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Examining the Pre-High School Roots of the Black and Latino Male Dropout Crisis in New York City

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Technical Report

Examining the Pre-High School Roots of the Black and Latino Male Dropout Crisis in New York City

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Examining the Pre-High School Roots of the Black and Latino Male Dropout Crisis in New York City is written by: Ben Meade and Frank Gaytan

We are grateful for the expert advice and support of the **Black and Latino Male Advocacy Coalition**, which represents a group of more than 10 organizations and individuals that meet regularly to coordinate research with advocacy activities throughout New York City. The goal of the **Advocacy Coalition** is to monitor the impact of New York City Department of Education reforms on the academic performance of Black and Latino male students. The coalition is comprised of researchers, community-based organizations, educators, and advocates dedicated to improving the social and academic outcomes of Black and Latino males in NYC.

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Executive Summary

In this report, we examine how the achievement levels of Black and Latino males vary across New York City neighborhoods and work to identify the neighborhoods where the needs of the two populations are most critical. We then examine differences in characteristics of the middle schools and students in the low- and high-performing Community School Districts (CSDs) to better understand the continually low performance of a large portion of Black and Latino males in New York City.

To perform our analysis, we use data from Black and Latino male members of the 2007 cohort that attended a New York City public middle school in the 8th grade and a New York City high school after the 8th grade. We identify the CSDs in which the performance of Black and Latino males is the lowest and highest. Students were matched to their neighborhood CSD by where they attended middle school as most New York City students leave their neighborhoods for high school, but often stay within their neighborhood school up until the 9th grade. After identifying the lowest and highest performing CSDs, we explore how differences in factors such as family background and access to higher-qualified teachers might explain inter-district disparities.

We find that five CSDs stand out among the lowest performing. Few Black and Latino males in our sample from these CSDs completed high school in four years and an alarming number dropped out. These CSDs include CSD 4 in East Harlem, CSD 8 which includes the neighborhoods of Hunts Point, Sound View, Castle Hill, and other neighborhoods in the East Bronx, CSD 7 which includes much of the South Bronx, CSD 23 which makes up parts of Brownville and East New York, and CSD 30 which includes the Queens' neighborhoods of Long Island City, Sunnyside, Jackson Heights, Woodside, and Astoria. A total of 2,447 students in our sample attended middle schools in those CSDs. These CSDs also stand out as having the highest proportion of students in our sample who qualify for free lunch, indicating that neighborhood poverty is most severe in those neighborhoods.

Among the alarming patterns observed in the low-performing CSDs:

- In four of the five low-performing CSDs, fewer than 22 percent of the Black and Latino male students in our sample graduated with a Regents Diploma in four years.
- In three of the five low-performing CSDs, about one-third of Black and Latino male students in our sample completed fewer than five credits in their first year of high school.
- In CSD 23, less than 15 percent of the 441 Black and Latino male students in our sample graduated with a Regents Diploma in four years and only 34 percent graduated with any diploma (Local or Regents).
- In CSD 8, nearly one in four Black and Latino male students in our sample dropped out in four years.

In order to examine the achievement patterns of students in high- and low-performing CSDs among students with similar backgrounds and achievement levels, we compare Black and Latino males in the CSDs who qualified for free lunch and scored at Level 2 on the 5th grade math and ELA tests. We find that much higher percentages of these students in the low-performing CSDs dropped from a Level 2 to a Level 1 between the 5th and 8th grades. The decrease in performance was especially strong in math, where more than 20 percent of students in each of the low-performing CSDs dropped from a Level 2 to Level 1 compared to only about 10 percent of the students in the high-performing CSDs. We also find that substantially higher proportions of low-SES and low-achieving low-performing CSD students drop out and lower proportions graduate. In CSD 8, for example, 32 percent of low-achieving and low-

socioeconomic-status (SES) students dropped out in four years compared to approximately 21 percent of students in the sample meeting the criteria citywide. An average of nine percent of low-achieving and low-SES Black and Latino males in the low-performing CSDs graduated with Regents diplomas, compared to an average of 22 percent in the high-performing CSDs and 13 percent for the total population.¹

Listed below are differences which might explain the disparities in middle school quality between the low- and high-performing CSDs.

- Student need levels are higher in low-performing CSD middle schools as indicated by higher proportions of students qualifying for free lunch and designated as English Language Learners and receiving special education services.
- Higher proportions of teachers in the low-performing CSDs have less than five years of teaching experience (during the time period in which students in our sample were in middle school).
- Lower proportions of teachers in the low-performing CSDs have a master's degree.

In examining New York City's policy response to the consistently low performance of the middle schools in the low-performing CSDs, we show that a large portion of the consistently low-performing middle schools in the low-performing CSDs have been closed in the years since students in our sample attended them. The closing of ineffective schools and their replacement primarily with new small schools appears to have been the primary policy response to the issues highlighted in this report. Therefore, considering the policy recommendations that stem from our analysis, we believe it important the New York City Department of Education:

- Work to ensure that new schools replacing the closed middle schools in the low-performing CSDs provide better opportunities for academic achievement and enrichment and stronger supports, particularly for vulnerable students.
- Ensure that new teachers and principals in the new schools have adequate level of support and mentoring in their initial years to improve both instruction and retention (Smith and Ingersol 2004).
- Continue working to recruit and retain highly qualified teachers and promote more equitable distribution of highly qualified teachers in the New York City school system.
- Work to transform low-performing middle schools in high-poverty urban areas using a comprehensive approach that incorporates strong academic programs with needed services such as health care, educational resources for parents, housing, and assistance for immigrant families.

¹ These differences might reflect lower achievement levels among students meeting the criteria for inclusion in low-performing CSDs, rather than CSD-related factors like the quality of the middle schools or the availability of services. Moreover, systematic variation in the quality of the high schools attended by the students in the different CSDs may also play a role in explaining the differences.

Introduction

In this report, we examine how the achievement levels of Black and Latino males vary across New York City neighborhoods and work to identify neighborhoods where the needs of the two populations are most critical. We then examine differences in characteristics of the middle schools and students in the low- and high-performing Community School Districts (CSDs) to better understand the continually low performance of a large portion of Black and Latino males in New York City.

To analyze variation in achievement patterns among Black and Latino males geographically, we determine the New York City Community School District (CSD) of the middle schools attended by the students in our sample as a rough indicator of their neighborhoods. We then examine differences in achievement patterns among students from those CSDs over time. We use the location of students' middle rather than high schools as a neighborhood indicator as students tend to stay in their neighborhoods for middle school while many go outside their neighborhoods for high schools.² CSDs, however, often make up multiple neighborhoods and in many cases CSD borders do not align with neighborhood borders. As we discuss in greater detail below, CSDs have mixed significance as neighborhood constructs and administrative entities.

The approach allows us to examine how differences in middle school quality and neighborhood characteristics predict high school achievement. Based on several achievement outcomes among Black and Latino males we identify the lowest- and highest-performing CSDs. After identifying these CSDs, we explore how differences in factors such as family background and access to higher-qualified teachers or higher-quality middle schools might explain inter-district disparities and to better understand the reasons behind alarmingly low achievement patterns among many Black and Latino males. Our analysis is based on the assumption that students' high school achievement patterns are largely rooted in their experiences through elementary and middle school, and the characteristics and level of support available in students' schools and neighborhoods during those years can make substantial differences in their life course (see Alexander, Entwisle, and Kabbani 2001; Alexander, Entwisle, and Bedinger 1994; Entwistle, Alexander, and Olson 1994). As we describe below, separating the influence of individual and contextual level factors on student achievement is complex. It is especially difficult to separate the effects of family, neighborhood, and previous schooling on high school achievement. We do not claim that attending a particular CSD during middle school explains high school achievement, but instead use the analysis to identify areas of needs and develop hypotheses for future research.

Consistent with other research, we find that the CSDs with the highest poverty rates tend to be the lowest performing (Latarola and Fruchter 2004). We find that five CSDs stand out among the lowest performing. Few Black and Latino males in our sample from these CSDs completed high school in four years and an alarming number dropped out. We provide evidence that students in the lowest-performing CSDs have limited access to high-performing middle schools or middle schools with gifted programs, and have lower proportions of experienced and qualified teachers than middle school in the high-performing CSDs. Finally, we show that a large portion of the low-performing middle schools in the low-performing CSDs have been closed in the years since students in our sample attended them. We conclude our analysis with a discussion of the potential advantages and disadvantages of this policy.

² Students generally attend their zoned neighborhood school in middle school or choose from schools within their CSD.

Review of Research Related to Geographic Disparities in Achievement

Prior research suggests four broad categories of variables that could explain differences in achievement among Black and Latino males in different CSDs in New York City. First and foremost in explaining achievement differences are individual variables related to the family background of students, including whether students are fluent in the language of instruction or if they have had exposure in their childhoods to academic-related content like books and academic vocabulary (Wiley and Wright 2004; Rothstein 2004; Jencks et al. 1972; Gamoran 2001).

The most important family background-related factors are generally captured in measures of family socioeconomic status (SES) (Jencks et al. 1972; Gamoran 2001). Researchers have found that SES-related measures such as parent education levels and economic resources are particularly strong predictors of student achievement (Konstantopoulos 2006; Gamoran 2001).

Factors identified by researchers that are important in explaining the positive correlation between SES and achievement include lower availability of family resources that contribute to achievement, such as computers, a quiet and stable place to study, or books, but also less tangible differences in social networks and culture that may provide an advantage to higher SES students (Rothstein 2004; Gamoran 2001). Because of these factors, in neighborhoods with higher concentrations of low-SES individuals one would expect to observe lower average levels of achievement.

The next two factors are related to the out-of-home context in which students develop. These can be divided into school characteristics and neighborhood context. Researchers have examined the role of school organization, structure, resources, and peer composition on student achievement (Lee and Bryk 1989; Lee 2000; Nye, Hedges, and Konstantopoulos 2000). Although there is disagreement on the influence of school resources in influencing academic outcomes (Hanushek 1989; Konstantopoulos 2006), certain experimental evidence shows that reduced class size can have a substantial effect on student learning outcomes (Krueger 2003).

Among the school organization and climate-related factors that have been identified as important in influencing learning outcomes include the level of social support and positive relationships between adults and students in schools, and the level of academic press (Lee and Smith 1999; Lee and Burkham 2003; Croninger and Lee 2001; Roderick 2003). There is also some evidence that students benefit from being in schools with more high-achieving peers (Hanushek et al. 2002).

One important finding from recent research is the high level of variation in achievement that occurs within schools due to differences in teachers (Konstantopoulos 2006; Jepson 2005). Konstantopoulos (2006) finds that variation in teachers within schools is much more important in explaining achievement variation than variation between schools, especially in math. Teachers also play an important role in explaining the size of the racial and SES achievement gap within schools (Konstantopoulos 2006). Researchers have been challenged, however, in distinguishing variables that consistently identify more effective teachers. Characteristics of teachers that have been associated with positive outcomes for students include more than five years of teaching experience and higher levels of content knowledge in the subject being taught, as measured by test scores or the number of courses taken in the content area (Rivkin, Hanushek, and Kain 2005; Ferguson and Ladd 1996; Kukla-Acevedo 2009). If there are systematic differences in teachers with different levels of experience and qualifications among the different CSDs, then this might be important in explaining inter-CSD variation in achievement outcomes.

Indeed, in New York City there is evidence of sorting of teachers with different levels of experience and qualification levels among schools that serve fewer and greater poor populations (Boyd et al. 2008). Although their findings suggest that the gaps in teacher experience and qualifications between the poorest and least-poor schools have narrowed since 2000, Boyd and his colleagues (2008) show that in 2005 the percentage of teachers in their first three years of teaching among schools in the poorest quartile was nearly 8 percentage points higher than among schools in the least-poor quartile. In 2005, about 27 percent of teachers in the poorest middle schools had fewer than three years of experience compared to 15 percent of teachers in the least-poor schools. Their findings also show that the gaps in teacher experience and qualifications remained strongest at the middle school level.

Third among the factors are neighborhood characteristics. Particularly important among the neighborhood characteristics is the level of concentration of neighborhood poverty, which has been found to influence student achievement outcomes in high school beyond individual and family characteristics (Entwistle, Alexander, and Olson 1997; Leventhal and Brooks-Gunn 2004; Ainsworth-Darnell and Downey 1998; Harding 2003).

Researchers examining the effects of neighborhoods have been challenged in attempting to tease apart individual and contextual variables due to the high levels of inter-correlation between them. Low-SES students are more likely to live in neighborhoods with high proportions of low-SES individuals and attend schools with higher concentrations of low-SES students that have fewer resources and less experienced teachers than schools with higher proportions of high-SES students (Gamoran 2001). Poor families living in neighborhoods with high poverty concentrations might differ from poor families on variables not included in analyses from those living in less-poor neighborhoods (Leventhal and Brooks-Gunn 2004).

A recent body of research has attempted to address this issue by analyzing data from cases where poor families were assigned to treatment groups where they received vouchers and assistance to move into private housing in neighborhoods with varying level of poverty. These cases allow researchers to compare changes in educational outcomes among families that moved from neighborhoods with high concentrations of poverty to less-poor neighborhoods to similar individuals that stayed in their high-poverty neighborhoods. Using this strategy, Leventhal and Brooks-Gunn (2004) find positive and significant effects for moving from high- to low-poverty neighborhoods on test scores for adolescent boys, but not for girls and not for outcomes associated with student behavior like school suspensions. Factors important in explaining these effects include time spent on homework and parent-reported school safety. The researchers are unable, however, to determine how much of the change might be attributed to students' neighborhoods or differences in the schools attended by the two groups.

A potential shortcoming of this approach is that rather than measuring the effect of living in a high-poverty neighborhood, this research instead measures the effect of leaving one (Harding 2003). Harding (2003) attempts to address this issue by matching individuals at age 10 in high- and lower-poverty neighborhoods on factors such as family income, parent education level, and family structure and comparing the proportion of individual that dropped out.³ He finds that living in a high-poverty neighborhood is associated with a significantly positive increased likelihood of dropping out of high school, with an effect size larger than had been found in studies examining the effect of receiving a housing voucher.

³ The Author uses propensity score matching.

There is some evidence that the neighborhood research is especially salient for the target population of our research – Black and Latino males. Levethal and Brooks-Gunn (2004) argue that differences in effects between males and females stem from neighborhood factors such as high rates of crime and violence and low social cohesion, which have a disproportionate impact on Black males. Higher proportions of Black children live in high-poverty neighborhoods and the effect of living in those neighborhoods might be stronger on males than females due to the fact that males tend to have greater exposure and access to neighborhood influences.

Similarly, a study in Baltimore revealed that boys' performance on math achievement tests in middle school was more sensitive to the effect of neighborhood resources than girls (Entwistle, Alexander, and Olson 1994). Overall, average performance on these tests of math ability was about equal between boys and girls. There was much greater variability, however, in performance among boys. This suggests that in the absence of resources at the neighborhood level, it is much more difficult for boys to achieve their full academic potential.

Finally, some evidence shows that differences in the level of resources and how those resources are used among CSDs may explain part of the inter-CSD achievement disparities we observe. Between 1970 and 2003, CSDs were governed by a combination of democratically elected local school boards and CSD superintendents. In 1996, legislation shifted the authority for CSD-level budgets from the CSD school boards to the CSD superintendents and the New York City school chancellor (Iatarola, Stiefel, and Schwartz 2002). Over the last four years of our analysis, 2003 to 2007, CSDs switched to being part of larger administrative units, 10 Regions rather than 32 CSDs, and to being administrative units again although with fewer responsibilities. For the period up until 2003 in which the students in our cohort were in elementary and middle school, sample students were in schools managed by CSDs – and differences in how CSDs used resources might account for at least some of the inter-CSD variation in student achievement.⁴

Previous research has shown that there was significant variation in both the availability of resources, like the level of per-student funding and the amount of certified teachers, and how resources were used between New York City CSDs during the period of decentralization (Iatarola, Stiefel, and Schwartz 2002; Iatarola and Fruchter 2004). Some CSDs, for example, were found to spend different amounts on paraprofessionals, leadership, and teacher salaries (Iatarola, Stiefel, and Schwartz 2002). There is also evidence that differences in CSD management explained a portion of the variation in student achievement levels among CSDs (Iatarola, Stiefel, and Schwartz 2002).

Data and Methods

The sample of students included in our analysis is made up of Black and Latino male students that entered the ninth grade in New York City public school in the 2003-04 school year, were in a New York

⁴ Although the central citywide district retained final veto authority over CSD spending decisions, the CSDs allocated the bulk of state and federal funding to the elementary and middle schools within the CSD and had control over CSD-level operations and instruction (Iatarola, Stiefel, and Schwartz 2002). Therefore, other than a lack of authority to raise revenue the CSDs operated in a manner similar to independent school districts (Iatarola, Stiefel, and Schwartz 2002). They are also similar in size to many independent school districts around the US, with enrollment ranging from approximately 8,500 to more than 38,000 students in 2000 (Iatarola, Stiefel, and Schwartz 2002).

City middle school in 2002-03 school year, and were not in a full-time special education program in that year or during their first year of high school. A total of 17,309 Black and Latino male students were included in the analysis out of a total of 23,820 Black and Latino males students that were part of the 2007 cohort.

Data for the cohort include a variety of demographic and achievement indicators. The demographic indicators include race, whether a student was designated as a special education student or given English Language Learner (ELL) status, age, and whether a student qualified for free lunch. One of the major limitations of our analysis is that free lunch qualification poorly captures family income level. Although highly correlated with most poverty based measures from census data (Kurki, Boyle, and Aladjem 2005), there may be a large degree of variation in incomes among qualifying families. Families qualify for free lunch if their annual household income is less than 130 percent of the national poverty level. In 2008, for instance, a family of four qualified if they earned less than \$27,560.

Our achievement data include New York State English Language Arts and Math Test scores (scale scores and levels) and four-year high school outcomes that include what type of diploma a student received after four years of high school and whether they dropped out or were still enrolled. We use the student-level data to construct school and CSD-level variables for Black and Latino males. We supplement the student-level administrative data with school-level data including school selectivity and the types of special programs provided in CSD middle schools.

As previously stated, our rough indicator of student neighborhood is the CSD attended by students in middle school. We use the middle school location as an indicator of students' neighborhood, as many students leave their neighborhood CSD to attend high school. In CSD 23, for example, by the ninth grade only eight percent of the 441 Black and Latino male students in the sample who had attended a CSD 23 middle school in the 8th grade remained within a CSD 23 high school – although 92 percent of the students went to a high school within Brooklyn.

We rate CSDs based on an index that awarded higher scores for CSDs where the achievement levels of its middle school students were lowest across multiple measures. The index is a sum of quintile ranks on seven achievement variables including middle school outcomes, such as the percent of students scoring at proficiency on the 8th grade math test, and high school outcomes theorized to be in part connected to middle outcomes, such as the percentage of students graduating with a Regents Diploma in four years.

We selected the variables for the index based on ours and others' research findings related to predictors of secondary and post-secondary school outcomes for students, particularly for Black and Latino males (Neild, Stoner-Eby, and Furstenberg 2008; Neild and Balfanz 2006; Alexander, Entwisle, and Kabbani 2001; Meade, Gaytan, and Noguera forthcoming). The scale for each item in the index ranged from 0 to 4. CSDs in the lowest quintile of four-year graduation rates (e.g., only 15 to 22 percent of students graduated in four years) received a four, while those in the highest-performing quintile, 37-58 percent, received a 0. The maximum possible score for the index is 28 and the minimum is 0. The variables and the range of the quintile ranks are presented in Table 1 on the next page.

As can be observed in the Table 1, there is a great degree of variation between CSDs – as demonstrated by the range in performance between the first and fifth quintiles on the middle school measure, the percentage of students scoring at level 1 on the 8th grade math test, as well as high school outcomes for the first and fourth years of high school. Variation is especially high on the percentage of students that drop out in four years, which ranges from four percent in District 26 to 23 percent in

District 8. Appendix A displays individual rankings for the 32 CSDs as well as their total scores and sample populations.

Table 1: Range of Quintiles for Selected CSD Achievement Measures

Rank	% Lvl 1 Math 8th Grd	% 0 Credits 1st Yr of HS	% < 5 Credits 1st Yr of HS	% Fail Math 1st Yr of HS	% Dropout in 4 Yrs	% Regents in 4 Yrs (reversed)	% Graduated in 4 Yrs (Reversed)
0	7-20	1-4	10-17	19-21	4-11	58-37	72-57
1	21-27	4-5	19-23	23-27	11-14	35-31	56-49
2	28-30	5-6	23-25	27-30	14-17	30-28	48-45
3	30-33	6-7	25-27	30-33	17-18	27-22	45-43
4	35-41	8-12	28-33	33-37	19-23	22-15	42-34

Source: Calculations by the authors using data from the New York City Department of Education, 2008.

Findings

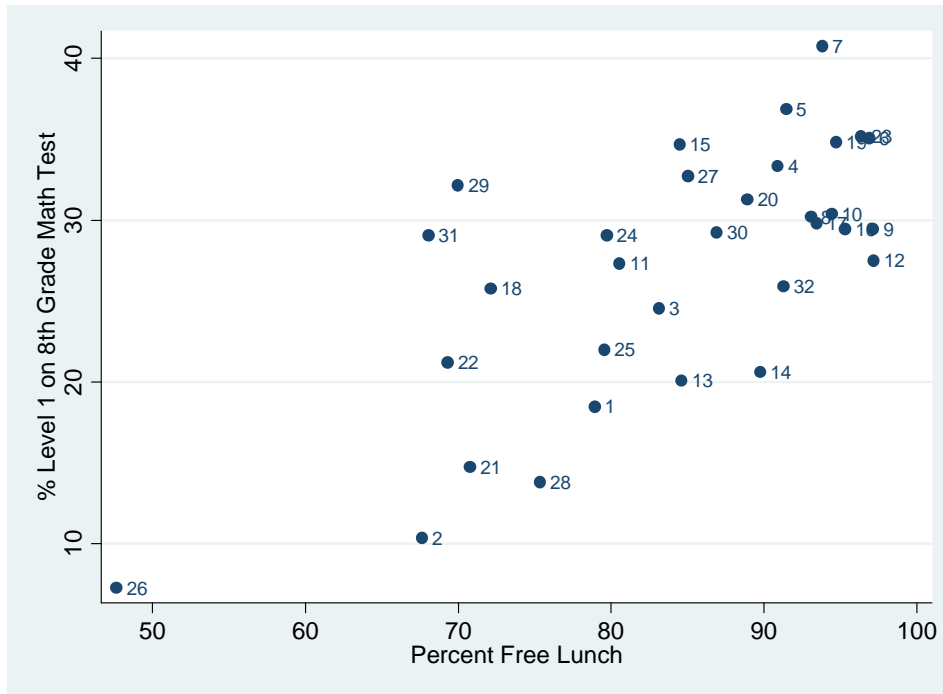
The Low-Performing CSDs

Five CSDs stand out as appearing in the lowest-performing quintiles most frequently in our analysis. These comprise CSD 4 in East Harlem, CSD 8 which includes the neighborhoods of Hunts Point, Sound View, Castle Hill and other neighborhoods in the East Bronx, CSD 7 which includes much of the South Bronx, CSD 23 which makes up parts of Brownville and East New York, and CSD 30 which includes the Queens’ neighborhoods of Long Island City, Sunnyside, Jackson Heights, Woodside, and Astoria. A total of 2,447 students in our sample attended middle schools in those CSDs, which we refer to as the low-performing CSDs.

To give a sense of the severity of the achievement problems among Black and Latino males in the low-performing CSDs, in four of the five CSDs fewer than 22 percent of the students in our sample graduated with a Regents Diploma in four years. In three of the five low-performing CSDs, about one-third of Black and Latino male students completed fewer than five credits in their first year of high school. The achievement levels appear to most critical in CSDs 23 and 8. In CSD 23, less than 15 percent of the 441 Black and Latino male students in our sample graduated with a Regents Diploma in four years and only 34 percent graduated with any diploma (Local or Regents). Another alarming pattern is observed in CSD 8 where nearly one in four Black and Latino male students dropped out in four years.

As can be observed in the maps presented in Appendix B, the low-performing CSDs also stand out as having the highest concentrations of students that qualify for free lunch. Figure 1, on the next page, shows a strong (Pearson) correlation (.70) between the percentage of students in the sample that qualify for free lunch and the percentage of students that received scores at the lowest level of their 8th grade NYS Math test. Similarly, high correlations were observed examining the relationship between percent free lunch and high school outcomes for the students attending those CSDs in middle school. The CSDs also stand out as having higher concentrations of Black and Latino students, although, as we show in Figure 1, there is variation in the density of each group among the low-performing CSDs.

Figure 1: Relationship between CSD-Level Percentages of Students that Qualify for Free Lunch and Graduated with a Regents Diploma in Four Years



Source: Calculations by the authors using data from the New York City Department of Education, 2008.
 Notes: Percentages were calculated for students in the sample that attended a particular CSD in the 8th grade.

Comparing the Low- and High-Performing CSDs

Table 2 shows background characteristics of Black and Latino male students who went to middle school in the five low-performing CSDs and Black and Latino males in the three highest-performing CSDs. The largest difference between low-performing CSD and high-performing sample students is encountered on our measure for socioeconomic status. For example, nearly all the 443 Black and Latino males who went to a middle school in CSD 23 qualified for free lunch compared to less than half of the students in CSD 26. Interestingly, however, free lunch status is not found to be a significant predictor of dropping out in our model, although it does positively predict whether a student completed fewer than five credits. Also, a total of more than 68 percent of students in CSD 26 that qualified for free lunch graduated with a Local or Regents Diploma in four years – double the percentage of free lunch students graduating in CSD 23. Eighth-grade achievement levels among student qualifying for free lunch in CSD 26 tend to be higher. We more closely compare outcomes for similar students from high-performing and low-performing CSDs in Table 2, on the next page.

Other differences in individual student characteristics between the low-performing and high-performing CSDs include the proportion of students that are in part-time special education programs and are one or more years overage for their grade in their first year of high school. This suggests that more students in the low-performing CSDs were held back one or more years in elementary middle school and have higher levels of need than students in the high-performing districts. Differences between the low- and high-performing CSDs in the percentage of student qualifying for special

education could reflect differences in how students are identified for special education within the CSDs, rather than differences in the students.

Also notable in Table 2 is the large degree of variation in the proportion of Black and Latino male students within the CSDs that are Black, Latino, immigrants, and ELL students. CSD 30 stands out as having a large proportion of Latino students, many of which are foreign born and whose parents speak a language other than English in the household. Also, in CSD 30 a total of 74 percent of the students in the sample population have families who speak a language other than English in the household.

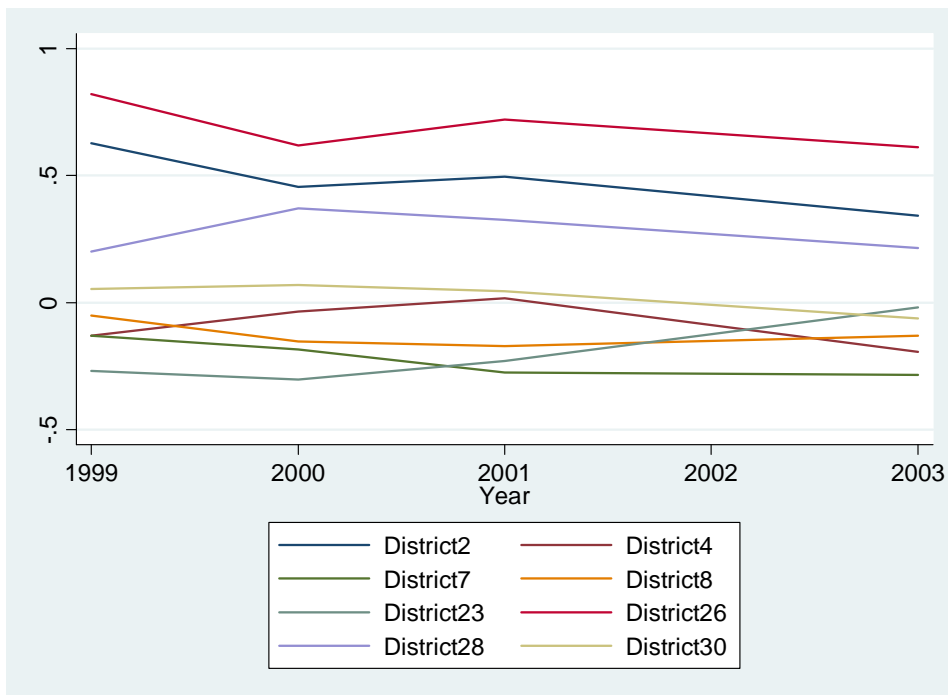
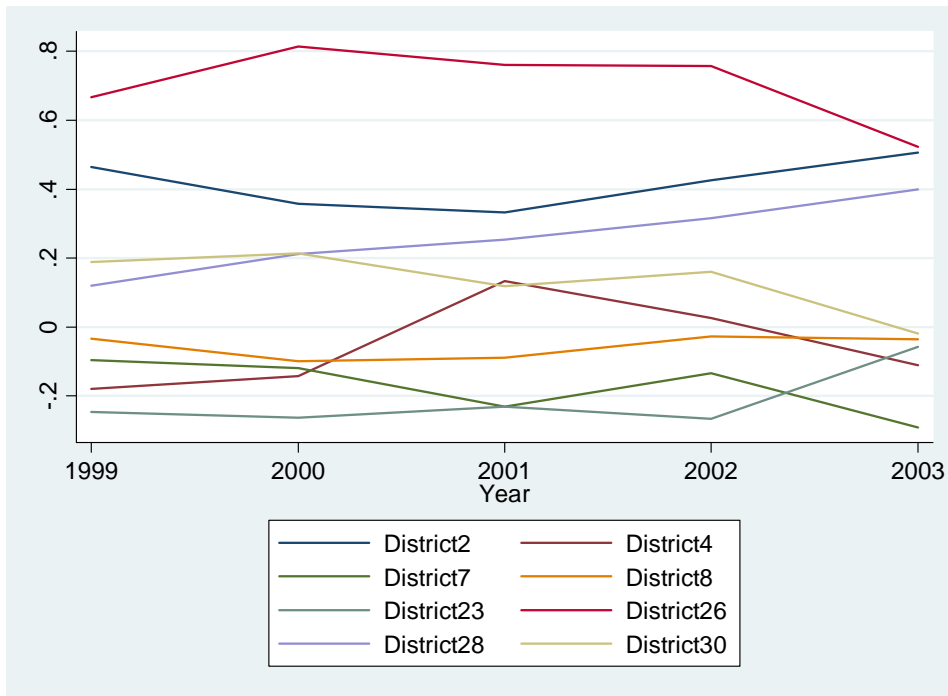
Table 2: Comparison of Student Characteristics and Four-Year Diploma Outcomes among Black and Latino Males in Low-Performing and High-Performing CSDs

Characteristics	Low-Performing CSDs					High-Performing CSDs			Total
	4	7	8	23	30	2	26	28	
Black	39.4	29.7	37.4	83.2	19.1	37.2	45.2	54.6	47.8
Latino	60.6	70.3	62.6	16.8	80.9	62.8	54.8	45.4	52.2
Free Lunch	90.9	93.8	93.1	97.5	86.9	67.6	47.6	75.4	85.7
Foreign Born	13.6	17.1	15.2	13.2	31.2	9.2	17.5	20.5	20.2
ELL	10.1	18.3	10.7	2.7	22.8	5.8	4.0	8.6	12.5
Home Lang. not Eng.	47.2	61.4	48.8	17.5	74.0	38.7	36.5	40.7	45.5
Special Ed.	20.0	21.0	12.6	19.5	11.0	17.9	12.7	12.7	13.5
Over 16 in 1st Yr. HS	4.8	6.9	4.6	3.4	1.3	2.4	0.0	2.5	2.6
Transferred in MS	87.4	29.7	46.2	34.8	18.4	30.1	44.7	65.5	34.6

Source: Calculations by the authors using data from the New York City Department of Education, 2008.

As can be observed in Figures 2 and 3 on the next page, and as would be expected given the manner we selected the CSDs, there is a fairly clear and consistent difference in achievement levels for students in our sample in low-performing and high-achieving CSDs over time. Figures 2 and 3 display CSD level mean standardized scores (mean of 0 and standard deviation of 1) for the New York State Math and ELA tests for 1999 to 2003 – the expected 4th to 8th grades for students in our sample. Means in the low-performing CSDs are for the most part below the group level mean (0) across years and tend to be lowest in CSDs 7 and 23. In those two CSDs, means scores are as low as 0.3 standard deviations below the mean. Also observable in the figure is that the achievement pattern is more consistent for the ELA than the math test, although it is important to point out that data is missing for 2002 for the ELA test. Among the high-performing CSDs, CSD 26 stands out with mean math scores as high as 0.8 standard deviations above the mean.

Figures 2 and 3: Mean CSD Level NYS Math and ELA Z-Scores for High-Performing and Low-Performing CSDs for Expected 4th to 8th Grades (1999 to 2003)



Source: Calculations by the authors using data from the New York City Department of Education, 2008.
 Notes: The 2002 ELA Score is missing due to inadequate data to calculate the z-score by CSD. Means were calculated for students in the sample that did not transfer across CSDs for the years included in the analysis.

We also observe large differences in test score levels between low- and high-performing CSDs for the 8th grade NYS ELA and Math Tests (Table 3). Most notably, low-performing CSDs have higher

percentages of students scoring at the Level 1 range. There are substantially higher proportions of students scoring proficient or above (Levels 3 and 4) in the high-performing CSDs. Similar proportions of students, however, score at the Level 2 range.

Table 3: Comparison of 8th Grade Test Score Outcomes among All and Low-Achieving and Low-SES Black and Latino Males in Low-Performing and High-Performing CSDs

Outcome	Low-Performing CSDs					High-Performing CSDs			Total
	4	7	8	23	30	2	26	28	
All									
ELA Level 1	17.7	19.2	15.4	11.5	15.5	4.2	1.6	4.5	13.7
ELA Level 2	65.4	66.0	66.7	66.2	65.0	60.0	54.5	67.2	62.7
ELA Level 3	16.6	14.6	16.6	21.4	17.7	34.2	39.8	26.6	21.9
ELA Level 4	0.3	0.2	1.4	0.9	1.8	1.6	4.1	1.8	1.7
Math Level 1	33.3	40.8	30.2	35.2	29.3	10.4	7.3	13.8	28.7
Math Level 2	47.7	46.6	47.0	39.5	45.1	46.1	50.8	44.8	44.7
Math Level 3	18.5	12.4	20.6	22.8	24.3	38.9	36.3	37.2	24.5
Math Level 4	0.5	0.2	2.2	2.5	1.3	4.7	5.7	4.2	2.1
Sample Pop. (N)	396	438	637	441	535	207	126	361	17309
Low Achv and SES									
ELA Level 1	16.8	16.2	11.1	8.7	15.0	5.8	0.0	3.5	11.8
ELA Level 2	76.7	77.3	81.0	77.4	77.3	78.9	78.3	89.4	78.3
ELA Level 3	6.6	6.6	7.9	13.9	7.8	15.4	21.7	7.1	9.8
ELA Level 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Meet Criteria (N)	167	198	252	195	167	52	23	113	6155
Meet Criteria (%)	42.2	45.2	39.6	44.2	31.2	25.1	18.3	31.3	35.6
Math Level 1	22.5	35.2	23.5	25.2	27.1	9.5	10.5	11.3	23.3
Math Level 2	68.3	58.6	63.8	54.8	61.4	73.8	84.2	57.7	60.7
Math Level 3	9.2	6.2	12.8	20.0	11.4	16.7	5.3	30.9	16.0
Math Level 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Meet Criteria (N)	142	162	196	155	140	42	19	97	5199
Meet Criteria (%)	35.9	37.0	30.8	35.1	26.2	20.3	15.1	26.9	30.0

Source: Calculations by the authors using data from the New York City Department of Education, 2008.

Notes: Only students who scored at Level 2 on the 1999-00 NYS Math and ELA Tests and qualified for free lunch are included in the figures for “Low Achv and SES.” The Ns and % of total students that took the tests are reported in the “Meet Criteria” row.

In order to examine outcomes between the two groups of CSDs among students with more comparable achievement levels prior to middle school and more comparable levels of family income, we examine differences in 8th-grade test score outcomes for students who scored at the Level 2 range in 5th

grade and qualified for free lunch in the second half of Table 3 under the heading “Low Achv and SES” and in Figures 4 and 5 below. The first notable pattern is that higher percentages of students in the low-performing CSDs than the high-performing CSDs meet the selection criteria of being both low-achieving and low-SES. The strongest patterns observable in this part of the table show that much higher percentages of students in the low-performing CSDs dropped from a Level 2 to a Level 1 between the 5th and 8th grades (See Figures 4 and 5). The decrease in performance was especially strong in math, where more than 20 percent of students in each of the low-performing CSDs dropped from a Level 2 to Level 1. The pattern, however, is not uncommon as more than 23 percent of all Level 2 Black and Latino males in the sample dropped from the Level 2 to the Level 1 range over the period, demonstrating that the high-performing districts were truly exceptional. Although there is more variation among CSDs in the percentage of Level 2 students that increased their performance from the Level 2 to the Level 3 range, for both tests in two of the three high-performing CSDs, more than 15 percent of students moved to a Level 3 while the same was the case in only one of the low-performing CSDs.

Figure 4. Percentage of Low Income Students Decreasing from ELA Level 2 to ELA Level 1 Between 5th and 8th Grade by CSD

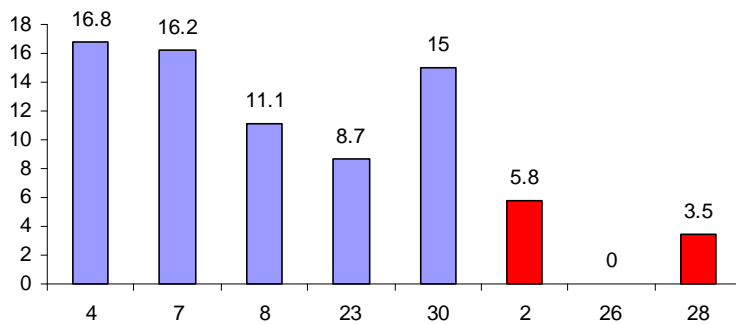
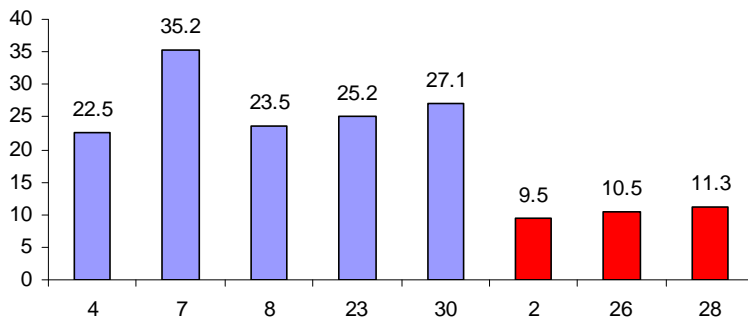


Figure 5. Percentage of Low Income Students Decreasing from Math Level 2 to Math Level 1 Between 5th and 8th Grade by CSD



Source: Calculations by the authors using data from the New York City Department of Education, 2008.

As would be expected, given the way we designated the low-performing and high-performing CSDs, there are large differences in the four-year outcomes among CSDs in the two groups (Table 4). To examine whether these disparities are reflected in comparing similar groups of students, we also examine four-year high school outcomes for Black and Latino males with low achievement levels on their 5th-grade math and ELA tests and who come from low-income families. More specifically, the figures for the “Low Achv and SES” only include students in our sample that did not meet proficiency on

both their 5th-grade Math and ELA Tests and qualified for free lunch. Far smaller proportions from the high-performing CSD students fit within that criteria, especially in CSD 26 where only 16 students are included in the analysis.

Comparing outcomes for students that meet the criteria in the low-performing and high-performing CSDs and for the total population, it is apparent that higher proportions of low-SES and low-achieving, low-performing CSD students drop out, while lower proportions graduate. In CSD 8, for example, 32 percent of low-achieving and low-SES students dropped out in four years compared to approximately 21 percent of students meeting the criteria overall. Also notable is the comparatively low percentages of students meeting the criteria in the low-performing CSDs that graduated with Regents Diplomas in four years. An average of nine percent of low-achieving and low-SES Black and Latino males in the low-performing CSDs graduated with Regents compared to an average of 22 percent in the high-performing CSDs and 13 percent of the total population. It is possible, however, that differences in high school outcomes reflect lower achievement levels among students meeting the criteria for inclusion in low-performing CSDs rather than CSD-related factors like the quality of the middle schools or the availability of services. Moreover, disparities in the quality of the high schools attended by the students in the different CSDs may also play a role in explaining the differences.

Table 4: Comparison of Four-Year High School Outcomes among All and Low-Achieving and Low-SES Black and Latino Males in Low-Performing and High-Performing CSDs

Outcome	Low-Performing CSDs					High-Performing CSDs			Total
	4	7	8	23	30	2	26	28	
All									
Dropout	22.5	22.2	23.4	17.5	19.0	10.1	4.0	13.0	33.1
Still Enrolled	37.6	31.3	29.5	44.4	37.6	25.6	15.9	26.9	15.7
Local in	14.4	19.4	22.1	19.3	12.3	15.0	14.3	16.6	18.9
Regents	21.7	22.1	22.3	14.7	27.5	46.4	57.9	40.7	28.9
Grad (Regents or Local)	36.1	41.6	44.4	34.0	39.8	61.4	72.2	57.4	47.8
Sample Pop. (N)	396	438	637	441	535	207	126	361	17309
Low Achv and SES									
Dropout	26.6	28.4	32.0	21.8	24.7	22.6	6.3	21.7	21.0
Still Enrolled	45.8	35.1	32.0	50.0	41.8	34.0	25.0	28.3	39.8
Local	15.3	18.2	25.2	19.9	18.4	20.8	31.3	26.4	22.3
Regents	8.9	12.0	8.2	5.3	12.7	15.1	31.3	20.8	13.4
Grad (Regents or Local)	24.1	30.2	33.3	25.2	31.0	35.9	62.5	47.2	35.7
Meet Criteria (N)	203	225	306	262	158	53	16	106	6899
Meet Criteria (%)	51.3	51.4	48.0	59.4	29.5	25.6	12.7	29.4	39.9

Source: Calculations by the authors using data from the New York City Department of Education, 2008.
Notes: Students not included in any of the four outcome categories are categorized as students who were discharged to another education setting, reached 21 without graduating, received their GED, or received a Special Education Diploma. Only students who did not meet the proficiency level on their 1999-00 NYS Math and ELA Tests (scored at level 1 or 2) and qualified for free lunch are included in the figures for “Low Achv and SES.” The Ns and % of total students that took the tests are reported in the “Meet Criteria” row.

To get a sense of the variation in achievement within CSDs, we examine school-level mean standardized scores (mean of zero and standard deviation of one) for the students in our sample for each of the three expected middle school years of our cohort – 2000 to 2003. In order to compare means from schools for the same students each year, we only include those students in the analysis who took each of the math tests and did not transfer across schools. We also excluded schools with sample sizes of less than ten.⁵ The results are presented in Appendix C, which shows one figure for each of the CSDs included in the analysis.

Although there is some variation in the school achievement patterns over time, mean math z-scores in the low-performing CSDs tend to be consistently below the group level mean z-score. One exception is CSD 30. Although there is a notable drop in the average between the 7th and 8th grades, scores are

⁵ The mean school N is 35.7, the mode is 30, and Ns range from 6 to 116. We include one school in CSD 7 with a sample size of 6 and another school in CSD 26 with a sample size of 7. We exclude all other school means with sample sizes of less than 10.

consistently above the mean in four of the six CSD 30 schools. This, along with the CSD-level findings, suggests that rather than being connected to low middle school achievement, the low high school outcomes in CSD 30 might reflect the fact that a high proportion of their students are ELLs, recent immigrants, or have other special needs that are not being adequately addressed. As would be expected given their overall performance, with only one exception, mean school-level z-scores in the high-performing CSDs are consistently above the group mean.

Another pattern we observe among some of the low-performing and high-performing CSDs is that occasionally individual schools stand out with extremely high average scores. One of the CSD 8 schools, for example, has mean scores more than one standard deviation above the mean for each of the three years for the math test. The school also stands out as being the only selective middle school among middle schools attended by sample students in CSD8. Students in that school are selected via a lottery from the highest-performing students from CSD 8 elementary schools. As would be predicted given the differences in middle school achievement, there are large differences in the achievement outcomes between the 21 students who attended the selective high-performing middle school and other CSD 8 students in our sample. After four years, 71 percent of the 21 students who had attended the selective middle school in CSD 8 had graduated with a Regents Diploma compared to only 22 percent of the 272 CSD 8 students in our sample who attended other middle schools. In fact, for CSD 8 students who did not attend the selected middle school about equal percentages of students dropped out in four years as graduated with Regents Diplomas.⁶

As we show in Table 5 on the next page, there are fewer gifted programs and schools with selective admissions among the schools attended by students in our sample in the low-performing CSDs and far more schools that have closed since the spring of 2003 than in the schools attended by sample students in the high-performing CSDs. It is important to note that we only examined middle schools attended by students from our sample in the low-performing and high-performing CSDs during the 2002-03 school year, and our findings may not reflect all of the schools in the CSDs or the current schools in the CSDs. Among the schools with selective admissions attended by students from our sample in the low-performing CSDs, one is the previously discussed school in CSD 8 attended by only 21 students from the sample, one is in CSD 30 which was attended by only 3 students in the sample, and one is in CSD 7 and had a sample enrollment of 111. The CSD 7 selective school, however, is a large traditional middle school in which students are interviewed prior to admissions but does not screen applicants based on their prior academic achievement.

Also notable in Table 5 is the high number of schools in the low-performing CSDs that have closed since 2003. In CSD 7, 47 percent of students in the sample attended a school that has since closed. In light of this finding, it is important to consider whether the schools replacing the closed schools in the low-performing CSDs are better serving the needs of this population than the school that were closed.

⁶ A total of 22.0 percent of students in our sample who did not attend the selective middle school in CSD 8 that meet our criteria for the analysis presented in Figure 7 (did not transfer across CSDs or schools for the years included in the analysis) dropped out and 22.4 percent graduated with a Regents Diploma. When we include all of the students in our sample who were in a CSD 8 middle school other than the selective school in the 8th grade, however, a total of 20.6 percent graduated with a Regents Diploma in four years and 24.0 percent dropped out.

Table 5: Comparison of Low-Performing and High-Performing CSDs in Selectivity, whether Gifted Program Available and whether School Closed Since 2003

Characteristic	Low-Performing CSDs					High-Performing CSDs		
	4	7	8	23	30	2	26	28
Total middle schools	4	11	12	10	9	14	5	6
Has gifted program	0	1*	1	1	0	3	3	3
Selective	0	1*	1	0	1	5	0	1
% of students in selective school	0.0	25.4*	3.3	0.0	0.6	31.1	0.0	6.9
Closed since 2003	1	3	3	2	0	3	0	0
% of students in school that closed	12.1	47.4	29.9	44.4	0.0	21.0	0.0	0.0

Source: Information on selectivity of admissions, whether a school had been closed or has a gifted program taken from Insideschools.org on April 15, 2009.

Notes: “Total middle schools” represents the total number of middle schools attended by at least one student from our sample in the 2002-03 school year and not the total number of middle schools in the CSD. All remaining categories represent the number of schools or percentage of students within the sample attending different types of middle schools in 2002-03. We were not able to identify whether many of the schools that had been closed had gifted programs or were selective.

* The one selective school in CSD 7 admits students based on an interview and students are not screened based on their prior achievement, although they are required to have good attendance rates. That school also has a gifted program and is therefore coded twice – once for “selective” and once for “gifted.”

The distribution of resources in the low- and high-performing CSDs are illustrated in Table 6 on the next page. Although there were no observable disparities in levels of spending per pupil and overcrowding appeared to be more of a problem in the high-performing CSDs, there were some notable differences in the distribution of experienced teachers and teachers with master’s degrees. Less than half of the teachers in all but one of the low-performing CSDs (CSD 30) had more than five years of experience, about 10 percentage points lower than the citywide proportion. Also, in all of the low-performing CSDs with the exception of CSD 30, the percentage of teachers with a master’s was from 10 to 19 percentage points lower than the citywide proportion. The proportion was especially low in CSD 23, where about one third of teachers did not have master’s degree in the 2003-04 school year.

Table 6: Distribution of Resources in Low- and High-Performing CSDs

Resource	Low-Performing CSDs					High-Performing CSDs			Total
	4	7	8	23	30	2	26	28	
Teachers									
% Fully Licensed	98.0	97.3	98.2	96.5	99.0	99.0	99.7	98.5	98.1
% > then 2yrs at School	63.6	54.8	56.7	62.3	67.0	61.6	65.2	66.9	66.9
% > than 5 yrs anywhere	47.5	47.3	44.8	43.6	55.1	45.3	60.0	57.0	57.0
% w/ Masters Degree	75.1	72.2	74.9	65.8	85.2	83.4	87.5	84.6	84.6
Spending									
Avg. Spending per Pupil	\$10,655	\$11,838	\$10,744	\$11,277	\$10,439	\$10,464	\$9,053	\$10,311	\$11,080
Capacity									
% of Utilization	83.0	80.9	95.2	71.3	104.8	93.2	112.4	99.5	93.8

Source: New York City Department of Education School Report Cards, 2004-05.

Notes: Data represent CSD level or citywide totals for the 2003-04 school year. Average spending per pupil is for direct services only.

Conclusion

One clear and important finding from our analysis is the apparent high level of need among Black and Latino males student from the five CSDs where the achievement levels of these students are alarmingly low. According to our analysis, far higher proportions of Black and Latino male students who went to middle school in these CSDs were still enrolled or dropped out after four year than graduated with either a Local or Regent Diploma. Moreover, in four of the five low-performing CSDs, a lower proportion of students in our sample dropped out than graduated with a Regents Diploma.

As has been the case with many other analyses attempting to measure the effects of contextual variables on student outcomes, we are challenged in attempting to disentangle individual-level and external factors. We are unable to determine how much of the differences in achievement in the low- and higher-performing CSDs might be connected to differences in family SES, school quality, or neighborhood characteristics.

We find some evidence, however, that something about the middle schools in the low-performing CSDs may be playing a role in explaining the differences in student performance. Among low-performing and low-income students in our sample, we observe a stronger decline in performance over the middle school years. We also observe that with the exception of a few individual and often selective schools attended by higher-performing students in the low-performing CSDs, average performance in the low-performing CSD middle schools tends to be below average. We also provide evidence that students in the low-performing CSDs from our sample have less access to experienced and qualified teachers during their middle school years.

We are unable to determine, however, what specifically it is about the middle schools in the low-performing CSDs that is contributing to the low performance of the Black and Latino males in our sample

who attended these middle schools. Given prior research and the descriptive findings from our analysis, potential influences include attending schools with a low proportion of high-performing peers (Hanushek et al. 2002), lack of experienced and qualified staff in the schools (Rivkin, Hanushek, and Kain 2005; Croninger and Lee 2001; Roderick 2003), and lower levels of social support in the schools (Lee and Smith 1999; Lee and Burkham 2003). Another factor might be that a critical mass of students in these schools have needs beyond those which traditional schools are typically able to provide. Schools with large numbers of students in poverty, from non-English speaking or immigrant homes, or located in communities with few networks of resources beyond the school may simply be overwhelmed because they cannot fulfill the non-academic needs (e.g., food, housing, healthcare, cultural resources) that lay the foundation for learning (Rothstein 2004).

The most apparent policy response in the low-performing CSDs has been the closing of low-performing middle schools. In two low-performing CSDs, more than 40 percent of students in our sample attended schools that have since closed. It is important to examine how well the new schools are performing as well as what is being done to support them, along with the low-performing schools that were not closed in the low-performing CSDs. Rather than putting “old wine in new bottles,” research can be used to show prospectively that new schools are in fact different than the schools they replaced, providing better opportunities for academic achievement and enrichment than their predecessors.

It is also important to ensure that students in the new schools and the low-performing middle schools that were not closed have access to qualified and experienced teachers. As these schools are frequently characterized by a pattern of high turnover rates and staffing by less experienced teachers, an important step will be to work to ensure that the new teachers and, in many cases, new principals have adequate levels of support and mentoring in their initial years, in order to both improve instruction and reduce retention (Smith and Ingersol 2004).

An encouraging sign is that gaps in teacher qualifications and experience levels between schools serving more- and less-poor populations appear to have narrowed, at least between 2000 and 2005 (Boyd et al. 2008). The analysis by Boyd and his colleagues suggests that the narrowing in the gap of teacher qualifications has primarily been the result of the recruitment of more highly qualified candidates to teach in the city, which may have in turn stemmed from higher salaries and programs like the New York City Teaching Fellows and Teach For America (TFA). Such programs, while working to position teachers with stronger academic background in high poverty schools, do not work to address gaps in levels of teacher experience between less- and more-poor schools. Instead these programs recruit new teachers to the field and assign them to the highest need schools, often in newly created schools, and at least among members of TFA, a low proportion intend to remain in the teaching field beyond the two-year requirement (Hemphill et al. 2009).

A recent study by the Center for New York City Affairs found that rates of teacher turnover were five percentage points higher among the new small high schools that opened between 2002 and 2004 than in “more established high schools” (Hemphill et al. 2009, P. 31). The combination of high turnover rates and higher concentrations of less experienced teachers may create instability that works against the effective development of new schools (Weinstein et al. 2007).

The New York City Council Middle School Task Force (2007) published a comprehensive list of reforms that focus generally on improving performance in middle schools throughout New York City. The recommendations from the report covered the areas of governance and organization, teaching and

learning, school leadership, parental involvement, student support and counseling, and school safety and discipline. Examples of specific reforms included expanding the middle-grade school day, incorporating Regents-level courses in all middle-grades, providing mentoring for principals, improving translation services, increasing the number of counselors, and creating a single mechanism for implementing school discipline. These recommendations were based on a comprehensive examination of middle schools in New York City and the research literature on best practices for serving middle-grade students. One of the most notable recommendations from the report was that the highest-need schools are served first. Our research shows that the highest-need middle schools are concentrated in high-poverty CSDs. It is imperative to make sure that the middle schools in these high-need CSDs are meeting the recommendations set forth by the Task Force for transforming the schools in these districts.

Moving beyond the recommendations of the Task Force, it is important to examine how additional resources in school serving high-need students might ameliorate the neighborhood and community level problems of poverty that our data suggest are present, such as health care, educational resources for parents, housing, and assistance for immigrant families. Researchers have shown that with a comprehensive approach it is possible to transform middle schools in high-poverty urban areas into strong academic institutions (Balfanz and Mac Iver, 2000). The transformation of the schools in these districts, despite best intentions, will not be achieved without a clear model of change, as well as monitoring of administrative and school practices and effectiveness through research and accountability efforts.

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Appendix A: Quintile Ranks on the CSD Achievement Index

District	% Level 1 Math 8th Grade	% 0 Credits 1st Yr of HS	% Less than 5 Credits 1st Yr of HS	% Fail Math 1st Yr of HS	% Dropout in 4 Yrs	% Regents in 4 Yrs (reversed)	% Grad. in 4 Yrs (reversed)	Low Performing Index	Total in Sample
1	0	1	1	0	3	2	3	10	204
2	0	0	0	0	0	0	0	0	207
3	1	0	1	1	2	1	1	7	445
4	3	3	4	4	4	4	4	26	396
5	4	1	2	1	3	3	4	18	398
6	4	1	1	1	3	3	2	15	901
7	4	3	3	3	4	4	4	25	438
8	3	4	3	4	4	3	3	24	637
9	2	4	3	3	4	4	3	23	918
10	3	2	1	2	4	2	1	15	1169
11	1	2	1	2	1	1	0	8	792
12	2	2	1	2	3	3	2	15	501
13	0	2	2	2	1	2	2	11	423
14	1	0	0	0	2	3	2	8	449
15	4	3	4	3	1	3	3	21	329
16	2	4	4	4	0	4	4	22	278
17	3	2	3	4	1	3	2	18	963
18	1	0	1	1	0	1	1	5	603
19	4	3	2	3	3	4	3	22	684
20	3	3	3	2	2	1	3	17	379
21	0	3	4	3	2	0	2	14	325
22	1	1	2	1	0	0	1	6	580
23	4	4	4	4	3	4	4	27	441
24	2	3	2	3	3	2	3	18	848
25	1	0	0	1	2	0	0	4	274
26	0	0	0	0	0	0	0	0	126
27	3	1	3	1	2	2	1	13	828
28	0	0	0	0	1	0	0	1	361
29	3	2	2	3	1	1	1	13	846
30	2	4	4	4	4	2	4	24	535
31	2	4	3	2	0	1	1	13	457
32	1	1	0	0	1	1	0	4	574

Appendix B: Maps Showing Black and Latino Male Achievement Patterns for Selected Measures across CSDs

Percentage of Black and Latino Males in the 2007 Cohort that Scored a Level 1 on their 8th Grade Math Test by Middle School CSD

Legend

nysd

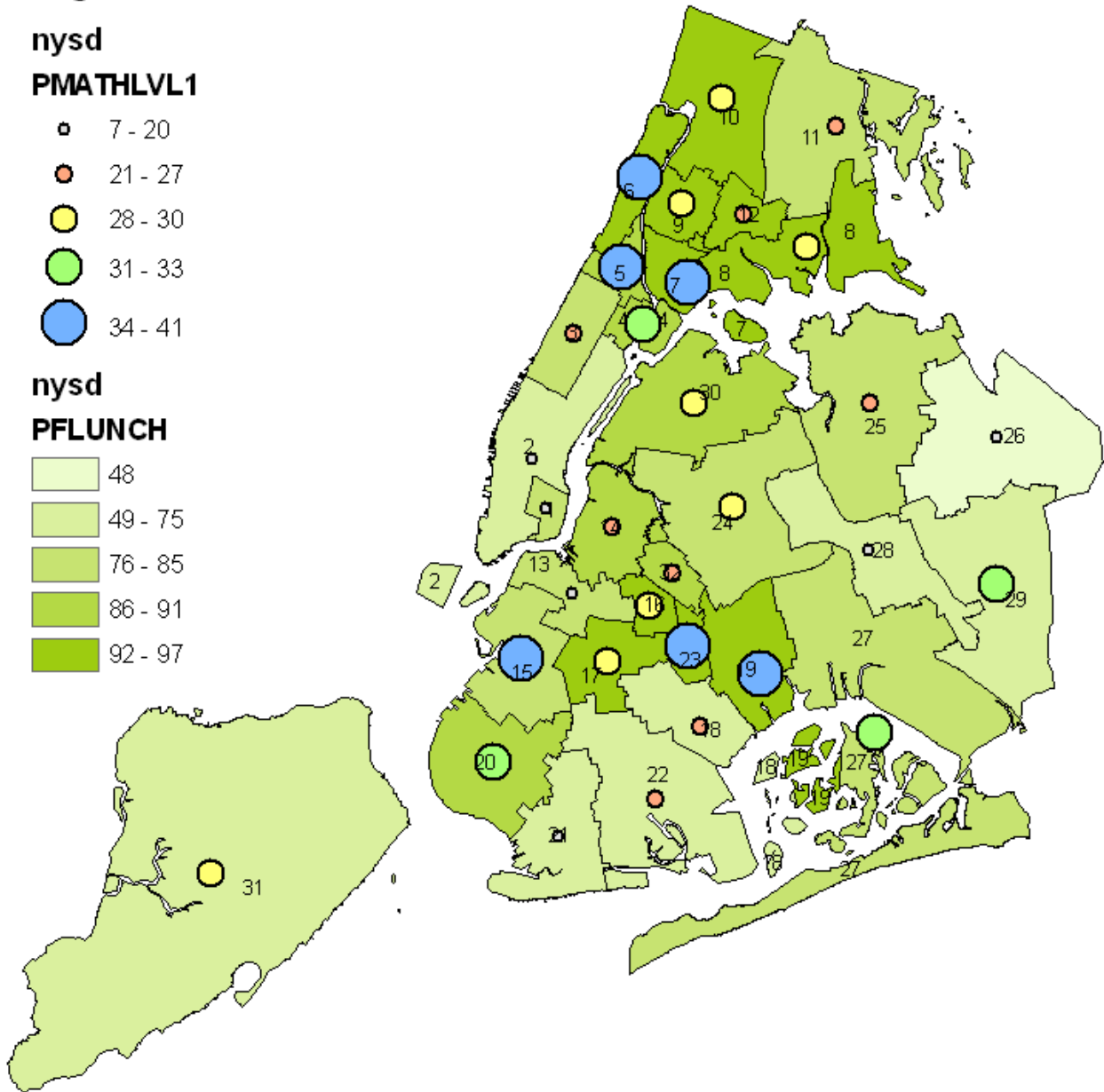
PMATHLVL1

- 7 - 20
- 21 - 27
- 28 - 30
- 31 - 33
- 34 - 41

nysd

PFLUNCH

- 48
- 49 - 75
- 76 - 85
- 86 - 91
- 92 - 97



Notes: "PMATHLVL1" is the percentage of Black and Latino males that scored at level 1 of the 8th grade math test. Students were matched to districts by the district they attended in middle school. Only students that attended a NYC public middle school in the 2002-03 school year are included in the analysis. "PFLUNCH" is the percentage of students in the sample within a CSD that qualified for free lunch.

Percentage of Black and Latino Males in the 2007 Cohort that Graduated with a Regents Diploma or Regents Diploma with Honors in Four Years by Middle School CSD

Legend

nysd

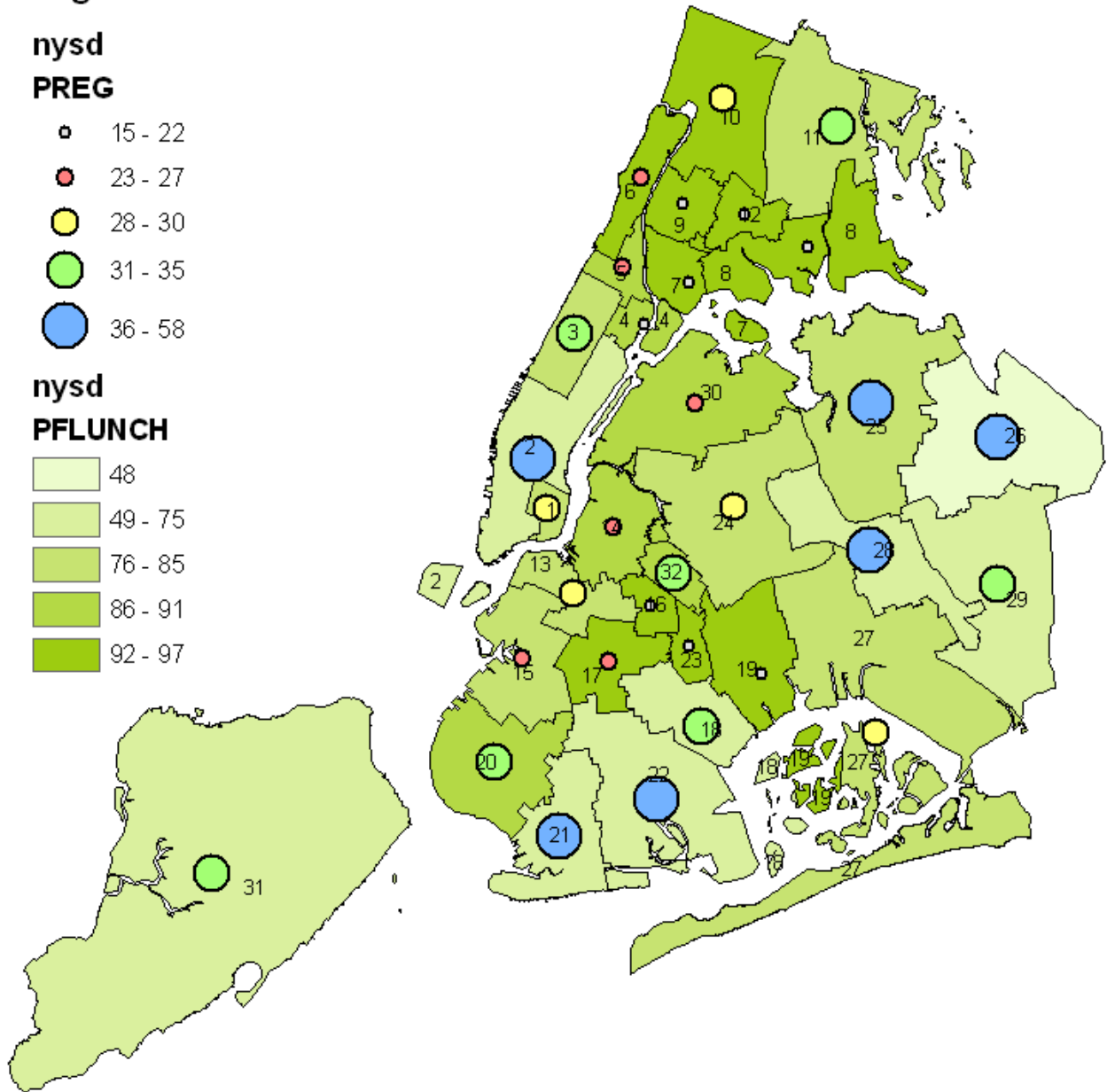
PREG

- 15 - 22
- 23 - 27
- 28 - 30
- 31 - 35
- 36 - 58

nysd

PFLUNCH

- 48
- 49 - 75
- 76 - 85
- 86 - 91
- 92 - 97



Notes: "PREG" is the percentage of Black and Latino males that graduated with a Regents Diploma or Regents Diploma with Honors in four years. Students were matched to districts by the district they attended in middle school. Only students that attended a NYC public middle school in the 2002-03 school year are included in the analysis. "PFLUNCH" is the percentage of students in the sample within a CSD that qualified for free lunch.

Percentage of Black and Latino Males in the 2007 Cohort that Dropped Out in Four Years by MS CSD

Legend

nysd

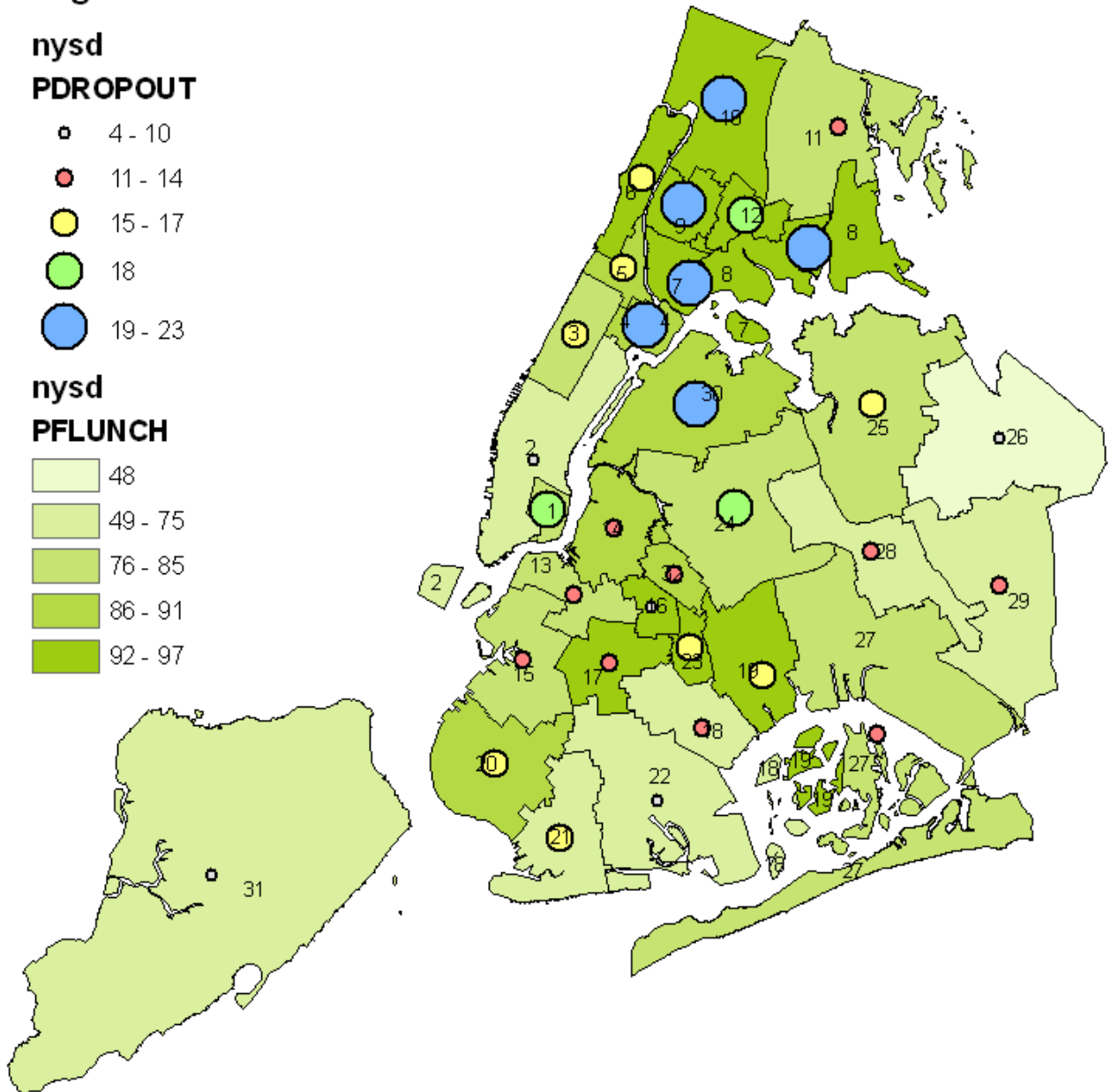
PDROPOUT

- 4 - 10
- 11 - 14
- 15 - 17
- 18
- 19 - 23

nysd

PFLUNCH

- 48
- 49 - 75
- 76 - 85
- 86 - 91
- 92 - 97



Notes: "PDROPOUT" is the percentage of Black and Latino males that dropped out in four years. Students were matched to districts by the district they attended in middle school. Only students that attended a NYC public middle school in the 2002-03 school year are included in the analysis. "PFLUNCH" is the percentage of students in the sample within a CSD that qualified for free lunch.

Percentage of Black and Latino Males in the 2007 Cohort that Graduated with a Local or Regents Diploma in Four Years by MS CSD

Legend

nysd

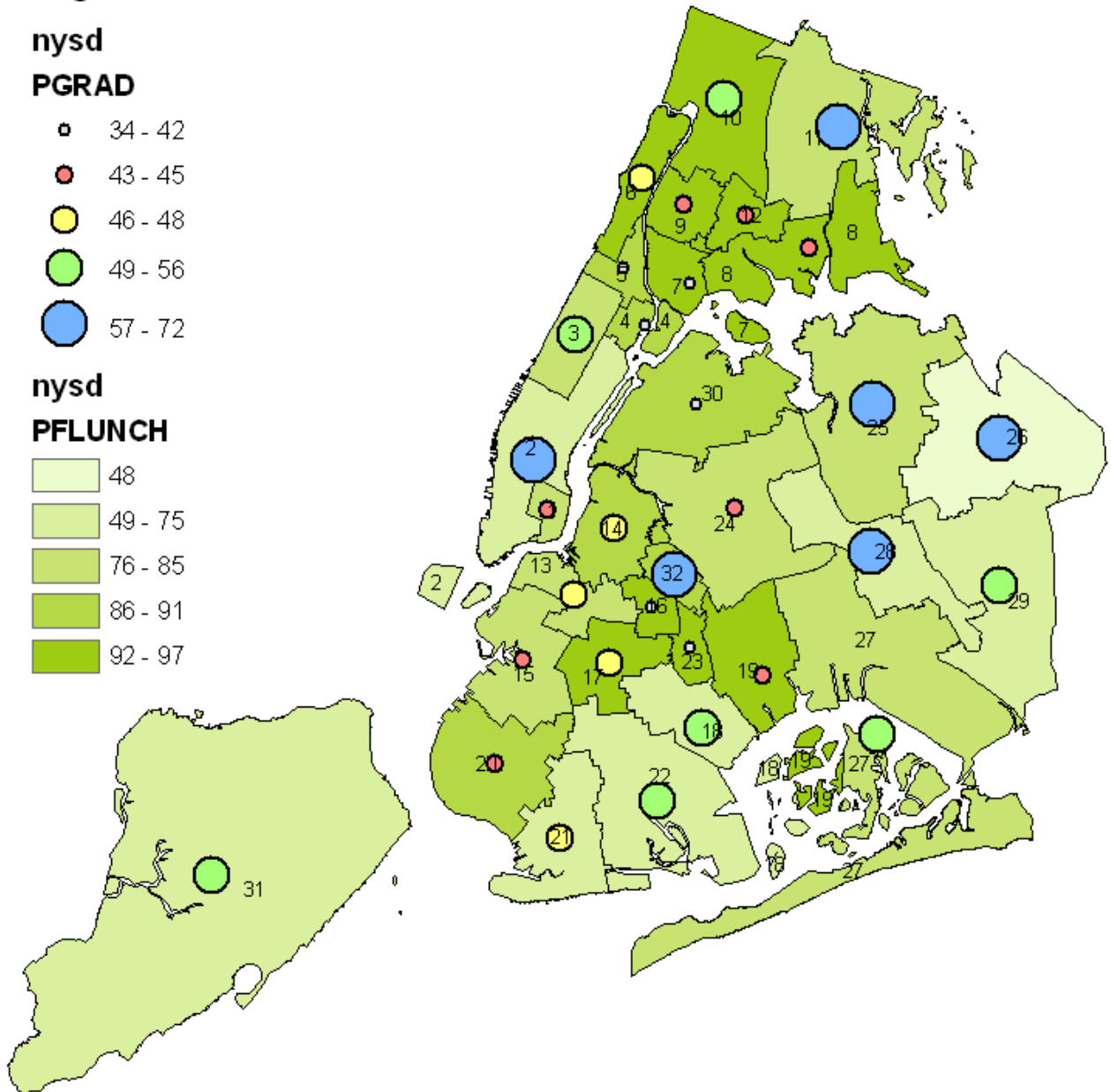
PGRAD

- 34 - 42
- 43 - 45
- 46 - 48
- 49 - 56
- 57 - 72

nysd

PFLUNCH

- 48
- 49 - 75
- 76 - 85
- 86 - 91
- 92 - 97



Notes: "PGRAD" is the percentage of Black and Latino males that graduated with a Regents or Local Diploma in four years. Students were matched to districts by the district they attended in middle school. Only students that attended a NYC public middle school in the 2002-03 school year are included in the analysis. "PFLUNCH" is the percentage of students in the sample within a CSD that qualified for free lunch.

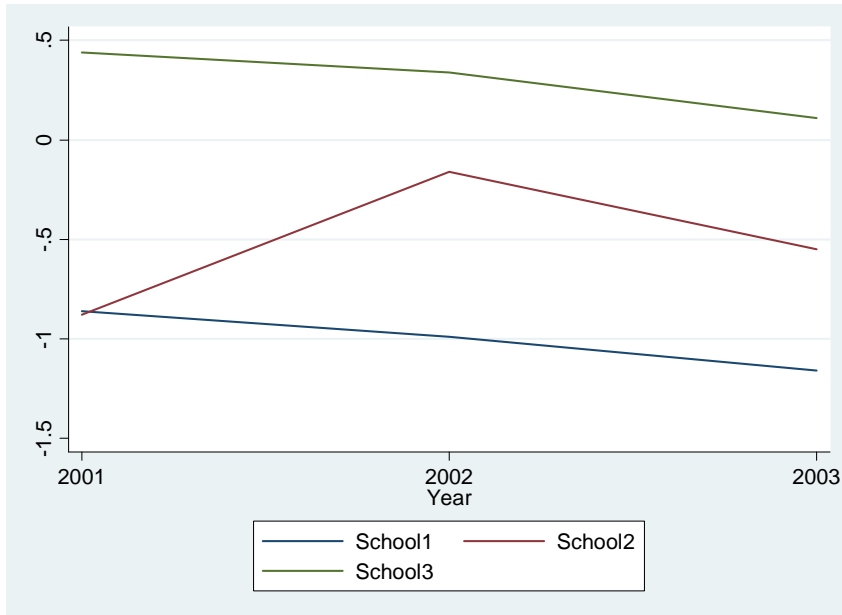
Appendix C: Mean School-Level NYS Math Z-Scores by CSD for Expected 6th to 8th Grades (2001 to 2003)

Source: Calculations by the Authors using data from the New York City Department of Education, 2008.

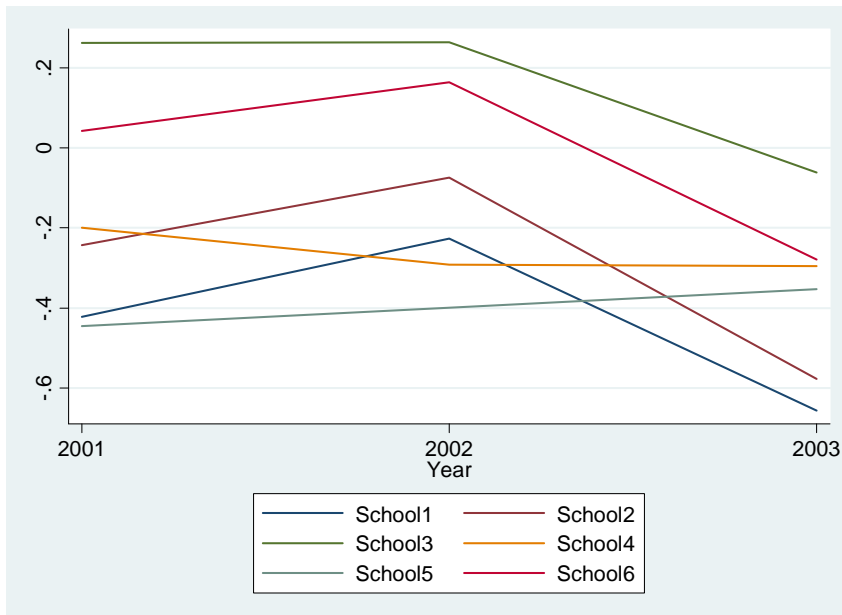
Notes: School-level means were calculated for students in the sample that did not transfer across CSDs or middle schools for the years included in the analysis. Schools with Ns less than six were not included. The z-scores were calculated for Black and Latino males in the sample that took each of the tests and did not transfer across CSDs during middle school.

Low Performing CSDs

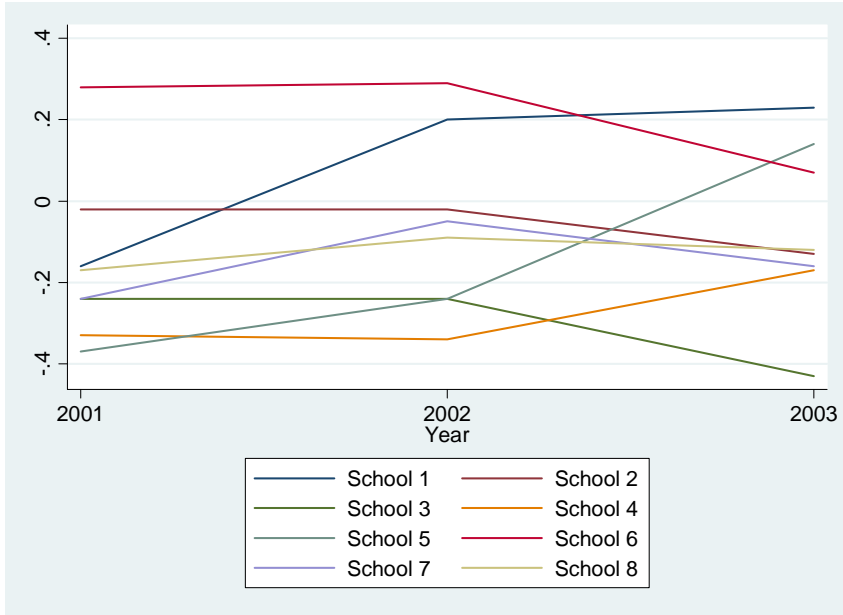
CSD 4



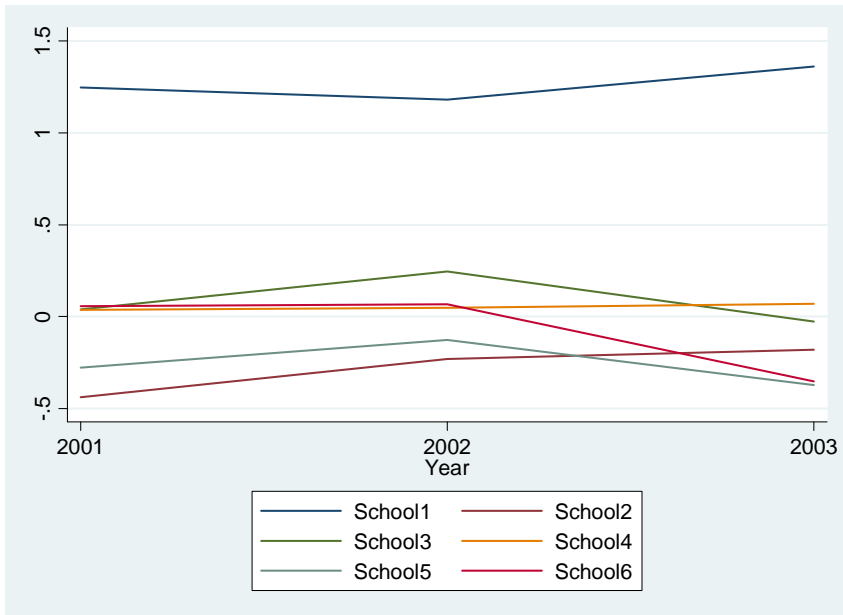
CSD 7



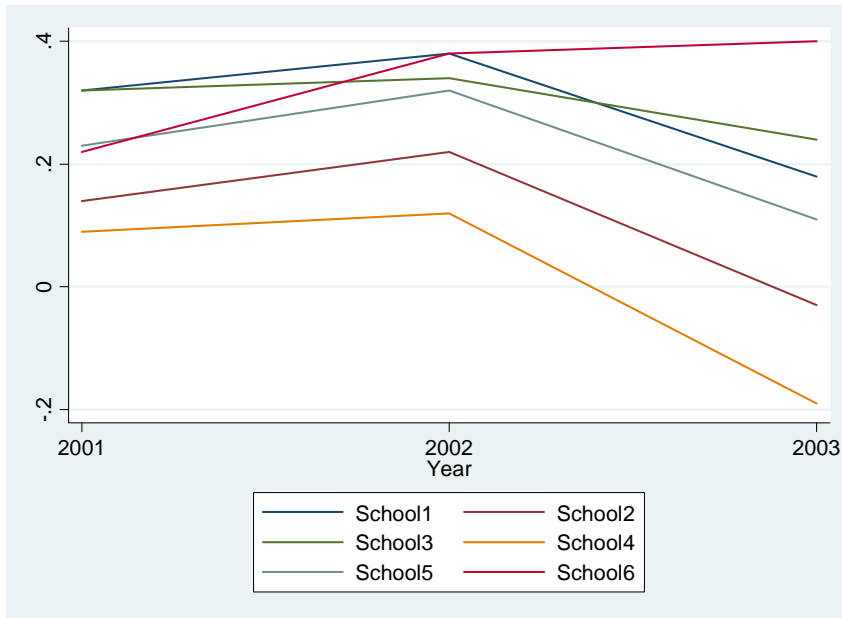
CSD 8



CSD 23

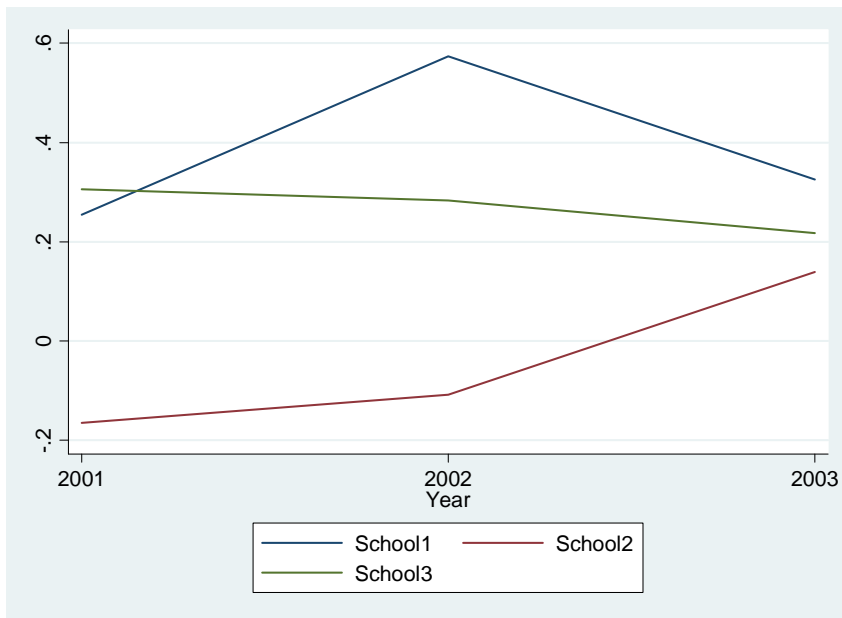


CSD 30

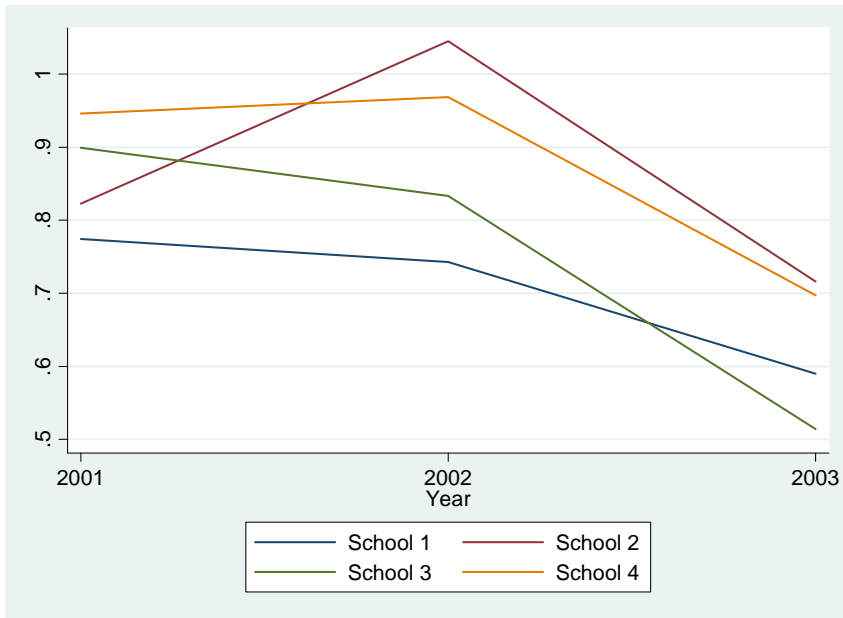


High Performing CSDs

CSD 2



CSD 26



CSD 28

