

The Condition of New York City High Schools: Examining Trends and Looking Toward the Future



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Overview

Until the turn of the 21st century, high school graduation rates in New York City hovered at or below 50 percent, nearly 20 percentage points lower than state and national averages.¹ Successive waves of ineffective reforms in the 1980s and 90s offered little hope of improvement. Meanwhile, the labor market was changing: Not only was a high school diploma an essential prerequisite for a growing number of jobs, but increasingly young people also needed college or some other advanced technical training in order to have a successful career and the stability that it can bring. There was widespread agreement about the need to reform the City's high schools—and produce better results for students.

This paper presents an independent analysis of how the high school landscape in New York City changed between 1999 and 2011 and, importantly, the extent to which key student outcomes improved during that time. The paper is based on data made available to the Research Alliance through a unique data-sharing partnership with the New York City Department of Education (DOE). While DOE staff were given the opportunity to review and comment on drafts of this report, the analyses and conclusions are solely those of the Research Alliance.

The trends examined in this paper took place in the context of dramatic changes in the supply of high schools in New York City. In the 1999-2000 school year, there were 212 general and vocational education high schools and junior high schools that admitted approximately 73,000 first-time 9th grade students.² Over the next 12 years, 38 of these schools were phased out and an additional 251 new schools were opened (two of which were subsequently phased out). As of the 2010-2011 school year, there were 409 schools that admitted approximately 72,600 first-time 9th graders.

The Condition of New York City High Schools

This is the first in a series of short papers that will examine the structure and performance of New York City's high schools. The goal of the series is to inform future policies that continue improvements that have occurred over the past 12 years and to accelerate progress in areas where gaps remain. A forthcoming paper will examine changes in school attendance patterns and student outcomes in the wake of decisions to phase out more than 30 of the City's lowest-performing high schools. Another paper will identify the characteristics of schools that have shown significant progress overall while narrowing gaps in performance among subpopulations of students who have traditionally lagged behind. For more information, visit our website: www.ranycs.org.

While the number of high schools nearly doubled, the average enrollment per high school declined by almost half. In the 1999-2000 school year, the 212 schools enrolled an average of 344 first-time 9th graders. By 2010-2011, 409 high schools enrolled an average of 178 first-time 9th graders. The reduction in school size occurred primarily because of the opening of 183 new schools that enrolled 110 or fewer first-time 9th graders each year.

Key Trends

Most indicators point to steady improvement in student outcomes, across all groups of students, during this 12-year period.

- High school graduation rates increased from 51 percent of those who entered high school in 1999 (scheduled to graduate in 2003) to 69 percent of those entering in 2007 (scheduled to graduate in 2011).³
- Improvements in graduation rates were driven by more students earning a Regents diploma (rather than the less demanding Local diploma),⁴ as both dropout rates and rates of transfer to other school systems declined during the period.
- Other important academic indicators (many of which are antecedents to graduation) also improved; these include on-track rates, attendance rates, credit accumulation, and the proportion of students taking and passing Regents Examinations.
- College readiness rates increased from 13 percent of those entering high school in 2001 to 21 percent of those entering high school in 2007 (the time period for which we have reliable data on this measure).⁵
- During the period under review, 9th graders entered high school increasingly better prepared (as judged by rising rates of middle school attendance and achievement). Yet, high schools have improved graduation and college readiness rates for students across the spectrum of prior achievement.
- Graduation rates, as well as other outcomes, improved at a moderately faster pace for black and Hispanic students, students eligible for free or reduced price

lunch, English language learners, and students referred for related special education services.⁶

Despite these gains, substantial gaps remain between groups of students—and between current achievement levels and the aspirations that the public and school leaders have for New York City high schools.

- Among students who entered high school in 2007, approximately 75 percent of Asian and white students earned a Regents diploma, compared to just 48 percent of black and Hispanic students.
- Similar gaps also persisted for students receiving English language learning and related special education services.
- And while 59 percent of all students who entered high school in 2007 earned a Regents diploma, only 21 percent of that cohort graduated with credentials that indicate they were ready for college-level work.

These gaps demonstrate that much remains to be done to ensure that all students complete high school and are ready for college and a career.

What Is New About These Analyses?

The information presented in this paper differs in several ways from the statistics that are routinely made available from the DOE and the New York State Education Department (NYSED). First, the analyses cover a wider range of student outcomes and examine trends over a 12-year period. Second, they examine these outcomes and trends for a broader set of student subgroups than has typically been reported by the NYSED and DOE. Finally, the information provided in this paper provides a foundation for subsequent analyses that will assess the likely influence of particular reforms, school characteristics and practices.

In addition, we present overall averages, particularly on graduation and college readiness rates, that may differ somewhat from those reported by DOE and NYSED. The primary reason for this difference is that our sample only includes students who enrolled in a New York City high school as a first-time 9th grader. NYSED and DOE calculations also include students who first entered the system in their second or third year of high school. Notes throughout the paper explain other differences in specific calculation methods. However, the general trends and patterns presented in this paper echo those presented elsewhere.

Evidence of the Impact of Reforms

In addition to efforts aimed at improving the quality of education in earlier grades, a wide range of high school-specific policies are likely to have contributed to the improvements in outcomes over the past 12 years. These include a systematic method for identifying and phasing out high schools that exhibit persistently low levels of performance and the creation of a portfolio of new smaller, mission-driven high schools to replace those that have been phased out. There is also a high school choice system that allows students to list preferences from across the City and then matches students and schools based on a combination of student preferences, school selection priorities, and available slots. Fundamental to these policies is an accountability system that measures and holds schools responsible for improving key outcomes.

Some studies have begun to examine the impact of the reforms that have occurred over the past 12 years. For example, an ongoing study by MDRC has provided rigorous evidence of the positive impact that the new small high schools have had on most student outcomes and for nearly all subgroups of students.⁷ Schwartz, et al., offered a broader assessment of the impact that recent reforms have had on student outcomes across the full spectrum of high schools (including small and large schools, new schools and those that have operated continuously). They concluded that “there was real meaningful improvement in high school outcomes” during the time period they examined (2001 – 2008).⁸ Kemple conducted a rigorous analysis of graduation trends, comparing New York City with other urban school districts in New York State. After accounting for other factors that might have influenced student outcomes, the analysis showed substantial impacts from the reforms that began in 2003.⁹

Looking Forward

These trends and remaining gaps suggest a three-pronged strategy for future policy and practice. First, it will be critical to continue identifying and supporting students who are struggling to reach the minimum requirements for a New York State Regents diploma. For example, the Research Alliance and others are working to develop more reliable early warning indicators that signal long-term problems. These indicators can be used to find struggling students and connect them with academic interventions and social-emotional supports.

Second, greater attention should be paid to aligning performance standards, curricula, and instruction with the skills that students will need to succeed in college. The ongoing development of “Common Core” standards and assessments is explicitly aimed at these challenges.¹⁰

Third, New York City policymakers should continue to forge multiple, high-quality pathways toward success for students who bring varying needs, ambitions and strengths, including those who do not opt for a four-year college degree. There is strong evidence that pathways combining solid academic preparation with work-related learning experiences can produce substantial gains in post-secondary labor market outcomes without jeopardizing access to college.¹¹

There is still much to be learned about the transformation of high schools over the past decade. For example, there has been no independent assessment of the effect that phasing out low-performing high schools has had on student enrollment patterns and outcomes. Also, while researchers have begun to probe the role that high school choice has played in the composition of high schools, little has been done to assess its impact on student performance.¹² Similarly, there has been no systematic study of schools that have achieved the largest improvements in student outcomes—what are these schools doing right? Subsequent papers in this series will tackle these and other questions in an effort to inform future policy and practice.

The availability of so much data—and the DOE’s willingness to subject it to analysis by an outside organization—represents progress toward a more evidence-based approach to the City’s education practice and policy. We hope this trend continues in New York and in other cities that are engaging a range of partners in efforts to boost student outcomes.

The remainder of this brief provides a more detailed description of changes in the City’s stock of high schools and trends in the characteristics and outcomes of first-time 9th grade students who enrolled in these schools. It also examines variation in key outcomes among subgroups of students. It is our hope that this information provides some direction for future policies that aim to continue positive trends and close the serious gaps that remain.

The Changing Stock of High Schools

The information in this paper is based on the enrollment patterns and outcomes of nearly 900,000 first-time 9th grade students who enrolled in 469 different New York City public schools, from 1999-2000 through 2010-2011.¹³ (The cohort size per year has remained relatively constant, ranging from a minimum of 71,587 in 2000 to a peak of 78,699 in 2005 and back to 72,588 in 2010). Of these students, approximately 596,000 were served by the 148 general education and career technical schools that operated continuously during the period. More than 45,000 students entered one of the City's nine specialized high schools, which admitted new students solely on the basis of an entrance examination or an audition. Approximately 149,000 first-time 9th graders began their high school careers in one of 251 new high schools that were created after 1999 and remained open during the period. Just over 87,000 new 9th grade students enrolled in a high school that was subsequently closed or stopped admitting first-time 9th graders during this period. Finally, a total of 21,000 students enrolled in one of the City's junior high schools (serving grades 7 through 9), all but one of which stopped enrolling 9th graders by 2010.

Figure 1 on the next page shows the number of schools that enrolled first-time 9th graders between the 1999-2000 school year and the 2010-2011 school year. In 1999-2000, 212 schools enrolled just under 73,000 first-time 9th graders. Seventy-two percent of the first-time 9th graders in this year were enrolled in one of the 148 general education and career technical high schools and 5 specialized high schools that remained open throughout the period. The remainder were enrolled in 38 high schools there were subsequently phased out or in the 21 junior high schools. Thus, by the 2010-2011 school year, 58 of the original 212 schools were either phased out or, in the case of 20 of the junior high schools, no longer enrolling 9th grade students. During this period, 255 new schools were created, including 251 new general or career technical high schools and four new specialized high schools. Two of these new schools were subsequently phased out before the 2010-2011 school year.

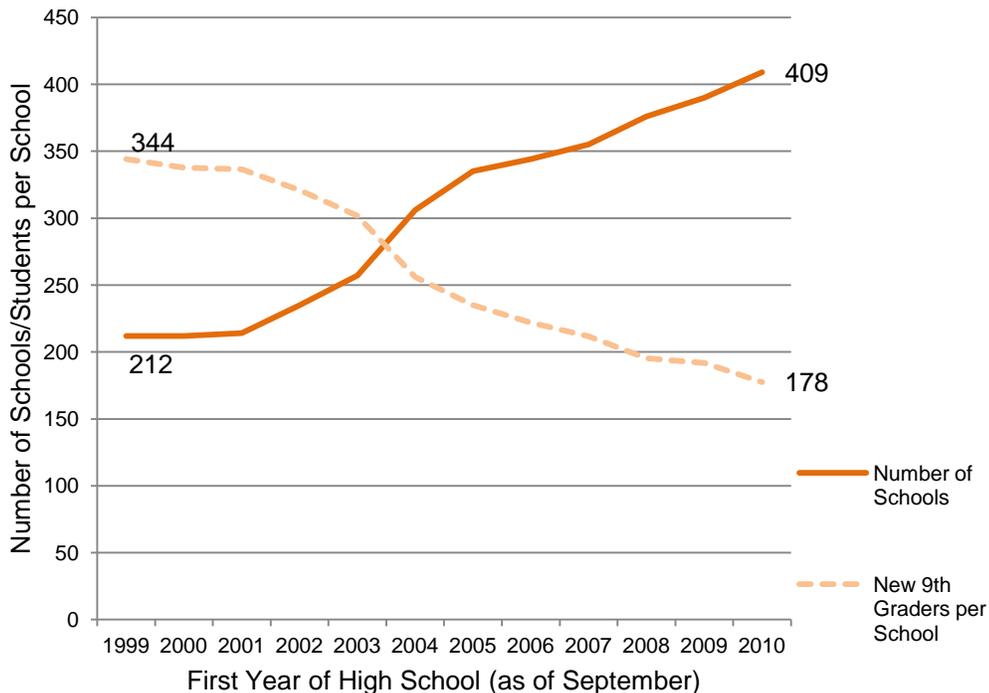
The figure shows that the City saw a dramatic shift toward smaller schools, most of them newly created, as larger high schools and junior high schools were phased out. While the quantity of schools nearly doubled, the number of new 9th graders per school was cut almost in half. In 1999-2000, the 212 schools enrolled an average of

344 new 9th grade students each. By 2010-2011, this had dropped to an average of 178 new 9th grade students per school.

The shift in school size was driven largely by the opening of new small schools. By the 2010-2011 school year, the 251 new general and career technical high schools were enrolling 35 percent of all entering 9th graders. Nearly three quarters of these new schools enrolled fewer than 110 first-time 9th graders, and most of the remainder enrolled between 110 and 200. Even the schools that had been operating continuously since 1999-2000 appear to have been getting smaller, as their average enrollment dropped from a high of 369 new 9th graders per school in 2003-2004 to 288 per school in 2010-2011. Table A1 in the technical appendix provides more information about the types of schools available to first-time 9th graders over this 12-year period.

MDRC's ongoing evaluation has found that these new smaller high schools are producing large positive impacts for students, including higher graduation rates.¹⁴ Schwartz et al. provided evidence that these effects extend beyond the new small high schools to the larger schools that operated continuously through 2008.¹⁵

Figure 1: Number of Schools Enrolling First-Time 9th Graders and Average Enrollment of First-Time 9th Graders, 1999-2010

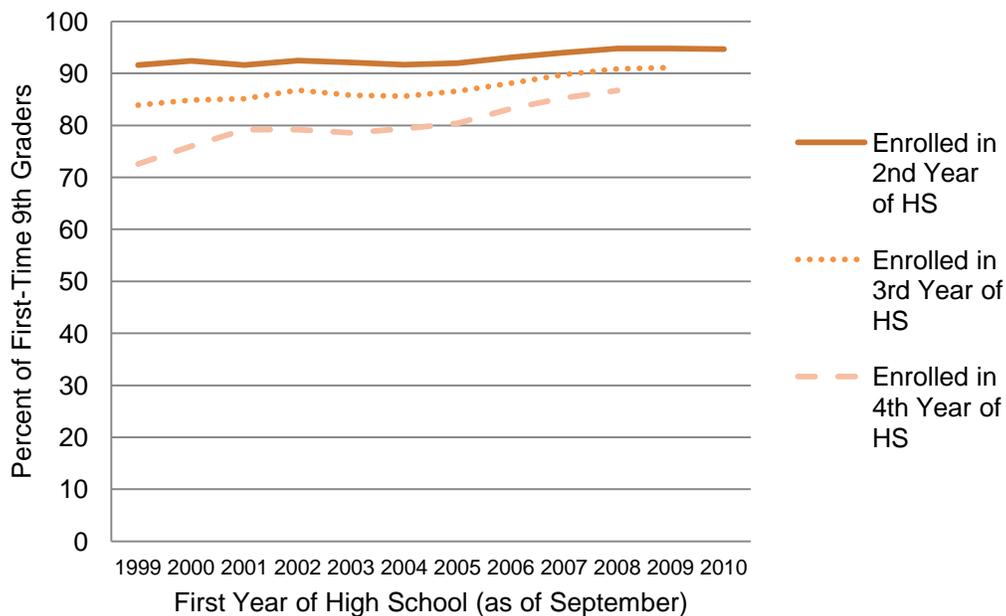


Together, these two studies provide strong evidence that the creation of new small schools had a beneficial effect on student outcomes during this period. The current paper expands on these analyses by examining trends over a longer time frame, incorporating a wider range of outcomes and comparing trends for various student subgroups.

Are Students Staying in School Longer?

For students to be well served by their high schools, they need to remain enrolled and make progress toward graduation. Thus “ongoing enrollment” is one indicator of success for high schools. Figure 2 shows steady increases in the percentage of students who remained enrolled following their entry into a New York City high school.¹⁶ For example, the line labeled “Enrolled in 4th Year of HS” in Figure 2 shows the percentage of first-time 9th graders who remained enrolled through the start of their fourth year of high school. This increased from 73 percent of those who entered in 1999 to 87 percent of those who entered high school in 2008.

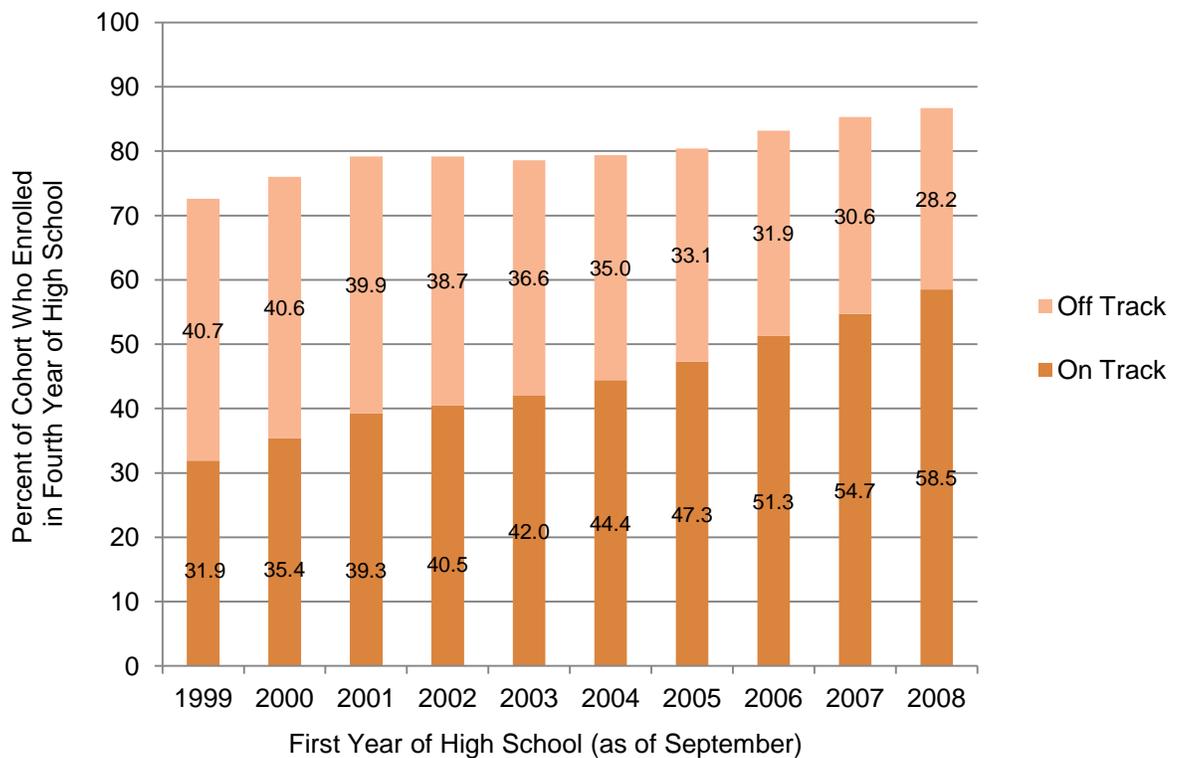
Figure 2: Enrollment Rates Through Four Years for First-Time 9th Graders, 1999-2010



Source: Research Alliance calculations from archival database compiled from New York City Department of Education source files.

The increase in ongoing enrollment seen in Figure 2 does not necessarily represent improved student performance or real progress toward graduation. Figure 3 below shows that, among students who entered high school in 2007, more than one third of those who remained enrolled at the start of their fourth year of high school could be classified as “off track” for graduation.¹⁷ In other words, these students had not earned enough course credits and passed enough Regents Examinations to be on a path toward graduation by the end of their fourth year in high school. While both enrollment and on-track rates have improved over time, there are still a substantial number of students who remain enrolled in a New York City high school with only limited prospects for graduating on schedule.

Figure 3: Rates of Enrollment in Fourth Year of High School and On-Track Rates for First-Time 9th Graders, 1999-2010



Graduation rates are widely seen as among the most important measures of high school performance, but they can actually be calculated in a number of different ways. Historically, New York City and New York State have calculated graduation

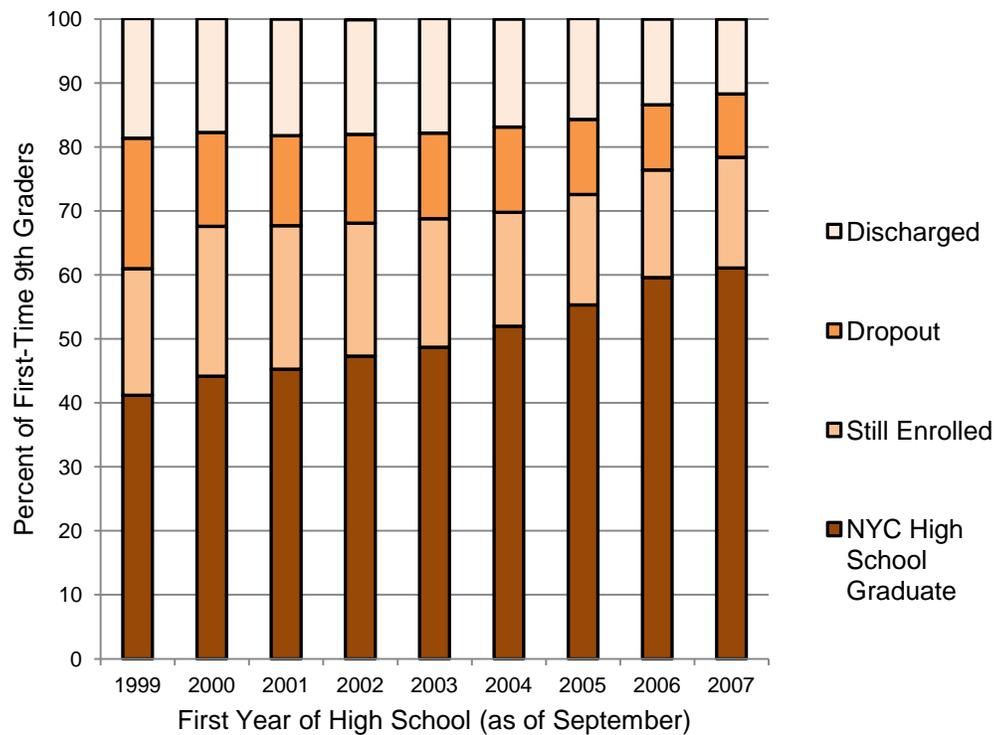
rates based only on students who do not transfer to schools outside the City or State, respectively (that is, the graduation rate is based on the population of students who remain enrolled within the relevant jurisdiction or who drop out of high school entirely). Some critics may contend that graduation rates can be manipulated if the school districts misleadingly classify dropouts (who *should* be included as non-graduates) as transfers (who *should not* be included). We set out to examine whether such factors might be at play in the rising graduation rates that have been previously reported for New York City.

Figure 4 presents the status of all first-time 9th graders as of October of their fourth year following initial enrollment in a New York City high school. For students who entered high school in September 2004, for example, the figure shows their status as of October 2008. Overall, the figure shows that the transfer rate—as well as the dropout rate—has declined steadily over the past nine years. The dropout rate was cut in half—from 20 percent of those who entered high school in 1999 to 10 percent of those who entered in 2007, while the transfer rate declined by more than a third—from 19 percent to 12 percent. This suggests that the increases seen in New York City’s graduation rate are a genuine reflection of more students completing their high school education on time. (See details in Appendix Table A2.)

In the remainder of this paper, all outcomes—including graduation rates—are calculated based on the NYSED standard of not including transfers. This is because neither we nor the NYSED or DOE have information about what happens to students after they transfer to a school outside the City’s public school system. In addition, the State’s decision not to include transfers in its graduation calculation reflects an assumption that schools are not accountable for students’ outcomes after they leave the system, as schools no longer have any influence over these students.¹⁸

Naturally, there are many antecedents and contributing outcomes leading to and embedded in a high school diploma. It is possible that the reforms in New York City have made progress on some of these and not others—or for some students and not others. The remaining sections of this paper examine trends in a wide range of outcomes that are critical indicators of success for high school students. We also take separate looks at these trends for various student subgroups, including those who have historically lagged behind citywide averages.

Figure 4: High School Completion Status After Four Years for Cohorts of First-Time 9th Graders, 1999-2010



Note: Discharged students include those who transferred to a charter school, a private school, or another public school outside of New York City.

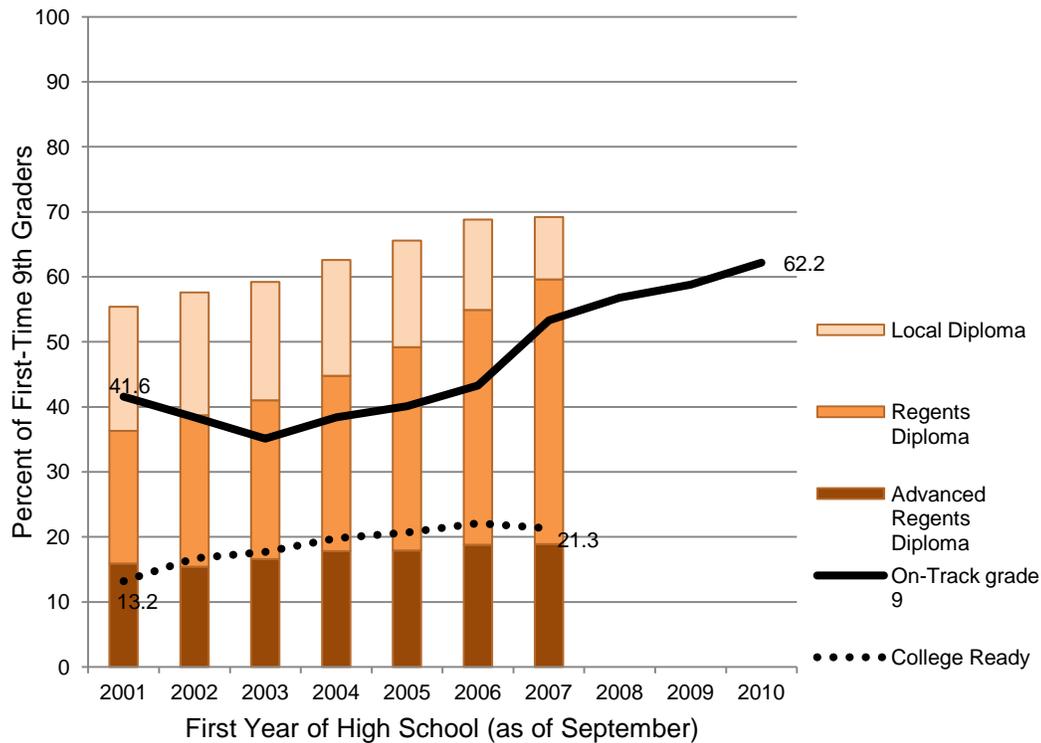
Has Student Performance and Engagement Improved?

In short, over the past 12 years, New York City saw steady improvement in many indicators of high school performance and engagement, including attendance, credit accumulation, Regents examination scores, staying on-track for graduation, graduation rates, and college readiness rates.

Figure 5 on the next page provides a general summary of these trends by showing three key indicators of students' progress through high school and toward college and careers. The solid line shows the trend in the rate at which students complete their first year of high school and are on track for graduation. Here, on track means that, during the first year of high school, a student had earned at least 10 credits and passed at least one Regents examination with a score of 65 or higher.¹⁹ The bars in the figure show trends in diploma receipt rates, including Local, Regents and Advanced Regents diplomas. Finally, the dashed line shows the rates at which students graduated with achievement levels on the math and English Regents exams

that suggest they are “college ready.” For the purposes of this paper, college readiness is defined as earning a New York State Regents Diploma and receiving a score of 80 or higher on a Mathematics Regents examination and a score of 75 or higher on an English Regents examination. This indicator is used by the NYSED as its “Regents-Based Math and English Aspirational Performance Measure.”²⁰

Figure 5: Diploma Receipt and College Readiness Rates for First-Time 9th Graders, 1999-2010



With the exception of the slight dip in 9th grade on-track rates for the 2002 and 2003 cohorts, Figure 5 shows steady improvements in all three indicators. First, 9th grade on-track rates reached 53 percent for the 2007 cohort and continued to increase to 62 percent for the 2010 cohort. The relationship between being “on-track” early in high school and ultimately graduating with a Regents diploma can be seen in the figure. The Regents diploma graduation rate runs in close proximity to the on-track rate (even though the on-track indicator is measured three years prior to scheduled graduation). Because the on-track indicator is a very accurate predictor of graduation, the ongoing rise in 9th grade on-track rates suggests that graduation rates will also continue to increase over the next several years. More importantly,

the on-track indicator offers a vital tool for identifying students who need additional support to regain their footing on the path to graduation. In fact, Kemple et al. showed that New York City has made strides in helping students get back on-track and then graduate after experiencing problems in the 9th grade.²¹

Figure 5 also shows New York City diploma receipt rates for cohorts of first-time 9th graders who began high school between 2001 and 2007.²² It shows that the increase in graduation rates was concentrated among students earning a New York State Regents diploma (rather than the less rigorous Local diploma, which has subsequently been phased out). Regents Diploma rates increased from just under 36 percent of those entering high school in 2001 to 60 percent of those entering high school in 2007 (a 64 percent increase).

Finally, the percentage of students who graduated from high school with achievement levels on math and English Regents exams that suggest they are “college ready” also increased during the period, from 13 percent to 21 percent (a 61 percent increase). This is important, considering the premium that is now placed on a college education. More and more jobs require advanced technical training or a college degree, making high school graduation essential, but not necessarily sufficient for students’ long-term success.

The trends seen in Figure 5—in on-track, graduation and college-readiness rates—were part of a larger pattern of improvement. Other indicators of high school achievement also rose during this period, including attendance rates, credit accumulation in each year of high school, and passing rates on New York State Regents Examinations. (For more details, see Table A3 in the appendix).

There are at least two ways of looking at these overarching trends. First, particularly against a historical backdrop of stubbornly low high school performance, these numbers represent undeniable progress. It is fair to question whether these indicators are “real”—for example, do higher graduation rates mean students are actually learning more, or simply that schools are becoming more adept at helping students earn course credits and pass tests? Yet, the fact that we see improvement across a wide range of indicators—from attendance to credit accumulation to graduation rates—suggests that students are in fact being better served by their high schools, on average.

Of course, the other way to look at these numbers is to focus on how much more work there is to be done. Even after an increase of 24 percentage points, 4 out of 10 students still fail to earn a Regents diploma within four years. And Figure 5 also reveals a wide gap between the percentage of students who graduate and those who might be considered ready for college-level work.

In fact, as a percentage of Regents Diploma recipients, college readiness rates in New York City were stagnant over the last seven years. For students from the 2007 cohort, for example, 36 percent of those who earned a Regents Diploma could be designated as college ready—the very same percentage of Regents diploma recipients seen in the 2001 cohort. While the percent has remained unchanged, raw numbers have increased, because more and more students are earning the Regents diploma. The 2007 cohort produced more than 14,000 college-ready graduates, compared to just under 7,800 from the 2001 cohort. Thus, the challenge is how to get a greater share of the students who are earning the Regents diploma better equipped for college work.

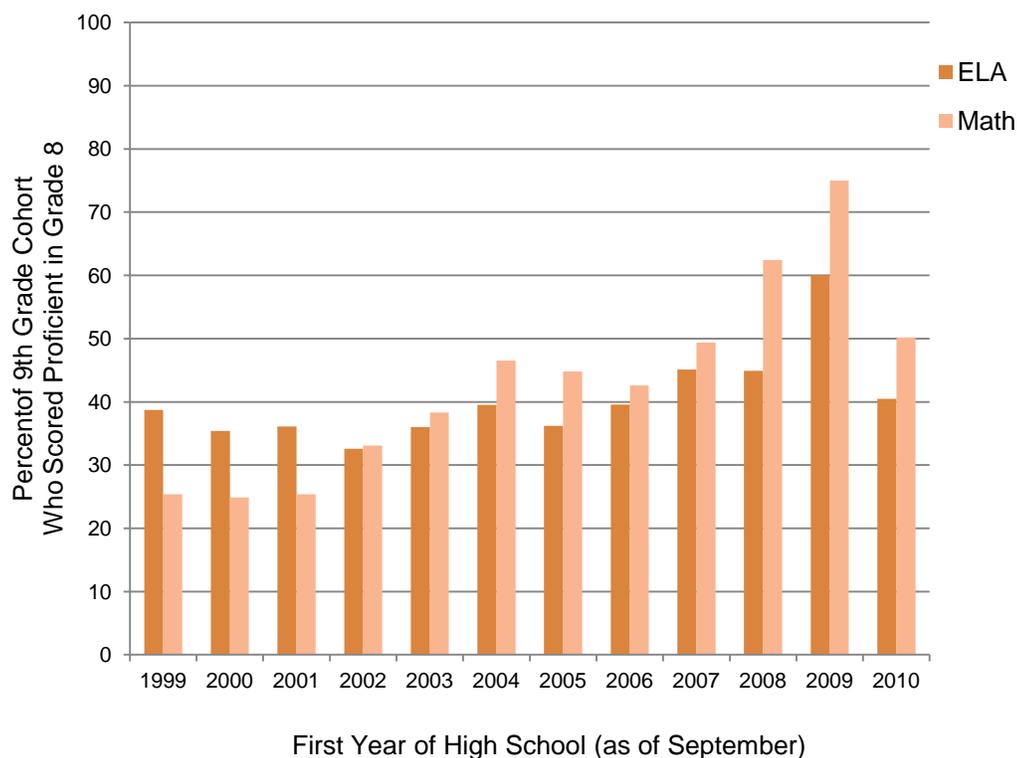
Are Students Better Prepared as They Enter High School?

The middle school performance of entering 9th graders improved significantly during the 12-year period under review.²³ Figure 6 on the next page shows that the percentage of students scoring proficient (Level 3 or 4) on the New York State 8th grade math assessment rose from 24 percent for those entering high school in the 1999-2000 school year to 75 percent for those entering in 2009-2010. The increase on the 8th grade English Language Arts (ELA) assessment was somewhat less dramatic, rising from 37 percent proficient to 60 percent proficient during the same period.

It should be noted that a sizable portion of these increases occurred between the 2007-2008 and 2009-2010 school years. Proficiency rates in both subjects then declined significantly for students entering high school in the 2010-2011 school year, when the State raised the proficiency cutoff score for all students. Yet, even with more stringent standards in place, proficiency rates in 2010 were as high or higher than for students entering high school as recently as 2006. In addition, middle school attendance rates increased from 89 percent for those entering high school in 1999-2000 to 92 percent for those entering in 2009-2010. Taken

together, these findings suggest that students are, on average, entering high school better prepared than they were a decade ago.

Figure 6: Grade 8 Proficiency Rates in ELA and Math for First-Time 9th Graders, 1999-2010



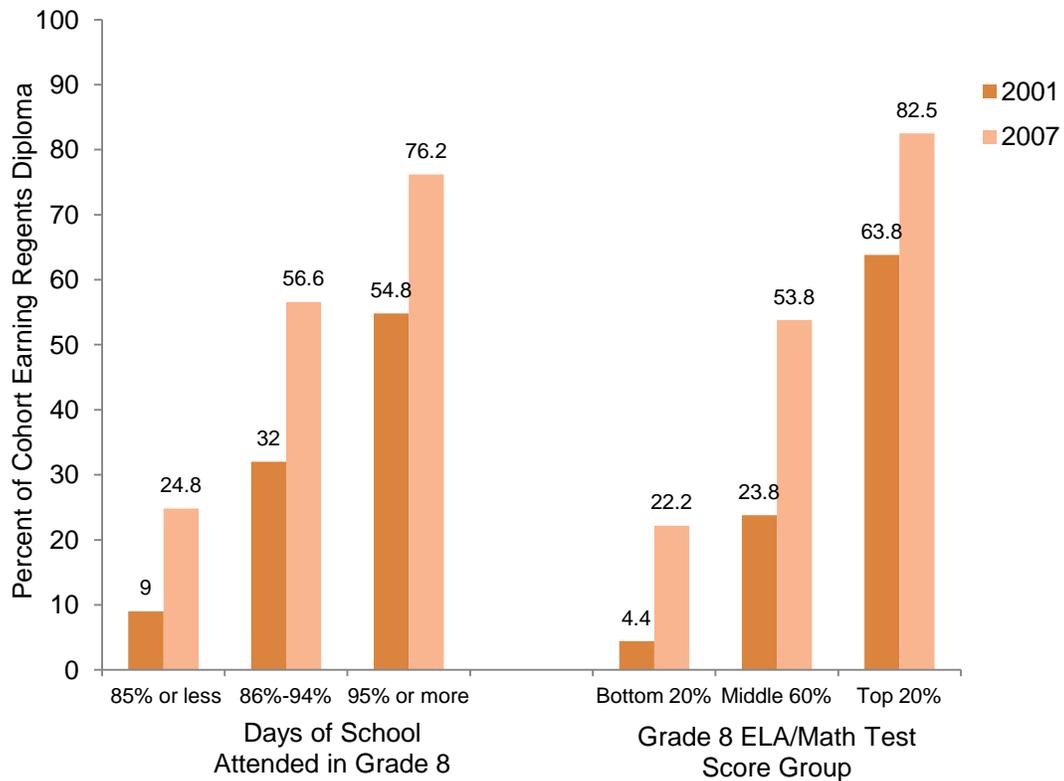
Notes: For detailed proficiency rates, see Appendix Table A4. Proficiency is defined as scoring at Level 3 or 4.

We also wanted to examine whether high schools are having better results with subgroups of students defined by their middle school performance. For this analysis, it was important to account for changes in the State's proficiency standards and the steady improvement in overall performance levels. Thus, we looked at Regents diploma receipt and college readiness rates for subgroups of students based on their attendance and test score performance relative to others in their same cohort.

Figures 7a and 7b show that the largest improvements in graduation and college readiness rates have occurred among students who entered high school with the lowest relative attendance and achievement test scores from middle school. For example, as seen in Figure 7a on the next page, graduation rates (with a Regents Diploma) for students who had been chronic absentees in the 8th grade increased by

176 percent between those who entered high school in 2001 and those who entered in 2007 (compared to an increase of about 39 percent for those with 8th grade attendance rates of 95 percent or higher). Similarly, graduation rates increased by over 400 percent for those with the lowest 8th grade ELA and math scores (and by just over 125 percent for those in the middle range). Even after these increases, however, 8th grade attendance and achievement test scores remained strong predictors of high school graduation rates. Among students in the 2007 cohort, for instance, more than 80 percent of those who entered high school at the top of the distribution of 8th grade test scores graduated with a Regents diploma, compared with only 22 percent of those at the bottom of the distribution.

Figure 7a: High School Graduation with a Regents Diploma by Grade 8 Attendance and Test Score Groups for First-Time 9th Graders (2001 and 2007 Cohorts)

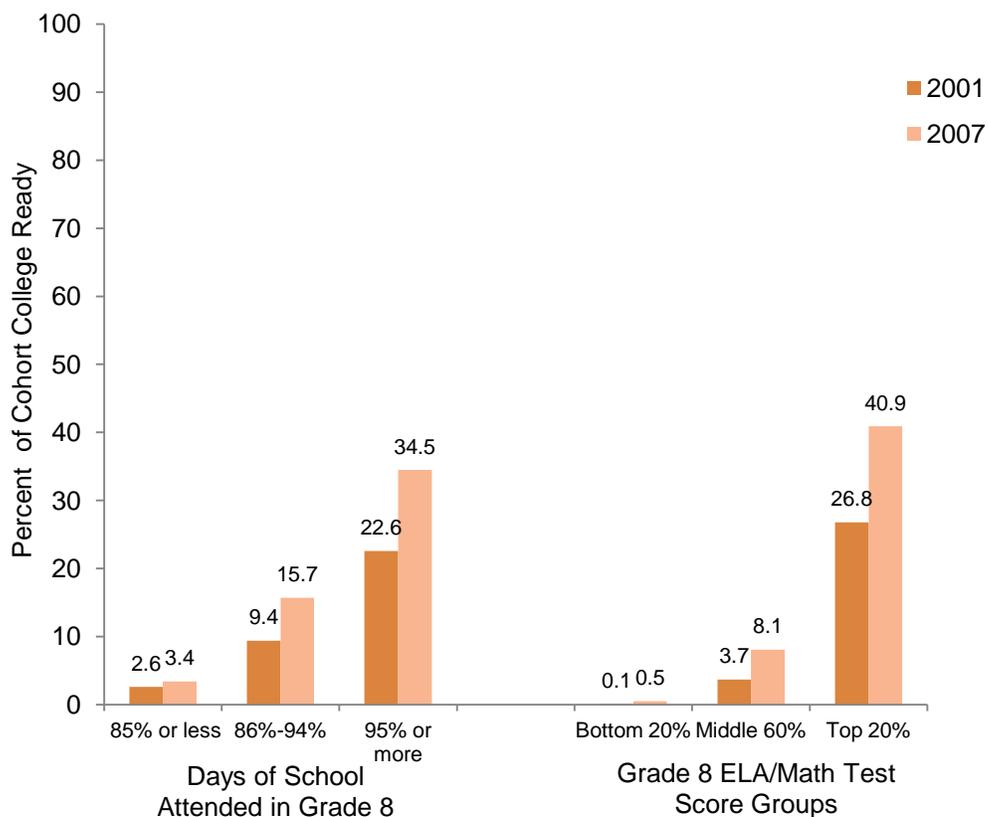


Overall, it is encouraging that substantially higher graduation rates have been seen across all groups of students, with greater increases for students who entered high school most “in need of improvement.” The City’s current focus on raising the

quality of middle schools across the district²⁴ also provides reason to hope that students will continue to come to high school better prepared than in decades past.

Still, as shown in Figure 7b, college readiness rates for students continue to differ greatly based on their 8th grade achievement. Although the gap has narrowed somewhat, students who entered high school in 2007 with higher levels of achievement were four times more likely to graduate college ready than students in the middle of the achievement distribution. Stronger academic preparation at both the middle and high school levels will be required to close this gap. (For more information on trends in high school outcomes for different subgroups of students defined by middle school performance, see Table A4 and Tables A5a, A5b, and A5c in the appendix.)

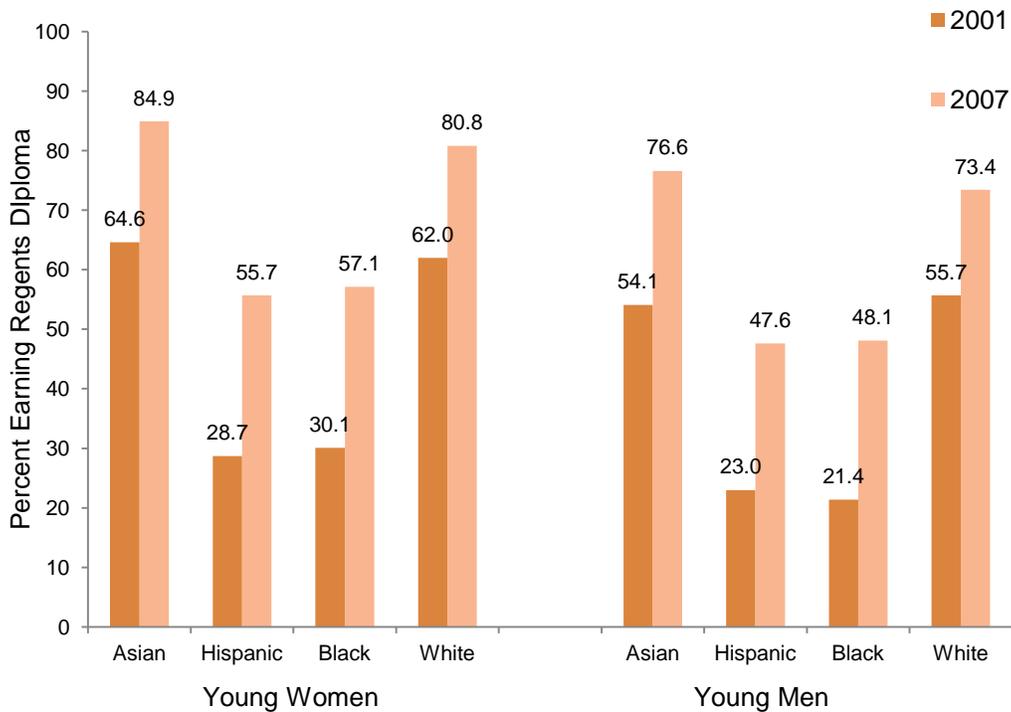
Figure 7b: College Readiness Rate by Grade 8 Attendance and Test Score Groups for First-Time 9th Graders (2001 and 2007 Cohorts)



Have Achievement Gaps Closed?

Improvements in high school outcomes were experienced by nearly all subgroups of students, including those defined by gender and race/ethnicity, socio-economic status, English language learning (ELL) and special education needs, and home language. For example, Figure 8a shows that graduation rates (with a Regents Diploma) more than doubled for black and Hispanic young men between the 2001 and 2007 cohorts (those scheduled to graduate in 2005 and 2011, respectively). Specifically, rates of Regents diploma receipt increased from approximately 23 (for Hispanic young men) and 21 percent (for black young men) to 48 percent for both groups.

Figure 8a: High School Graduation with a Regents Diploma by Gender and Race for First-Time 9th Graders (2001 and 2007 Cohorts)



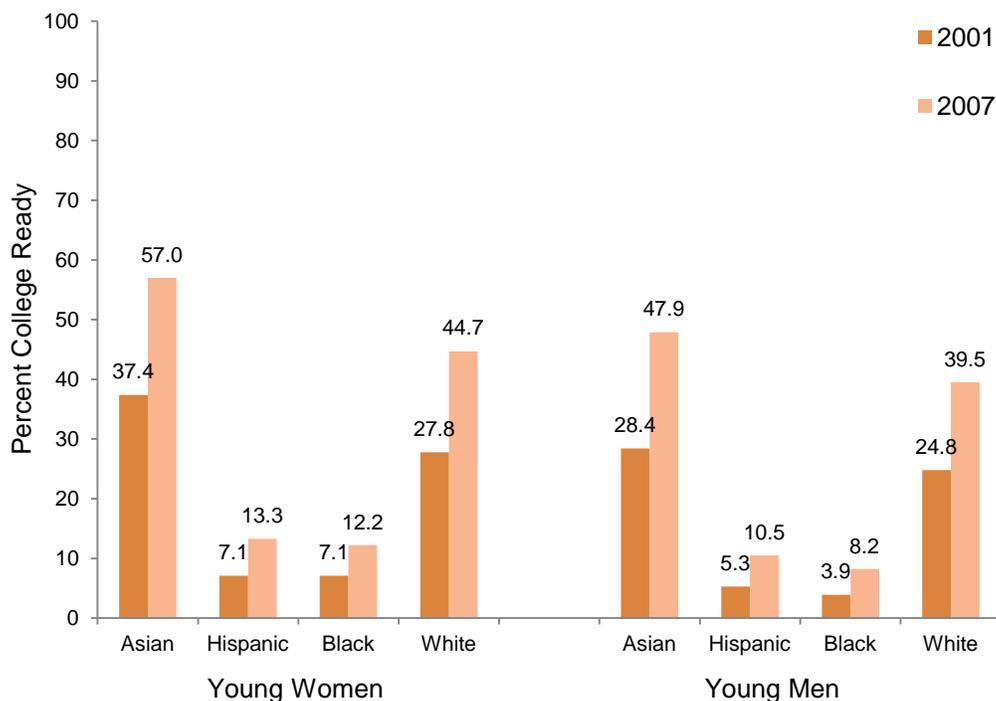
Gaps in graduation rates between groups defined by gender and race/ethnicity narrowed somewhat during this period. For example, for the 2001 cohort, Asian and white young men were almost 2.5 times more likely to earn a Regents Diploma. For the 2007 cohort they were approximately 1.5 times more likely to do so. The gap narrowed for young women as well. Among the 2001 cohort, Asian and

white young women were 2.25 times more likely to graduate than their black and Hispanic counterparts, a number that dropped to 1.5 times more likely for those in the 2007 cohort.

Although graduation rates improved for all groups of students, and gaps among groups narrowed somewhat, substantial differences persisted between black and Hispanic youth and white and Asian youth. For example, among young men who entered high school in 2007, more than 70 percent of Asian and white youth graduated with a Regents Diploma, compared to 48 percent of black and Hispanic young men. The gap for young women in 2007 was between 24 and 30 percentage points.

Figure 8b shows that college readiness rates also improved for all race and gender groups of students. For example, college readiness rates for black and Hispanic young men more than doubled. However, gaps among gender and race subgroups were especially wide in this area and persisted throughout the period. For example, in the 2007 cohort, while 48 and 40 percent of Asian and white young men,

Figure 8b: College Readiness Rate by Gender and Race for First-Time 9th Graders (2001 and 2007 Cohorts)



respectively, were identified as college ready, only 8 percent of black young men and 11 percent of Hispanic young men were identified as college ready.

Again, these numbers point to areas of important progress, as well as stubborn gaps that will likely require a range of strategies to close. Lagging college readiness rates among black and Latino young men, in particular, demand attention. Several initiatives are getting underway to address this college readiness gap directly. For example, the Expanded Success Initiative is currently being rolled out in 40 New York City high schools that serve a high concentration of black and Hispanic males, to provide a range of supports and services related to academics, youth development, and school culture. (The Research Alliance is conducting an evaluation of this effort.)

As shown in Figures 9a and 9b on the next page, there were also improvements in graduation and college readiness rates, along with somewhat less pronounced gaps, for other groups of traditionally “underperforming” students. These included students who were eligible for free or reduced price lunch (noted in the figure as “lower SES”—for lower socioeconomic status and reflecting a student’s eligibility for free or reduced price lunch) and students identified for ELL or special education services. For example, Figure 9a on the next page shows that, comparing students who entered high school in 2001 with those who entered in 2007, graduation rates (with a Regents Diploma) more than doubled for students identified for ELL services in 8th grade, and nearly tripled for students identified for related special education services. These increases resulted in somewhat narrower—but still notable—gaps between ELL and non-ELL students and between special education students and non-special education students. More work is needed to understand the variation inherent within these large categories of students, and to develop targeted interventions that help more students succeed.

Have the Demographics of Entering 9th Graders Changed Substantially?

Overall, the distribution of background characteristics of entering high school students remained fairly stable between 1999 and 2010. There were some small shifts in the mix of race and ethnicity (with modest increases in the percentage of Hispanic and Asian students and decreases in the proportion of black and white students). There was also an increase in the percentage of students eligible for free and reduced price lunch and students referred for special education services. (See Table A6 for details). It is unlikely that any of these shifts drove the changes in academic outcomes that we observed during the same time period.

(For more information about trends in outcomes for these subgroups of students, see Tables A7a, A7b, and A7c in the appendix.)

Figure 9a: High School Graduation with a Regents Diploma by Age, SES, Home Language, ELL, and Special Education Status for First-Time 9th Graders (2001 and 2007 Cohorts)

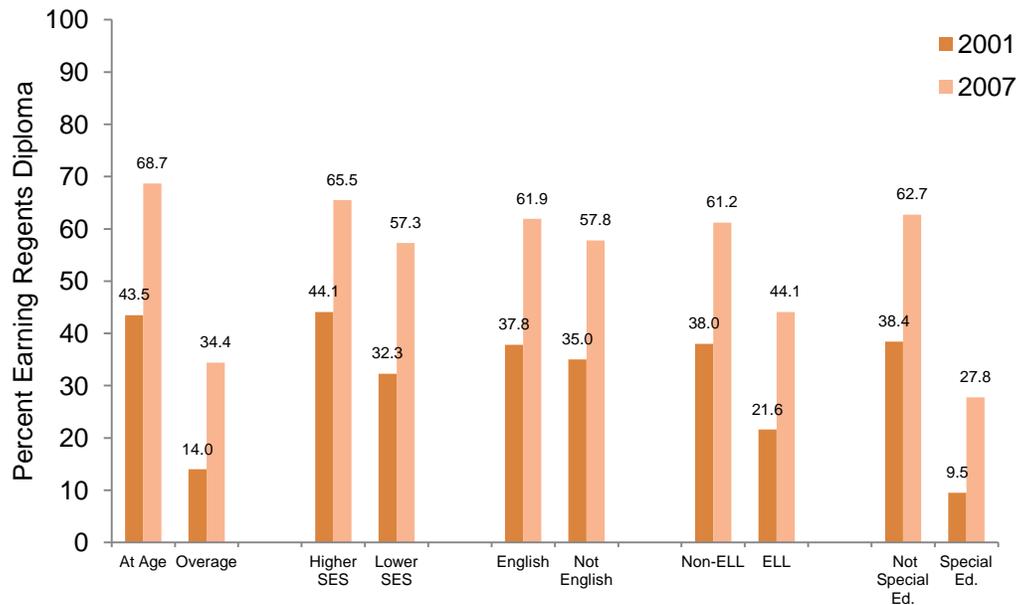
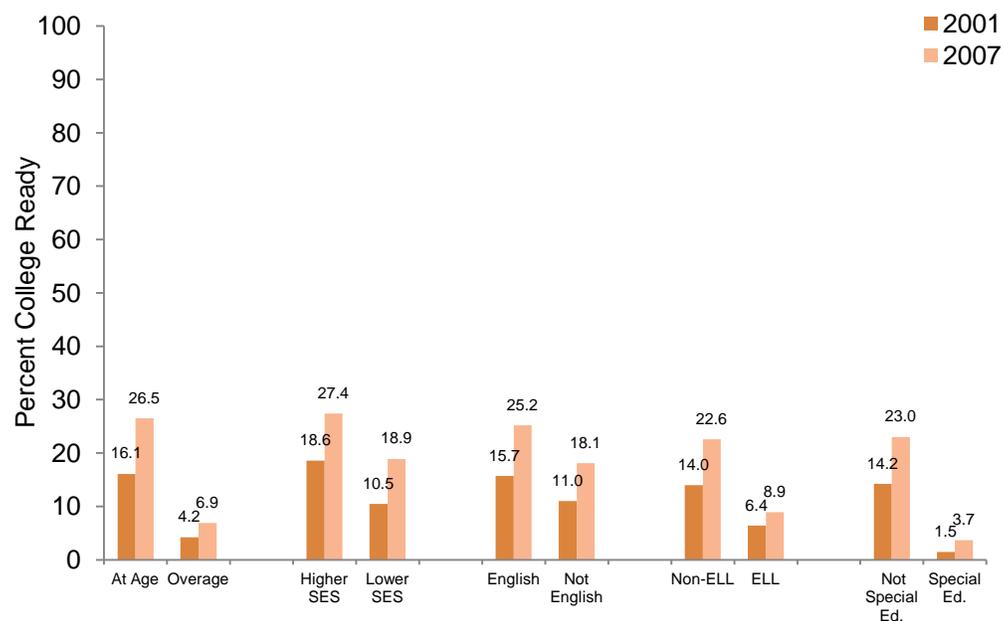


Figure 9b: College Readiness Rate by Age, SES, Home Language, ELL, and Special Education Statuses First-Time 9th Graders (2001 and 2007 Cohorts)



Looking Forward

Overall, the analyses presented in this paper point to substantial improvements in key outcomes over the last 12 years. These gains can be seen in multiple areas—ongoing enrollment, attendance, getting and staying on track for graduation, and, finally, graduations rates—and across subgroups of students. All in all, high schools appear to be producing better results than they were a decade ago.

On the other hand, serious gaps between subgroups of students remain. And, across the system, far too few young people are being prepared for the rigors of college. These areas represent the major challenges for New York City’s education policy as we look ahead.

These trends and remaining gaps suggest a three-pronged strategy for future policy and practice. First, it will be critical to continue identifying and supporting students who are struggling to reach the minimum requirements for a New York State Regents diploma. For example, the Research Alliance and others are working to develop more reliable early warning indicators that signal long-term problems, as a first step in supporting struggling students. These indicators can be used to connect students directly with interventions aimed at boosting academic achievement and providing needed social-emotional supports.

Second, greater attention should be paid to aligning performance standards, curricula, and instruction with the skills that students will need to succeed in college and a career. The ongoing development of “Common Core” standards and assessments is explicitly aimed at these challenges.

Third, New York City policymakers should continue to develop multiple, high-quality pathways toward success for students who bring varying needs, ambitions and strengths, but who may not opt for a four-year college degree. There is strong evidence that pathways combining solid academic preparation with work-related learning experiences can produce substantial gains in post-secondary labor market outcomes without jeopardizing access to college.²⁵

Finally, the information presented in this short paper raises many additional questions. For example, the paper focuses on averages across the wide variety of schools and school contexts in New York City. It will be important to understand the underlying the variation in key student outcomes across geographic areas and

individual high schools. For instance, in 2011, some high schools graduated fewer than one third of the students who enrolled in those schools four years earlier, while other schools graduated all or nearly all of the students from that cohort.²⁶ To what extent are these differences an artifact of the prior performance and experiences of the students who enroll in those schools, and to what extent can they be attributed to differences in school contexts, practices, and supports that add to or detract from students' existing skills and knowledge? These and other related questions will be the topic of subsequent papers in this series.

Another set of important questions revolves around specific elements of the reforms that have been underway during past decade. For example, how has the phasing out of the City's lowest-performing high schools affected students who would most likely have attended those schools had they remained open? How has this process affected existing schools? We intend to address these questions as well.

There are other questions about the validity of the measures that are used in this paper—and that are frequently used to gauge school performance. For example, it will be important to build reliable and valid measures of college readiness, including validation of the “college ready” measure used here. What are the college success rates of students who meet this or other benchmarks? What other information will help school personnel identify students who are making progress toward graduation but are not building the skills and credentials they need to succeed in college? There is also a need for a wider array of measures that can shed light on various aspects of students' experience and performance in school, including their resilience in the face of academic, social and personal challenges and the degree to which they are developing the habits of mind and critical thinking skills that will enable them to be lifelong learners. The Research Alliance will be addressing these wide-ranging questions in future work.

Endnotes

¹ For information about New York City graduation rate trends prior to 1999, see New York City Department of Education (2012). “New York City Graduation Rates, Class of 2011 (2007 Cohort).” For information on graduation rates across the country, see Chapman, C., J. Laird, and A. Kewal Ramani (2010).

² The analyses presented in this paper include public general education high schools, career technical high schools, and junior high schools in New York City that admitted 15 or more first-time 9th grade students in a given year between 1999 and 2010. The analyses do not include transfer high schools, GED programs, special education high schools, or charter high schools that may have admitted first-time 9th graders. The paper focuses on first-time 9th graders and follows their enrollment patterns and outcomes throughout their high school careers, including their transfers to these alternative schools and programs. A first-time 9th grader is defined as a student who was classified as a 9th grader in a given year and was not enrolled in a New York City school as a 9th grader in the prior year.

³ Throughout this paper, graduation rates are calculated using criteria that are consistent with the New York State Education Department (NYSED) and NYC DOE. Graduates include those who earned a local diploma or a New York State Regents Diploma. Non-graduates include those who received a GED or IEP certificate, those who dropped out of high school, and those who remained enrolled in a New York City high school without yet graduating. Also, like the NYSED and DOE calculations, graduation rates here include those who earn diplomas over the summer following scheduled graduation. For example, graduation rates for students who began high school in September 2005 reflect the percentage of these students who earned a diploma as of October 2009. Unless otherwise noted, graduation calculations do not include those who were identified as transferring from the

New York City public school system with an indication that they enrolled in another jurisdiction. Finally, the analyses in this paper do not include students who transferred into a New York City high school after their 9th grade year. Such students are included in the overall graduation rates reported by the NYSED and DOE. Thus, the graduation rates reported in this paper are different (typically 4-5 percentage points higher) than those reported by the NYSED and DOE.

⁴ During this period, the NYSED increased the requirements for a Regents Diploma and phased out the use of Local diplomas. As of 2011, the New York State Regents Diploma requires that students earn a minimum of 44 course credits (one for each semester-long class that a student passes) and pass a minimum of five end-of-course Regents Examinations with a score of 65 or higher. The Local Diploma does not require passing scores on Regents Examinations. Beginning in 2012, students must earn a Regents Diploma to graduate from high school in New York State. See New York City Department of Education (2012), “Summary of NYSED Regulation 100.5 and Chancellor’s Regulation A-501” and New York State Education Department (2012), “General Education and Diploma Requirements.

⁵ For the purposes of this paper, college readiness is defined as earning a New York State Regents Diploma and receiving a score of 80 or higher on a Mathematics Regents examination and a score of 75 or higher on an English Regents examination. This indicator is used in the New York City Department of Education and New York State Education Department’s designation of “Regents-Based Math and English Aspirational Performance Measure.”

⁶ Related special education services include Individual Education Plans (IEPs) for learning or behavioral disabilities that can be accommodated in regular education classrooms. Students in self-contained special

education classes or enrolled in District 75 schools are not included in the analyses presented in this paper.

⁷ Bloom et al., 2010 and Bloom and Unterman, 2012.

⁸ Schwartz et al., 2012.

⁹ Kemple, 2011.

¹⁰ See <http://www.corestandards.org/>.

¹¹ Kemple, 2008.

¹² Corcoran and Nathanson, 2013; Corcoran and Levin, 2011.

¹³ At the time this paper was drafted, data for the cohorts of first-time 9th graders included in these analyses were available through October 2011. Thus, not all information is available for all of the entering cohorts. For example, graduation information was only available for the cohorts entering high school in 1999 through 2007 (and scheduled to graduate in 2003 through 2011, respectively). Similarly, data on the fourth year of high school were available for the 1999 through 2007 cohorts; data on the third year of high school were available for the 1999 through 2008 cohorts; and data on the second year of high school were available for the 1999 through 2009 cohorts. Also, accurate Regents diploma information was not available for the 1999 and 2000 cohorts. As a result, changes in rates of receiving a Regents diploma and being college ready are only calculated for the 2001 through 2007 cohorts.

¹⁴ Bloom et al., 2010; Bloom and Unterman, 2012.

¹⁵ Schwartz et al., 2012.

¹⁶ The enrollment rates in Figure 2 are calculated as a percentage of all students who enrolled in a New York City high school as a first-time 9th grader, including those who subsequently transferred to schools outside the system. Students who dropped out of high school or left the New York City public schools to enroll in another district are counted as non-enrollees. The high school enrollment rates are calculated for the start of each year following students' initial enrollment in a New York City high school regardless of their grade level progression.

For example, enrollment rates for Year 3 represent enrollment in September three years after entering high school, regardless of whether students were promoted to the 11th grade or were retained in a grade at some point after the 9th grade year.

¹⁷ For the purposes on this paper, being on track at the start of a student's fourth year of high school is defined as having earned 32 or more course credits (of the 44 needed to graduate) and having passed three or more Regents examinations with a score of 65 or higher (of the five needed to graduate).

¹⁸ As noted above, the analyses in this paper do not include students who transferred into a New York City high schools after their 9th grade year. Such students are included in the overall graduation rates reported by the NYSED and DOE. Thus, the graduation rates reported in this paper are different (typically 4-5 percentage points higher) than those reports by the NYSED and DOE.

¹⁹ The on-track indicator shown in Figure 5 assesses students' likelihood of graduating with a New York State Regents Diploma. For a detailed analysis of on-track indicators for New York City schools, see Kemple, Segeritz, and Stephenson, 2013. The paper shows a strong relationship between this on-track indicator and graduating with a Regents diploma that is consistent over more than a decade.

²⁰ New York State Education Department, 2011. "Public School District Total Cohort Aspirational Performance Measure (APM): 2007 Total Cohort as of June 2011."

²¹ Kemple, Segeritz, and Stephenson, 2013.

²² Graduation rates shown in Figure 5, and in all subsequent figures, are calculated as a percentage of students who were not identified as transferring to a high school outside the New York City public schools. Students who dropped out of high school or acquired a GED or IEP diploma are counted as non-graduates. Graduation rates are calculated as of October of the year of scheduled graduation. For example, graduation rates for students who began high school in September 2005 reflect the percentage of these students who earned a

diploma as of October 2009. Finally, graduation rates for students entering high school in 1999 and 2000 are not included in Figure 5 because the data available for these students do not provide complete information on the type of diploma they earned.

²³ The information in this section reflects students' performance in the 8th grade and is only available for students who were enrolled in a New York City school in the year prior to entering high school. Table A4 shows that the percentage of students not enrolled in a New York City school in the year prior to entering high school fell from

15 percent in 1999 to 8 percent in 2007. The percentage increased to just under 13 percent of those entering high school in 2010. The percentages presented in Figure 6 are based on those for whom 8th grade test scores are available.

²⁴ Wolcott, 2011; Lyles et al., 2011.

²⁵ Kemple, 2008.

²⁶ For information on individual schools, see the New York City Department of Education's annual progress reports at <http://schools.nyc.gov/Accountability/tools/report/default.htm>.

References

Bloom, H., S. Levy Thompson, and R. Unterman, (2010). *How New York City's New Small Schools are Boosting Student Achievement and Graduation Rates*. New York, NY: MDRC.

Bloom, H., and R. Unterman, (2012). *Sustained Positive Effects on Graduation Rates Produced by New York City's Small Public High Schools of Choice*. New York, NY: MDRC.

Chapman, C., J. Laird, and A. KewalRamani, (2010). "Trends in High School Dropout and Completion Rates in the United States: 1972–2008" (NCES 2011-012). Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved 3/21/13 from: <http://nces.ed.gov/pubsearch>.

Corcoran, S. and H. Levin, (2011). "School Choice and Competition in the New York City Schools," in J.A. O'Day, C.S. Bitter, and L.M. Gomez (Eds.), *Education Reform in New York City: Ambitious Change in the Nation's Most Complex School System* Cambridge, MA: Harvard Education Press.

Nathanson, L., Corcoran, S., Baker-Smith, C. (2013). "High School Choice in New York City: A Report on the School Choices and Placements of Low-Achieving Students."

New York, NY: The Research Alliance for New York City Schools.

Kemple, J., (2008). *Career Academies: Long-Term Impacts on Work, Education, and Transition to Adulthood*. New York, NY: MDRC.

Kemple, J., (2011). "Children First and Student Outcomes: 2003-2010." In J. A. O'Day, C. S. Bitter, & L. M. Gomez, (Eds.), *Education Reform in New York City: Ambitious Change in the Nation's Most Complex School System* (255-292). Cambridge, MA: Harvard Education Press.

Kemple, J., M. Segeritz, and N. Stephenson, (2013). "Building On-Track Indicators for High School Graduation and College Readiness: Evidence from New York City." *Journal of Education for Students Placed at Risk*, 18(1), 7-28.

Lyles, M., S. King, and J. Lack, (2011). "The Blueprint for Middle School Success Key Elements and Promising School-Based Practices: A Component of the Campaign for Middle School Success." New York, NY: NYCDOE. Retrieved 3/18/13 from: [http://schools.nyc.gov/NR/rdonlyres/8658AA07-31C7-4C1A-AE2A-ADF4EAA34160/0/Blueprint for Middle School Success.pdf](http://schools.nyc.gov/NR/rdonlyres/8658AA07-31C7-4C1A-AE2A-ADF4EAA34160/0/Blueprint%20for%20Middle%20School%20Success.pdf)

New York City Department of Education (2012), "New York City Graduation Rates Class of 2011 (2007 Cohort)." Retrieved 3/24/2013 from:
http://schools.nyc.gov/NR/rdonlyres/6853B2BF-E509-44DD-84E0-CA70B819109B/0/2011GradDeck_Presentation061112.pdf

New York City Education Department (2012), "Summary of NYSED Regulation 100.5 and Chancellor's Regulation A-501." Retrieved 3/22/13 from:
<http://schools.nyc.gov/NR/rdonlyres/215FF06B-DCA3-442B-89DF-18E674DC867E/0/Acpolicygened.pdf>

New York State Education Department (2012), "General Education and Diploma Requirements." Retrieved 3/22/13 from:
<http://www.p12.nysed.gov/ciai/gradreq/revisedgradreq3column.pdf>

New York State Education, (2011). "Public School District Total Cohort Aspirational Performance Measure (APM): 2007 Total Cohort as of June 2011" Retrieved 3/25/13 from:

<http://www.p12.nysed.gov/irs/statistics/sgrads/2012/June112012-districtAPM.pdf>

Schwartz, A., M. Wiswall, L. Stiefel, and E. Debraggio, (2012). "Does High School Reform Lift Urban Districts? Evidence from New York City." Paper presented at the National Center on Scaling Up Effective Schools Conference, June 10-12, 2012, Vanderbilt University. New York: Institute for Education and Social Policy.

Wolcott, D. (2011). Speech presented at NYU Steinhardt. Retrieved on 3/19/13 from:
<http://schools.nyc.gov/offices/mediarelations/newsandspeeches/2011-2012/msspeechatnyu92011.htm>

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