more than half of the large, nonselective schools that remained after the lowest-performing such schools were closed were located in Queens and Staten Island. Another notable point is that a substantial proportion of both large and small, academically selective schools are located in Manhattan. (In fact, in the 2007-2008 school year, Manhattan was home to nearly half of all small academically selective schools.)

Student Demographic and Performance-Related Characteristics

Table 8 compares the demographic characteristics and prior school performance of first-time ninth-graders enrolled in the five categories of high schools. The table indicates that, overall, students in the small, academically nonselective schools were distinctly more disadvantaged than students in other public high schools.

On average, small, nonselective schools served higher proportions of black and Hispanic students and higher proportions of students who were low-income (as evidenced by their eligibility for free or reduced-price lunch) than did the other categories of schools that are shown. Moreover, students in the small, nonselective schools were more likely to be overage for grade by the time they were in eighth grade than students in the four other school categories, and higher proportions of students in these schools had eighth-grade reading and math scores indicative of low academic skills.

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Table 8

Demographic and Performance-Based Characteristics of First-Time Ninth-Grade Students Enrolled in DOE High Schools, 2007-2008 School Year

Characteristic	Large, Academically Selective[a]	Large, Academically Nonselective[b]	Midsize, Academically Selective[c]	Small, Academically Selective[d]	Small, Academically Nonselective[e]	All Schools
Gender (%)						
Male	50.7	55.4	52.3	45.8	50.7	50.6
Female	49.3	44.6	47.7	54.2	49.3	49.4
Race/Ethnicity (%)						
Black	38.4	23.8	40.0	33.4	44.4	38.6
Hispanic	42.5	34.8	43.2	47.0	49.0	45.5
Asian	12.6	17.7	8.1	11.1	2.8	8.2
White	6.1	23.0	8.1	8.0	3.3	7.1
American Indian	0.4	0.7	0.6	0.4	0.4	0.5
Overage for eighth grade (%)	23.1	26.9	20.1	23.8	27.4	25.2
Eligible for free and reduced-price lunch (%)	73.0	55.2	72.6	81.5	82.1	76.8
Special education (%)	13.2	13.5	13.9	10.6	13.6	13.0
English language learner (%)	11.2	17.8	9.8	21.1	14.0	14.9
Average eighth-grade reading proficiency[f] (%)						
Low	42.0	40.8	41.0	45.7	51.9	46.4
Medium	44.0	41.2	41.6	37.1	40.2	40.4
High	14.1	17.9	17.3	17.2	8.0	13.1
Average eighth-grade math proficiency (%)						
Low	41.1	39.1	40.0	42.0	53.0	46.0
Medium	38.4	38.4	38.9	36.5	36.8	37.3
High	20.5	22.5	21.2	21.5	10.2	16.7

(continued)

Table 8 (continued)

Characteristic	Large, Academically Selective[a]	Large, Academically Nonselective[b]	Midsize, Academically Selective[c]	Small, Academically Selective[d]	Small, Academically Nonselective[e]	All Schools
Average percentage of students who did not particpate in the High School Application Processing System (HSAPS)	9.0	21.8	8.4	11.2	15.6	13.6
Total number of schools	36	23	51	51	108	273
Total number of students	22,842	15,416	11,051	5,419	11,063	66,218

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, DOE October enrollment data for school years 2006-2007 through 2007-2008, and HSAPS data for eighth-grade students in 2006-2007.

NOTES: Rounding may cause slight discrepancies in calculating sums and differences.

Midsize academically nonselective schools are not shown as a separate column in the table because of the small number of schools in this category (n = 4). These schools are, however, included in the "All Schools" column.

Data are presented for schools that enrolled first-time ninth-grade students in the 2007-2008 school year.

[a]Large academically selective schools include high schools that admit the majority of students on the basis of their prior academic performance and have a total student enrollment greater than 1,400 students.

[b]Large academically nonselective schools include high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a total student enrollment greater than 1,400 students.

[c]Midsize academically selective schools include high schools that admit the majority of students on the basis of their prior academic performance and have a total student enrollment between 551 and 1,400 students.

[d]Small academically selective schools are high schools that admit the majority of students on the basis of their prior academic performance and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[e]Small academically nonselective schools are high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[f]For the New York State eighth-grade tests, Level 1 indicates that a student is not meeting learning standards; Level 2 indicates that a student is partially meeting learning standards; Level 3 indicates that a student is meeting learning standards; and Level 4 indicates that a student is meeting learning standards with distinction. For the purposes of these analyses, students scoring at Level 1 and low Level 2 are in the low-proficiency category; students scoring at high Level 2 and low Level 3 are in the middle-proficiency category; students scoring at high Level 3 and Level 4 are in the high-proficiency category.

Students in the small, nonselective schools were also as likely as students elsewhere to have special education status, and the percentage of English language learners (that is, students whose native language is not English) in these schools was close to the average for all school types. These findings are particularly noteworthy because the DOE gave new small schools the authority to exclude special education students and English language learners during their first two years of operation. Clearly, by 2007-2008, these schools had caught up with, and in many cases had surpassed, other types of schools in serving large percentages of students in these special populations.

At the same time, the table suggests that in the 2007-2008 school year, the large, academically nonselective schools that remained were quite different from those that had been closed. Their location in Queens and Staten Island meant that they served larger percentages of white students, and smaller percentages of students who were eligible for free- and reduced-price lunch, than did the other categories of schools. These schools enrolled a substantial percentage of students who were overage for eighth grade. But they also enrolled the lowest percentages of students with low eighth-grade reading and math test scores and the highest proportions of students with high test scores.

Finally, the data reported in the last row indicate that freshman classes in large, nonselective schools and small, nonselective schools included higher proportions of students who did not arrive at these schools through HSAPS at all but were instead "over-the-counter" students assigned to the schools because seats were available. Seat availability is a given in large, nonselective schools, because these zoned schools are required to accept all students who live in their residence areas. Smaller nonselective schools, in contrast, had distinct slot limitations; in a given year, they commonly were slated to enroll 108 new ninth-graders. The fact that openings were available in these schools indicates that not all the schools were fully subscribed, perhaps in part because a number of them were still new and had not yet become established in their communities.

Instruction-Related Characteristics

Table 9 displays instruction-related characteristics of schools in the various size/selectivity categories. The data indicate that along a number of dimensions, there were marked differences between the small, academically nonselective schools and schools in the other categories.

TEACHER EXPERIENCE AND CREDENTIALS

The new, small, nonselective schools generally had teachers who were less experienced than teachers in other kinds of schools. On average, more than one-third of the teachers in the small, nonselective schools (36 percent) were novice teachers with less than three years of

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Table 9

Instruction-Related Characteristics of DOE High Schools, by School Type, 2007-2008 School Year

Characteristic	Large, Academically Selective[a]	Large, Academically Nonselective[b]	Midsize, Academically Selective[c]	Small, Academically Selective[d]	Small, Academically Nonselective[e]	All Schools
Teacher characteristics (%)						
Less than 3 years of teaching experience	10.7	6.7	17.1	21.6	36.4	23.9
Doctorate or master's degree plus 30 hours	49.1	53.8	36.6	32.5	24.1	34.2
Teaching out of subject-area certification	12.4	11.6	18.0	15.2	19.1	16.5
Average number of students in tenth-grade classes						
English	30	30	29	25	26	27
Math	29	29	28	24	25	27
Total number of schools	36	23	51	51	107	272
New York City Progress Report[f] (%)						
Progress Report overall score						
A	5.7	15.0	30.6	62.5	41.4	36.2
B	54.3	65.0	38.8	31.3	48.6	44.6
C	22.9	15.0	22.4	6.3	7.1	13.4
D	8.6	5.0	6.1	0.0	0.0	3.1
F	8.6	0.0	2.0	0.0	2.9	2.7
Total number of schools	35	20	49	48	70	224

(continued)

Table 9 (continued)

Characteristic	Large, Academically Selective	Large, Academically Nonselective	Midsize, Academically Selective	Small, Academically Selective	Small, Academically Nonselective	All Schools
School Quality Review[g]						
Overall score	3.5	3.7	3.5	3.6	3.4	3.5
Statement 1: Gather Data	3.6	3.8	3.6	3.7	3.5	3.6
Statement 2: Plan and Set Goals	3.5	3.8	3.5	3.6	3.5	3.6
Statement 3: Align Instructional Strategy to Goals	3.5	3.8	3.6	3.7	3.5	3.6
Statement 4: Align Capacity Building to Goals	3.8	3.9	3.7	3.8	3.7	3.7
Statement 5: Monitor and Revise Goals	3.5	3.4	3.3	3.4	3.3	3.4
Total number of schools	33	20	50	49	94	248
Student Learning Environment Survey[h]						
Safety and Respect	6.2	5.9	6.3	6.8	6.4	6.4
Academic Expectations	6.9	6.7	7.0	7.3	7.2	7.1
Engagement	6.1	5.9	6.1	6.5	6.3	6.3
Communication	5.3	5.1	5.5	6.0	5.9	5.7
Total number of schools	17	12	34	37	74	176

(continued)

Table 9 (continued)

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, DOE October enrollment data for the 2007-2008 school year, and High School Application Processing System data for eighth-grade students in 2006-2007. DOE accountability measures include the New York City Progress Report, School Quality Review, and the Student Learning Environment Survey for the 2007-2008 school year.

NOTES: Rounding may cause discrepancies in sums and differences.

Midsize, academically nonselective schools are not shown as a separate column in the table because of the small number of schools in this category (n = 4). These schools are, however, included in the "All Schools" column.

Data are presented for schools that enrolled first-time ninth-grade students in the 2007-2008 school year.

[a]Large academically selective schools include high schools that admit the majority of students on the basis of their prior academic performance and have a total student enrollment greater than 1,400 students.

[b]Large, academically nonselective schools include high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a total student enrollment greater than 1,400 students.

[c]Midsiz,e academically selective schools include high schools that admit the majority of students on the basis of their prior academic performance and have a total student enrollment between 551 and 1,400 students.

[d]Small, academically selective schools are high schools that admit the majority of students on the basis of their prior academic performance and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[e]Small, academically nonselective schools are high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[f]A Progress Report overall score is computed only for schools serving all grades 9-12. These schools received scores along three dimensions: school environment, student performance, and student progress.

[g]In order to calculate the averages shown in the table, the authors converted each school's School Quality Review overall score and five statement scores from a nominal ranking scale to a numeric scale, where "underdeveloped" = 1, "underdeveloped with proficient features" = 2, "proficient" = 3, "well developed" = 4, and "outstanding" = 5.

[h]The Student Learning Environment Survey data measure each school along the four domains shown. The DOE gives each answer a point value on a scale between 0 and 10, with answers describing the school environment most favorably receiving a 10 and answers describing the school environment least favorably receiving a 0. An overall domain score was calculated by averaging the answer scores pertaining to that domain. Data are included for schools with a student response rate of at least 70 percent.

classroom experience. This was true of only 24 percent of teachers across the various categories, with the large schools, both selective and nonselective, having the lowest proportions of new teachers, and midsize and small, selective schools occupying an intermediate position. The disparity is in part a function of the newness of many small, nonselective schools: in 2007-2008, some of these schools had not yet been in existence for three years. It may also reflect different hiring patterns in the new small schools — a greater willingness on the part of principals to hire bright and enthusiastic but inexperienced teachers — as well as higher rates of teacher turnover in these schools.[39] Whatever the cause, the newness of these teachers to the profession may have put their students at something of an educational disadvantage. The research on teacher quality indicates that teacher effectiveness improves markedly over the first few years in the profession, although additional experience beyond the first two or three years is not correlated with improved performance.[40]

In addition, teachers in the small, nonselective schools were only half as likely as their large-school counterparts to hold a doctorate or a master's degree plus 30 additional credit hours.[41] Teachers in these schools were also more likely to be teaching out of their area of certification, although differences along this dimension were smaller, and across all categories of schools, the large majority of teachers were certified to teach the subjects they taught.

In and of themselves, the data do not suggest that, because their teachers were less likely to have advanced degrees, students in the small, nonselective schools were subject to a lower-quality educational experience than their counterparts elsewhere. In general, the research literature does not point to strong links between teacher credentials and teaching quality. A 2006 study of the relationship between certification and teacher effectiveness based on New York City public schools data, for example, found that there was little or no difference in the average effectiveness of certified, uncertified, and alternatively certified teachers.[42] Furthermore, most of the literature suggests little or no relationship between holding a master's degree (except in mathematics or science) and teachers' ability to improve student achievement.[43]

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[39]A recent report by the New School's Center for New York City Affairs notes that many teachers at the new small schools are recruited from two programs — Teach for America, which asks teachers to stay for only two years, and the New York City Teaching Fellows, an alternative teacher certification program. The report also found higher rates of turnover among teachers at the new small schools than in more established high schools. See Hemphill and Nauer (2009).

[40]Snipes and Horwitz (2007).

[41]In education, a master's degree plus 30 semester hours of graduate credit marks a pay distinction on the teacher salary scale.

[42]Kane, Rockoff, and Staiger (2006).

[43]See Snipes and Horwitz (2007).

CLASS SIZE

The table indicates that tenth-grade English and math classes in small schools (both selective and nonselective) included between 24 and 26 students, on average, whereas class sizes in large schools and midsize selective schools ranged between 28 and 30 students, a notable disparity. It is not immediately apparent why small schools should also have smaller classes than midsize or large schools. But given the discretion afforded to individual principals over budgets and scheduling, it seems plausible that principals in small schools were more likely than their counterparts in larger institutions to direct available resources toward lowering class sizes, at least for the core subjects measured.

ACCOUNTABILITY MEASURES

Beginning in the 2006-2007 school year, the DOE started to evaluate schools using three accountability measures.[44] Table 9 shows these measures, which are discussed in turn, beginning with the panel headed "New York City Progress Report."

The New York City Progress Report is intended to help parents, teachers, and others understand how well schools are doing, especially when compared with other schools serving similar students. The Progress Report overall score consists of three components: school environment, which is measured by attendance rates and by the results of the Learning Environment Survey (LES), discussed below, that is administered to teachers, parents, and students; student performance, which is measured by graduation rates for high schools; and student progress, which is measured by credit accumulation and by the rates at which students complete and pass the New York State Regents High School Examinations.[45] In order to get an overall score, a school must receive a score on all three components; this means that only high schools that have been in existence long enough to have a graduating cohort can receive an overall score. A school's results in each area are compared with the results for all high schools, as well as for a group of up to 40 schools that serve a demographically similar student body. The school receives a letter grade of A, B, C, D, or F on the Progress Report and can improve its grade by helping special education students, English language learners, and other high-need students to make progress.

As Table 9 shows, 63 percent of the small, academically selective schools earned an A on the Progress Report, and most of the rest earned a B. Small, nonselective schools also

[44]These measures are described on the New York City Department of Education, Office of Accountability Web page. See NYC Department of Education (2009f).

[45]The New York State Regents High School Examinations are standardized tests of discipline-specific content knowledge administered to students who seek Regents credit for their courses. New York State now requires high school graduates to pass five Regents exams with a score of 65 or higher; students seeking an Advanced Regents Diploma must pass eight exams.

received high ratings, with 41 percent earning an A and 49 percent a B. That said, the majority of schools in all categories did well on this measure, although a substantial minority of large, academically selective schools received a grade of C or lower.

The School Quality Review, shown in the next panel in Table 9, is an assessment conducted by experienced educators from outside the DOE who, over a two- to three-day school visit, interview students, teachers, and parents; observe classrooms; and review the ways in which the school uses data to set goals and improve learning. In 2007-2008, schools were graded on their ability to (1) gather and analyze student outcomes data, (2) plan and set students' learning goals, (3) align academic work and strategic plans with students' learning goals, (4) align staff professional development with students' learning goals, and (5) monitor students' progress and revise students' learning goals as needed. In each area, the school could receive a rating of "underdeveloped" (for which it received a score of 1), "underdeveloped with proficient features" (score of 2), "proficient" (score of 3), "well developed" (score of 4), and "outstanding" (score of 5), along with an overall score (which is not, however, the simple average of the five individual subscores).

In this analysis, the ratings were converted into the numeric scores given above so that a mean score for each school category could be calculated; these mean scores were then translated back into qualitative descriptions. On average, schools in all categories received ratings that placed them between "proficient" and "well developed" on all five quality measures as well as on the overall measure. Small, academically nonselective schools scored somewhat lower than the average on the overall score and on most of the component measures, although the magnitude of the differences was not large.

Finally, as noted above, the Learning Environment Survey, shown in the last panel of Table 9, is administered to students, teachers, and parents at all schools. The version for each group includes questions that tap opinions about the school's functioning with respect to four domains: Safety and Respect, Academic Expectations, Engagement, and Communication. This analysis includes only the results of the student survey, and then only for schools where the response rate was 70 percent or higher.[46] (Response rates for the teacher and parent surveys — 61 and 24 percent, respectively — were too low to support generalizable conclusions.) Box 5 shows examples of student survey items within each domain.

Table 9 shows the average score for schools in each category on each of the domains measured; scores for each domain could range from 0 to 10. It is striking that small schools

[46]These schools include 74 of the 108 small, academically nonselective schools; 37 of the 51 small, academically selective schools; 2 of the 4 midsize, nonselective schools; 34 of the 51 midsize, selective schools; 12 of the 23 large, nonselective schools; and 17 of the 36 large, selective schools.

New York City Small Schools of Choice

Box 5

Examples of Learning Environment Survey Questions for Students, Related to Four Domains

Domain and Sample Questions	Survey Response Choices				
Safety and Respect					
How much do you agree or disagree with the following statements about your teachers?	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Teachers in my school treat *students* with respect.					
Most students in my school treat *teachers* with respect.					
How much do you agree or disagree with the following statement about your school?	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
I am safe in the hallways, bathrooms, and locker rooms at my school.					
Academic Expectations					
Approximately how often, *during the school year*, have your teachers asked you to:	Never	1 or 2 times	3 or 4 times	5 or more times	
Complete an essay or research project using multiple sources of information?					
Complete an essay or project where you had to use evidence to defend your own opinion or ideas?					
How much do you agree or disagree with the following statements about being successful at your school?	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
My teachers expect me to continue my education after high school.					

(continued)

Box 5 (continued)

Domain and Sample Questions	Survey Response Choices				
Engagement					
How much do you agree or disagree with the following statements about your teachers?	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
My teachers inspire me to learn.					
My teachers connect what I am learning to life outside of the classroom.					
How much do you agree or disagree with the following statement?	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
My school offers a wide enough variety of classes and activities to keep me interested in school.					
Communication					
How much do you agree or disagree with the following statements about your school?	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Most of the teachers, counselors, school leaders, and other adults I see at school everyday know my name or who I am.					
On a scale of 1 to 4, how *comfortable* are you talking to teachers and other adults at your school about:	Uncomfortable (1)		(2)	(3)	Comfortable (4)
A problem you are having in class?					
Something that is bothering you?					

SOURCE: Based on NYC Department of Education, *Learning Environment Survey Report 2007-08: Educator's Guide.*

(both selective and nonselective) received higher scores in all areas than did larger ones.[47] Large, nonselective schools trailed behind schools in all the other categories on all four domains. The fact that only 12 of the 23 large, nonselective schools and only 17 of the 36 large, selective schools had high enough response rates to be included in the analysis necessarily weakens any efforts to draw firm conclusions about these schools, however, because it is impossible to know how representative these schools were of all schools in their category.

Are the differences in LES scores between small schools and other schools real? Because Learning Environment Survey data are available for only a subgroup, or sample, of schools in each category, it is appropriate to use tests of statistical significance to determine the likelihood that all these samples came from the same underlying population, or, put another way, the likelihood that the variation in responses among students attending different kinds of schools is attributable to something other than chance.[48]

A t-test was conducted to assess whether the average domain scores registered by students in small, nonselective schools were significantly different from the average scores reported by students in all the other types of schools. As shown in Appendix Table B.1, these differences turned out to be statistically significant for the measures of Academic Expectations and Communication, indicating a low probability that the differences occurred by chance. A second t-test assessed the differences between responses of students in small, nonselective schools and those in midsize and large schools, both selective and nonselective; the results appear in Appendix Table B.2.[49] This time, the differences were highly significant on all four measures. Students in the small, nonselective schools really did rate their schools as better places to be than did their counterparts in larger schools. (Appendix B contains tables that present all t-test results.)

Because small, nonselective schools are so critical to New York City's high school reform strategy, differences among these schools merit special consideration. The remainder of this section examines whether or not schools that had been in existence for at least four years differed from those that had been in operation for a shorter period of time. The decision to select four years as a cut-point is based on the fact that schools in existence for four years have been around long enough to graduate at least one cohort of students and might therefore be presumed to be more experienced in implementing change. By the 2007-2008 school year, approximately two-thirds of the small, nonselective schools (71 of the 108) had been in existence for four years

[47]The 29 large schools in the LES analysis include four schools that were divided into small learning communities aimed at improving personalization and effecting other positive outcomes.

[48]In contrast, data pertaining to the other measures shown in Tables 7 through 9 are available for the population of schools in each category, making tests of statistical significance inappropriate.

[49]Small, selective schools were omitted from this analysis.

or more, while the remaining one-third had been in operation for lesser amounts of time. Table 10 compares the characteristics of the two groups of schools.

The table indicates that while small schools were developed early on in all boroughs except Staten Island, the majority of the early schools were located in the Bronx, where they served to replace the large, very low-performing high schools located in that borough. With respect to the characteristics of the students they served, older and newer schools were quite similar, with both sets of schools serving substantial proportions of students who were overage for ninth grade and eligible for free or reduced-price lunch, and whose test scores indicated low levels of achievement on both reading and math tests in eighth grade.

Teachers in the newer schools had substantially less experience than those in the older schools: on average, 48 percent of teachers in the newer schools had taught for less than three years, compared with 31 percent of those in the older schools. Teachers in the two sets of schools were more similar in terms of the percentages holding an advanced degree and teaching outside of their area of certification.

Perhaps surprisingly, newer schools scored as well as or better than the older ones on the School Quality Review overall score and on most of its constituent measures. Students also rated the newer schools slightly higher than the older ones on three of the four constructs measured by the Learning Environment Survey, although t-tests indicate that the difference was statistically significant only with respect to Communication.[50] (See Appendix Table B.3.) In general, then, if more mature schools function better than their more recently established counterparts, that superiority is not apparent in the measures available for this study.

Reflections and Conclusions

The evidence in this report indicates that within the space of six years, the New York City school system — the nation's largest and most complex — transformed the options it offered to those high school students at greatest risk of academic failure. The most dysfunctional large schools, which such students had typically attended, were shuttered and replaced by new schools that were much smaller, more personalized, and organized around themes intended to appeal to students and adults alike. Students whose weak middle school performance had afforded them minimal access to better high schools before the advent of Children First subsequently had the same probability as their higher-achieving age peers of being accepted into the new small schools. And school choice, which in the past had been a "luxury good" restricted to

[50]Forty-seven of the 71 small, nonselective schools that were four years old or older had Learning Environment Survey response rates of 70 percent or higher and were included in this analysis. The same was true for 27 of the 37 schools that were less than four years old.

New York City Small Schools of Choice

Table 10

Selected Characteristics of Older and More Recently Established Small, Nonselective Schools, 2007-2008 School Year

Characteristic	School in Existence Four Years or More	School in Existence Less Than Four Years	All Schools
School characteristics			
Average ninth-grade enrollment	113	101	109
Distribution of schools by borough (%)			
Bronx	56.3	29.7	47.2
Brooklyn	25.4	40.5	30.6
Manhattan	14.1	16.2	14.8
Queens	4.2	10.8	6.5
Staten Island	0.0	2.7	0.9
Student characteristics			
Race/Ethnicity (%)			
Black	45.7	43.4	44.9
Hispanic	49.2	46.7	48.3
Asian	2.5	3.5	2.8
White	2.2	5.8	3.4
American Indian	0.3	0.5	0.4
Overage for eighth grade (%)	38.4	32.9	36.5
Eligible for free and reduced-price lunch (%)	72.5	75.6	73.5
Special education (%)	12.7	8.8	11.3
English language learner (%)	10.9	14.7	12.2
Students scoring at Level 1 or Low Level 2 on eighth-grade reading[a] (%)	51.7	52.2	51.9
Students scoring at Level 1 or Low Level 2 on eighth-grade math (%)	52.6	53.5	53.0
Teacher characteristics (%)			
Less than 3 years of teaching experience	30.5	48.0	36.4
Doctorate or master's degree plus 30 hours	25.3	21.8	24.1
Teaching out of subject-area certification	17.4	22.4	19.1

(continued)

Table 10 (continued)

Characteristic	School in Existence Four Years or More	School in Existence Less Than Four Years	All Schools
Average number of students in tenth-grade classes			
English	26	24	26
Math	26	25	25
Total number of schools	71	37	108
New York City Progress Report[b] (%)			
Progress Report overall score			
A	41.4	NA	41.4
B	48.6	NA	48.6
C	7.1	NA	7.1
D	0.0	NA	0.0
F	2.9	NA	2.9
Total number of schools	70	NA	70
School Quality Review[c]			
Overall score	3.4	3.5	3.4
Statement 1: Gather Data	3.5	3.5	3.5
Statement 2: Plan and Set Goals	3.5	3.5	3.5
Statement 3: Align Instructional Strategy to Goals	3.5	3.6	3.5
Statement 4: Align Capacity Building to Goals	3.7	3.5	3.7
Statement 5: Monitor and Revise Goals	3.2	3.4	3.3
Total number of schools	66	28	94
Student Learning Environment Survey[d]			
Safety and Respect	6.4	6.5	6.4
Academic Expectations	7.2	7.1	7.2
Engagement	6.3	6.4	6.3
Communication	5.8	6.1	5.9
Total number of schools	47	27	74

(continued)

Table 10 (continued)

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, DOE October enrollment data for school years 2006-2007 through 2007-2008, and High School Application Processing System data for eighth-grade students in 2006-2007. DOE accountability measures include the New York City Progress Report, School Quality Review, and the Student Learning Environment Survey for the 2007-2008 school year.

NOTES: Rounding may cause discrepancies in sums and differences.

Data are presented for schools that enrolled first-time ninth-grade students in the 2007-2008 school year. Student data pertain to all students enrolled in the schools except for eighth-grade measures, which pertain to only ninth-grade students in the schools.

Small academically nonselective schools are high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

A school's number of years in existence is calculated starting with the year in which the school began accepting its first cohort of ninth-grade students. Schools in existence four years or more have served four full grades, while schools in existence less than four years have not yet served four full grades of students.

[a]For the New York State eighth-grade tests, Level 1 indicates that a student is not meeting learning standards; Level 2 indicates that a student is partially meeting learning standards; Level 3 indicates that a student is meeting learning standards; and Level 4 indicates that a student is meeting learning standards with distinction. For the purposes of these analyses, students scoring at Level 1 and low Level 2 are in the low-proficiency category and included in these measures.

[b]A Progress Report overall score was computed only for schools serving all grades 9-12. These schools received scores along three dimensions: school environment, student performance, and student progress.

[c]In order to calculate the averages shown in the table, the authors converted each school's School Quality Review overall score and five statement scores from a nominal ranking scale to a numeric scale, where "underdeveloped" = 1, "underdeveloped with proficient features" = 2, "proficient" = 3, "well developed" = 4, and "outstanding" = 5.

[d]The Student Learning Environment Survey data measure each school along the four domains shown. The DOE gives each answer a point value on a scale between 0 and 10, with answers describing the school environment most favorably receiving a 10 and answers describing the school environment least favorably receiving a 0. An overall domain score was calculated by averaging the answer scores pertaining to that domain. Data are included for schools with a student response rate of at least 70 percent.

the best and/or most motivated students, or those with the savviest parents, was extended to all students in the city.

Changes of this magnitude and rapidity were accomplished because key DOE officials had a clear vision of what they wanted to achieve; they pursued that vision in a focused, determined way; and they had the full support of the Mayor. They also took place because prior experience in establishing new schools endowed New Visions for Public Schools and other intermediary organizations with a well-defined approach to securing rapid scale-up. Finally, they were made possible because the Bill & Melinda Gates Foundation was committed to making an extraordinary investment in the educational success of some of the country's most disadvantaged students.

This report does not address the question of how well the investment in the new small schools has paid off in terms of student attendance, progress, and achievement. That is the subject of a companion report that MDRC will release in the spring of 2010. That report, which describes the findings of an impact study, compares outcomes for students who applied through HSAPS to a new small school and were admitted to it with those for similar students who also applied but "lost" the HSAPS lottery and were assigned to another school instead. The rigorous nature of the impact study, which takes advantage of the random element in HSAPS to construct a natural experiment, means that its findings provide the strongest possible evidence about the effectiveness of the small schools. Those findings suggest that small schools are having the desired impacts — better attendance and greater credit accumulation — at least through the first two years of high school. (Additional follow-up will trace students through all four years of high school.)

The Learning Environment Survey data reported in Table 9 of this report provide promising although inconclusive evidence that these positive outcomes may have come about because, at least for lower-performing students, small, academically nonselective schools offer the best predisposing conditions for academic achievement. Students in the small, nonselective schools rated their schools as safer, their teachers and peers as more respectful of one another, communication within the schools as more frequent, the academic expectations placed on them as higher, and their sense of engagement as greater than did students in other schools.

Given these findings, it may be a bit troubling that more students do not apply to these new schools as their first choice, or indeed, as one of their top three choices (as was shown in Table 6). This is not to say that small schools are necessary or even good for all students. Higher-achieving students may be well served by large schools — selective or nonselective — if the schools are good ones. (In this regard, it is worth remembering that more than half of the remaining large, nonselective high schools are in Queens and Staten Island; these schools generally serve students with fewer educational and social disadvantages than do high schools in the other boroughs.) But one of many questions raised by the data is whether more should be done to get the small-schools message out to the low-income, low-performing students that these schools were created to serve and to their parents. This is especially a concern because the substantial proportion — nearly one-sixth — of students enrolled in the small, nonselective schools who did not get into them through HSAPS in the 2007-2008 school year indicates that the schools did not fill their quotas through the regular high school application process.

While time and resources constrain the analyses that can be presented in this report, the data that MDRC has assembled constitute a rich lode of information that can be mined for other purposes. For example, the MDRC database makes it possible to chart changes in enrollment, student demographics, teacher characteristics, and accountability measures for a school or for a group of schools over time. The HSAPS data in particular can be more fully exploited to answer

questions about how students select schools — how, for example, school theme and geography shape students' choices, or whether students meet the eligibility criteria for the schools to which they apply.

At the same time, the information in the MDRC database cannot address other key issues. The changes discussed in this report are primarily structural and procedural. They concern the development of new schools and of new mechanisms for assigning students to schools of their choice. But the school characteristics data that are available for this study provide no insights into the challenges associated with founding new schools and how those challenges have been met. For that, the Policy Studies Associates study of the intermediary organizations involved in new school creation will be an invaluable source of information. Nor do the school characteristics data supply much information about what happens when teachers and students interact with one another in the classroom. If small schools are to succeed in increasing academic achievement as well as becoming more personalized, instruction must involve rigorous content conveyed in an engaging way. The case studies conducted by the Academy for Educational Development will shed light on the extent to which such instruction is evident in a sample of schools that received funding from the Gates Foundation. The hope is that, collectively, the impact study, the study of intermediary organizations, the case studies, and this school characteristics study will contribute to an understanding of the dramatic changes that have taken place in New York City's high school landscape, the effects of those changes, and the factors that produce those effects.

Appendix A

Sample School Description Page from the *New York City High School Directory*

GEORGE WESTINGHOUSE CAREER AND TECHNICAL EDUCATION HIGH SCHOOL *CTE SCHOOL*

Address: 105 Tech Place, Brooklyn, NY 11201
Tel: 718-625-6130
Fax: 718-596-9434
E-mail: jwidlun@schools.nyc.gov
Website: www.withs.org

Subway: A, C, F to Jay Street-Borough Hall; M, R to Lawrence Street-MetroTech; 2, 3 to Hoyt Street; 4, 5 to Borough Hall-Court Street
Bus: B25, B26, B37, B38, B41, B45, B52, B67, B75 to Jay Street & Myrtle Avenue or Flatbush Avenue & Tillary Street

Eligibility
- Open to New York City residents

Site Accessibility
- Not Accessible

Special Education Services
- Collaborative Team Teaching (CTT)
- SETSS
- Special Class
- Special Class for Hearing Impaired Students

ELL Programs
- ESL

Enrollment (10/31/2006)
- Total Students: 1012
- Grades Served (2008-2009): 9, 10, 11, 12

Important Information!

- Our school observes a uniform dress code. Incoming 9th grade students wear khaki pants and a navy blue polo shirt.
- All students enter as a member of our 9th Grade Success Academy.
- Parent involvement is key to the social and academic growth of all of our students. We are counting on all parents to assist the school and join our various parent organizations.

IN THEIR OWN WORDS

Our school is committed to providing all students an academically challenging and technologically advanced course of study. If you become a part of our family, you will soon learn that excellence is expected and can be achieved by all.

COURSES AND PROGRAM HIGHLIGHTS

■ **Programs:** Intermediate Programming (Oracle), A+ Computer Repair, Vision Care Technology, Electrical Technology, Cisco Networking, Project Lead the Way (Pre-Engineering), Multimedia Internet, Technology, Computer Aided Design Technology, Counseling in School, I-Mentor ■ **Language Classes:** American Sign Language, Spanish ■ **Advanced Placement Courses:** Chemistry, English Literature and Composition, United States History, World History

PARTNERSHIPS

■ **Community-Based Organizations:** Talent Development High Schools, Counseling in Schools, The Leadership Program ■ **Higher Education Institutions:** Polytechnic University, New York City College of Technology, Brooklyn College, Pace University ■ **Cultural/Arts Organization:** Creative Arts Team ■ **Corporate:** Metrotech Business Improvement District (BID), Construction Skills 2000, Metropolitan Transit Authority (MTA) New York City (NYC) Transit Authority, Verizon ■ **Financial Institution:** HSBC Bank ■ **Other:** I-Mentor

EXTRACURRICULAR ACTIVITIES

■ **Leadership & Support:** Peer Mediation and Conflict Resolution, Student Government, Student Leadership Team, Anti-Bullying Committee, Financial Literacy, Job Readiness Workshops ■ **Academic:** National Honor Society, National Society of Black Engineers, Virtual Enterprise ■ **Artistic:** School Theatre Group, Fashion Show ■ **Clubs:** For Inspiration and Recognition of Science and Technology (FIRST) Robotics, Band, Chorus, Poetry Team, Creative Writing, Cheerleading

PSAL SPORTS TEAMS

■ **Boys:** Baseball, Basketball & JV Basketball, Bowling, Golf, Handball, Indoor Track, Outdoor Track, Soccer, Tennis ■ **Girls:** Basketball, Handball, Indoor Track, Outdoor Track, Softball, Volleyball

SCHOOL SPORTS

■ Fitness and Weight Training

SCHOOLWIDE AWARDS & RECOGNITION

■ POSSE Foundation Scholarship awarded to graduates for the past three years

GEORGE WESTINGHOUSE CAREER AND TECHNICAL EDUCATION HIGH SCHOOL (CONTINUED)

Reminder:
Use these codes for your application!

PROGRAM(S) OFFERED	CODE	SELECTION METHOD	GRADE	2006 PROGRAM SEATS	2006 TOTAL APPLICANTS
Information Technology (Computer Science & Technology) Involves the design, development, support and management of hardware, software, multimedia and systems integration services	**K70A**	Screened	9	245	1182
Selection Criteria: English (75-100) Math (75-100) Social Studies (75-100) Science (75-100) Standardized Test Scores: Math Level(s) 2-4 English Language Arts Level(s) 2-4 Review of Attendance & Punctuality Writing Sample					
Vision Care Technology (Health Professions) Involves the use of information about the functioning of the eye to interpret prescriptions and fit patients for eyeglasses or contact lenses	**K70R**	Screened	9	116	434
Selection Criteria: English (75-100) Math (75-100) Social Studies (75-100) Science (75-100) Standardized Test Scores: Math Level(s) 2-4 English Language Arts Level(s) 2-4 Review of Attendance & Punctuality Writing Sample					

Did You Know?

Many members of our teaching staff are graduates of George Westinghouse High School.

Famous Alumni

We salute all graduates and the contributions they have made.

Open House Information

Please call Ms. Kieran, Assistant Principal, Pupil Personnel Services at 718-625-6130, ext. 152 for our Open House dates.

Appendix B

Statistical Significance Tests of the 2007-2008 Student Learning Environment Survey

New York City Small Schools of Choice

Appendix Table B.1

Statistical Test of Student Learning Environment Survey Comparing Small, Nonselective Schools with Other Schools, 2007-2008 School Year

Survey Domain	Score		P-Value for T-Test
	Small Nonselective Schools[a]	Other Schools[b]	
Student Learning Environment Survey[c]			
Safety and Respect	6.4	6.4	0.744
Academic Expectations	7.2	7.0	0.055 *
Engagement	6.3	6.2	0.183
Communications	5.9	5.6	0.000 ***
Total number of schools	74	102	

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, DOE October enrollment data for 2007-2008 school year, High School Application Processing System data for eighth-grade students in 2006-2007, and DOE Student Learning Environment Survey for the 2007-2008 school year.

NOTES: A two-tailed t-test was applied to the Student Learning Environment Survey domains. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

[a]Small, academically nonselective schools are high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[b]"Other Schools" includes small, academically selective schools; midsize, academically selective and nonselective schools; and large, selective and nonselective schools.

[c]The Student Learning Environment Survey data measure each school along the four domains shown. The DOE gives each answer a point value on a scale between 0 and 10, with answers describing the school environment most favorably receiving a 10 and answers describing the school environment least favorably receiving a 0. An overall domain score was calculated by averaging the answer scores pertaining to that domain. Data are included for schools with a student response rate of at least 70 percent.

New York City Small Schools of Choice

Appendix Table B.2

Statistical Test of Student Learning Environment Survey Comparing Small, Nonselective Schools with Midsize and Large Schools, 2007-2008 School Year

Survey Domain	Score		P-Value for T-Test
	Small Nonselective Schools[a]	Other Schools[b]	
Student Learning Environment Survey[c]			
Safety and Respect	6.4	6.2	0.020 **
Academic Expectations	7.2	6.9	0.000 ***
Engagement	6.3	6.1	0.003 ***
Communications	5.9	5.4	0.000 ***
Total number of schools	74	65	

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, DOE October enrollment data for 2007-2008 school year, High School Application Processing System data for eighth-grade students in 2006-2007, and DOE Student Learning Environment Survey for the 2007-2008 school year.

NOTES: A two-tailed t-test was applied to the Student Learning Environment Survey domains. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

[a]Small, academically nonselective schools are high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

[b]"Other Schools" includes only midsize, academically selective and nonselective schools and large, selective and nonselective schools.

[c]The Student Learning Environment Survey data measure each school along the four domains shown. The DOE gives each answer a point value on a scale between 0 and 10, with answers describing the school environment most favorably receiving a 10 and answers describing the school environment least favorably receiving a 0. An overall domain score was calculated by averaging the answer scores pertaining to that domain. Data are included for schools with a student response rate of at least 70 percent.

New York City Small Schools of Choice

Appendix Table B.3

Statistical Test of Student Learning Environment Survey Comparing Older and More Recently Established Small, Nonselective Schools, 2007-2008 School Year

Survey Domain	Score: School in Existence Four Years or More	Score: School in Existence Less Than Four Years	P-Value for T-Test
Student Learning Environment Survey[a]			
Safety and Respect	6.4	6.5	0.434
Academic Expectations	7.2	7.1	0.524
Engagement	6.3	6.4	0.745
Communications	5.8	6.1	0.007 ***
Total number of schools	47	27	

SOURCES: MDRC calculations from the New York State Report Card and data on new small schools provided by the NYC Department of Education (DOE) for school years 2002-2003 through 2007-2008, DOE October enrollment data for 2007-2008 school year, High School Application Processing System data for eighth-grade students in 2006-2007, and DOE Student Learning Environment Survey for the 2007-2008 school year.

NOTES: Small, academically nonselective schools are high schools that admit students based on grounds other than prior academic performance, such as place of residence, and have a maximum total enrollment of 550 students and a maximum ninth-grade enrollment of 175 students.

A school's number of years in existence is calculated starting with the year in which the school began accepting its first cohort of ninth-grade students. Schools in existence four years or more have served four full grades, while schools in existence less than four years have not yet served four full grades of students.

A two-tailed t-test was applied to the Student Learning Environment Survey domains. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

[a]The Student Learning Environment Survey data measure each school along the four domains shown. The DOE gives each answer a point value on a scale between 0 and 10, with answers describing the school environment most favorably receiving a 10 and answers describing the school environment least favorably receiving a 0. An overall domain score was calculated by averaging the answer scores pertaining to that domain. Data are included for schools with a student response rate of at least 70 percent.

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About MDRC

MDRC is a nonprofit, nonpartisan social 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
- Promoting Successful Transitions to Adulthood
- 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.